

**Third Report of the
Independent Investigator
for the
Houston Police Department
Crime Laboratory and Property Room**

**Michael R. Bromwich
Independent Investigator**

Fried, Frank, Harris, Shriver & Jacobson LLP
1001 Pennsylvania Avenue, N.W., Suite 900
Washington, D.C. 20004
202.639.7000

<http://www.hpdlabinvestigation.org>

June 30, 2005

Investigative Team

Independent Investigator

Michael R. Bromwich
Fried, Frank, Harris, Shriver & Jacobson LLP

Fried Frank Team

Tommy P. Beaudreau
Joseph S. Green
Piper M. Hendricks
Jennifer M. Wollenberg
Michelle Hand-Arevalo
Coleman Hinnant

Scientific Advisory Board

Margaret C. Kuo
Orange County Sheriff-Coroner's Office (ret.)

Douglas M. Lucas
Centre of Forensic Sciences of the Province of Ontario, Canada (ret.)

Bruce W. Vander Kolk
Illinois State Forensic Sciences Command (ret.)

Forensic Scientists

Robert P. Bianchi
DEA Special Testing and Research Laboratory (ret.)

Roger J. Bolhouse
Michael Sinke
Speckin Forensic Laboratories

Michael A. Evans, Ph.D.
American Institute of Toxicology Laboratories

Patricia P. Hamby
International Forensic Science Laboratory and Training Centre

Edward E. Hueske
Arizona Department of Public Safety (ret.)

Karen L. Irish
Forensic Services Section, Baltimore County Police Department (ret.)

Carll Ladd, Ph.D.
Connecticut State Forensic Laboratory

Mark D. Stolorow
Rick W. Staub, Ph.D.
Orchid Cellmark

Executive Summary

This is the Third Report of the Independent Investigator for the Houston Police Department (“HPD”) Crime Laboratory and Property Room. Like our previous two reports, it is intended to advise the City of Houston (the “City”) and the public of our progress in fulfilling our mandate to conduct a comprehensive independent investigation of the Crime Lab and Property Room. In the roughly 90 days since we began our work, we have made rapid and substantial progress gathering facts, conducting preliminary reviews of cases analyzed by the Crime Lab, and reviewing the operations of the Property Room.

The investigation is divided into two phases. Phase I, which is now complete, has involved gathering facts related to the historical operations, practices, and management of the Crime Lab and Property Room and assessing the scope of the investigative work to be performed during the second phase of the investigation. Phase II, which begins next month, will involve, among other things, reviewing thousands of cases analyzed by forensic scientists in each of the six disciplines worked by the Crime Lab -- DNA/serology, firearms, controlled substances, toxicology, trace evidence, and questioned documents. Our factual investigation will continue during Phase II, and we will be performing comprehensive and detailed reviews of several cases that are illustrative of issues facing HPD and the Crime Lab. These cases will include, among others, the Josiah Sutton, Nanon Williams, and George Rodriguez cases.

During the first phase of this investigation, we have reviewed tens of thousands of pages of documents and conducted a total of 83 interviews of 61 people, including current and former Crime Lab personnel, HPD officers, and others. In particular, since our last report we have interviewed all of the members of HPD’s command staff with supervisory responsibility over the Crime Lab during the period 1997 through 2003. We also have spoken with members of the defense bar in Harris County and with prominent critics of the Crime Lab. We greatly appreciate the cooperation we have received from the City, HPD, and all of the people we have met with and interviewed.

Also during this initial phase of the investigation, all of the members of our Scientific Advisory Board as well as our scientific team coordinator spent a week at the Crime Lab performing a limited review of cases. The purpose of these case reviews was threefold: (1) to obtain a preliminary assessment of the quality and documentation of the work and reports generated by the Crime Lab across analysts and time periods; (2) to assess the volume of the case work performed by the Lab during the relevant time periods; and (3) to develop

estimates as to the time that our forensic scientists will need during second phase of the investigation to review cases selected from each of the forensic science disciplines. We selected and reviewed cases analyzed by many of the forensic scientists currently and formerly employed in each of the sections of the Crime Lab across the relevant periods.

Although the investigation is ongoing, several themes already have emerged as we have examined the causes of the problems that gave rise to the crises in the Crime Lab.

A. Lack of Support for the Crime Lab Within the Department and at the Political Level

It is clear that, over the 15 years preceding the DNA/Serology Section's closure in December 2002, HPD and the City failed to provide the Crime Lab with adequate resources to meet growing demands. From the very beginning, the DNA Section was left to fend for itself to obtain grant funding for personnel, equipment, and training. As the enormous investigative potential of DNA profiling came to be realized during the 1990s, and as technological advancements in DNA analysis evolved at a rapid pace, the City and the Department failed to support the Crime Lab to ensure that the DNA/Serology Section was properly staffed and supervised and that its scientists were well trained to perform high quality scientific work.

During these years, Houston grew to become the fourth largest metropolitan area in the United States, and the level of criminal activity grew along with the City. Yet, as the Crime Lab's caseload swelled, it struggled to keep up. We have heard consistently from witnesses that, as a support function populated by civilian employees, the Crime Lab was marginalized within the Department. Salaries for Crime Lab personnel were significantly lower than the compensation offered in other laboratories, even other public laboratories in the Houston area. Accordingly, the Crime Lab experienced difficulty attracting and retaining well-qualified forensic scientists. Although between 1994 and 2002 there was some modest growth in the number of criminalists authorized for the Crime Lab, there were always positions left vacant as a result of turnover or inadequate funding to fill the positions. The calcified organization of the Crime Lab afforded analysts very little opportunity for promotion and pay increases.

Moreover, and quite problematically, there has been no line supervisor over the Toxicology Section since 1992, and the line supervisor position in the DNA/Serology Section was vacant between August 1996 and December 2002, when DNA analysis at the Crime Lab was suspended. The lack of a line

supervisor in the DNA/Serology Section was brought directly to the attention of Chief of Police C.O. Bradford by DNA analysts in 1999, but, after providing an initially encouraging response, no action was taken to fill the position, with Chief Bradford claiming a lack of funding.¹ Two years later, when funding was available as a result of a grant provided by the City Council to reduce the backlog of approximately 19,500 unanalyzed sexual assault kits, Chief Bradford rejected his command staff's recommendation that a portion of the funds be devoted to hiring additional DNA criminalists, including a line supervisor. Chief Bradford's reason for doing so appeared to be an unwillingness to use grant money to create a position that eventually would have to be funded by the Department.

Shockingly, the City and HPD failed to repair the roof leaks that allowed water to pour into the Crime Lab for over six years. The City and HPD were aware of problems with the roof at the 1200 Travis Street HPD headquarters building before the Crime Lab moved into the facility in 1997. In 2001, Tropical Storm Allison flooded the Crime Lab, and boxes containing biological evidence became soaked and the evidence likely contaminated. Yet, the roof leaks continued unabated in a scientific laboratory charged with the enormous responsibility of processing sensitive biological evidence for use in criminal matters. The roof problem was not addressed until after the Crime Lab scandal erupted in 2002.

Finally, there appears to have been a lack of support within the Crime Lab and the chain of command for disciplining line analysts for serious misconduct. This lack of support for strong disciplinary action toward analysts found to have engaged in serious misconduct is illustrated by four instances of drylabbing -- *i.e.*, scientific fraud -- involving two analysts in Controlled Substances Section, James Price and Vipul Patel. Although it appears the Department was prepared to terminate Mr. Price after his second drylabbing incident, he received relatively light punishment after his first incident for scientific misconduct that at least one of his immediate supervisors believed should have resulted in immediate termination. Mr. Patel was never severely disciplined for his incidents and it appears Chief Bradford intervened directly to have Mr. Patel reinstated as a bench analyst, which may have undermined the ability of lower level managers and supervisors to effectively respond to misconduct.

¹ Chief Bradford has told us that he does not recall being informed of the pressing need for a first-level supervisor in the DNA/Serology Section.

B. Ineffective Management Within the Crime Lab

Although HPD and the City must be faulted for failing to provide the Crime Lab with the resources it needed, there appears also to have been a lack of strong and effective leadership within the Crime Lab. The information we have developed so far indicates that the head of the Crime Lab from 1995 to early 2003, Donald Krueger, was an isolated and detached manager in the Lab. Mr. Krueger rarely met with Crime Lab analysts as a group, and he relied heavily on James R. Bolding, the head of the DNA/Serology and Trace Evidence Sections, and the other managers to run their Sections, while providing little oversight of them. Mr. Krueger told us that he was surprised and shocked when, in December 2002, outside auditors advised him that the DNA Section was in shambles. Given the state of affairs described by the auditors, this could only have been the reaction of a manager extremely far removed from the activities of his subordinates.

It also appears that Mr. Krueger failed to make a forceful case with HPD command staff for critical needs, such as the DNA/Serology Section line supervisor position. Although requests for funding were made regularly over the years, Mr. Krueger failed -- almost surely because he did not fully appreciate the problem himself -- to explain the disastrous potential held by the lack of supervision in the DNA/Serology Section.

We have also found that there was inadequate management of the strong and difficult personalities within the Crime Lab. Morale was consistently low among Crime Lab analysts and discontent was widespread. After Dr. Baldev Sharma was made the line supervisor over the DNA/Serology Section in 1993, open and prolonged feuding developed between Dr. Sharma and his supervisor Mr. Bolding. Grievances and IAD complaints between and among analysts and supervisors, some of which were quite petty, were commonplace. As discussed above, Crime Lab managers found it difficult to discipline or remove incompetent personnel. These personnel problems fostered a highly dysfunctional, and, in some respects, unprofessional, laboratory environment.

C. Lack of Adequate Quality Control and Quality Assurance

Managers and supervisors within the Crime Lab also failed to ensure that the analytical and quality control procedures employed by the Crime Lab were up to date, properly designed, and complete. Standard operating procedures for several of the Sections in the Crime Lab consisted of procedures and reference materials cobbled together over time without periodic re-evaluation and reorganization. Although the supervision and quality control in some Sections of

the Crime Lab appear to have been effective, as demonstrated at least to some extent by the detection of four drylabbing incidents by the Controlled Substances Section supervisors, this does not appear to have been the case across all Sections of the Crime Lab. The Crime Lab stopped performing lab-wide quality control audits in 1997. Mr. Bolding's reviews of the DNA/Serology Section, using the Federal Bureau of Investigation's ("FBI's") Quality Assurance Standards for Forensic DNA Testing Laboratories, performed at the end of 2000 and 2001 described a very different picture of the state of that Section than did the outside audit in December 2002, which used the same standards.

Although we have not yet begun our Phase II reviews of the cases worked by the Crime Lab, based on the materials we have reviewed and the interviews we have conducted, we are attuned to several potential problem areas. For example, several of the problematic cases processed by the DNA/Serology Section involved analysis of samples containing mixtures of body fluids and DNA from more than one person. Such cases involve complexities in performing the actual DNA analysis and calculating the statistics associated with the results. As the outside audit found in 2002, Mr. Bolding, who had served as the technical lead of the DNA/Serology Section following Dr. Sharma's removal from the Section in 1996, lacked sufficient training and education in statistics. Our preliminary reviews suggest that, in several cases involving mixtures, the DNA analysts performed the statistical calculations incorrectly. We also already have encountered deficiencies in the documentation contained in analysts' case files.

D. Isolation of the DNA/Serology Section

Major problems beset the DNA/Serology Section of the Crime Lab almost from its inception, but these problems were insufficiently recognized by Crime Lab management and the HPD command staff for many years. By the time of the 2002 DPS audit, the DNA Section was in shambles -- plagued by a leaky roof, operating for years without a line supervisor, overseen by a technical leader who had no personal experience performing DNA analysis and who was lacking the qualifications required under the FBI standards, staffed by underpaid and undertrained analysts, and generating mistake-ridden and poorly documented casework. A critical component of the FBI standards, to which the Crime Lab agreed to abide when it registered to participate in CODIS in 1998, is a requirement for bi-annual reviews by outside agencies. Such a review, of course, never occurred until the fate of the Section already was sealed. The internal reviews of the Section, performed by Mr. Bolding in 2000 and 2001, made findings regarding the condition of the DNA Section that were largely contradicted by the 2002 DPS audit, which used the same standards. Despite Lab management's recognition as early as 1996 that accreditation was becoming a

necessity, the Crime Lab's efforts toward achieving accreditation quickly dissipated; no outside inspection of the DNA Section related to accreditation was ever performed.

The purpose of outside scrutiny is to shed light on a laboratory's practices and to focus attention on existing deficiencies and potential problems. By insulating itself from outside scrutiny, the Crime Lab never received this benefit. Flawed practices and embedded misunderstandings -- for example about the way to present the statistics about DNA mixtures -- became accepted by analysts within the DNA/Serology Section as the correct way to do things. These misunderstandings infected the work of the Section's analysts from the analysis through trial testimony -- indeed, the Lab's most vociferous critics, including Professor William Thompson and Dr. Elizabeth Johnson, have claimed that the Section's work was plagued by serious errors in virtually every case they have reviewed.

The fact that Mr. Krueger was, by all accounts, genuinely shocked to learn of the DPS audit's highly critical findings, speaks volumes about his isolation from what was going on in the DNA/Serology Section -- and of the Crime Lab's isolation from the outside world. The fact that Mr. Bolding acknowledges that, without a line supervisor in the DNA/Serology Section, he knew its "ship was sunk" -- and yet no one from the outside was invited into the Lab, and the DNA Section kept churning out cases -- is extremely troubling. We will continue to explore the isolation of the Crime Lab from outside scrutiny, the effects of that isolation, and the extent to which the Crime Lab's problems may have been purposefully hidden from managers and command staff within the Department and from the larger forensic science community.

Conclusion

Although there has been undeniable and important progress in the Crime Lab -- including the Lab's recent accreditation in many forensic science disciplines by the American Society of Crime Laboratory Directors/Laboratory Accreditation Board -- our job is, among other things, to conduct a thorough exploration of the quality of work performed in the Crime Lab, especially during the period before the leadership of the Crime Lab changed and the push to raise standards, with high level HPD and political support, was launched. At the heart of our investigation is the review of a large number of cases analyzed by the Crime Lab in all disciplines in which the Crime Lab did its work. We have now framed the context of those case reviews and understand much better the institution within which the work was done, but we do not yet know whether the well-publicized cases of the Crime Lab's failures are isolated analytic

breakdowns or only the tip of an iceberg of widespread analytic failures, incompetence, or worse. Our Phase II case reviews will show comprehensively, not anecdotally, the extent to which Crime Lab analysts did or did not do good work. Only then will we grasp the answers to the questions that have driven this investigation -- most centrally, how did the work of the HPD Crime Lab facilitate or impair the proper functioning of the Harris County criminal justice system. And, to the extent there were widespread failures, what were the human consequences?

TABLE OF CONTENTS

	Page
Introduction	1
A. Background of the Independent Investigation	1
B. The Investigative Team	3
C. Structure of the Independent Investigation	5
Status of the Investigation	6
A. Documents	7
B. Interviews	7
C. Case Reviews	9
Preliminary Factual Findings	10
A. Early History of the Crime Lab (1953-1989)	10
B. The Crime Lab During the DNA Era (1989-2002)	12
1. Background Regarding DNA Profiling	12
2. Peter Christian’s Management of the Crime Lab	14
3. Creation of the DNA Section	16
4. Operations of the DNA/Serology Section (1991-2002)	18
a. Dr. Sharma’s Difficulty with RFLP Analysis	18
b. Early Problems in the DNA/Serology Section	18
c. Feuding Between Mr. Bolding and Dr. Sharma	19

	Page
d. The Lynn Jones Case and the 1996 Inspections Division Audit of the DNA/Serology Section	21
e. DNA/Serology Section Criminalists Raise Concerns Regarding the Absence of a Line Supervisor	23
f. Inadequate Internal Quality Control Reviews in the DNA/Serology Section	27
5. Early Consideration of Accreditation	29
6. Controlled Substances Section and Drylabbing Incidents	31
a. Mr. Patel’s Drylabbing Incidents	32
b. Mr. Price’s Drylabbing Incidents	34
7. Firearms Section	36
8. Trace Evidence Section.....	36
9. Toxicology Section.....	37
10. Compensation, Personnel Levels and Workload.....	38
11. The Roof at 1200 Travis Street.....	44
C. The Crime Lab’s Problems Become Public (2001–2004)	46
1. Sexual Assault Kit Backlog	47
2. The Resignation of Jennifer LaCoss.....	48
3. KHOU-Channel 11 News Reports Regarding the DNA Analysis by the Crime Lab	49
4. December 2002 Audit of the DNA/Serology Section.....	50

	Page
5. The DNA Case Re-Testing Program	51
6. The National Forensic Science Technology Center Needs Assessment and Interim Director Frank Fitzpatrick	53
7. Investigations of the Crime Lab.....	54
8. Accreditation	55
D. The Property Room and Project 280.....	55
1. Facilities	56
2. Project 280	57
3. Storage of Biological Evidence	58
4. Evidence Tracking and Chain of Custody	59
5. Audits of Inventory and Destruction of Property	59
6. Standard Operating Procedures	60
E. Limited Case and Proficiency Test Reviews	60
Themes of the Investigation	61
A. Lack of Support for the Crime Lab Within the Department and at the Political Level.....	62
B. Ineffective Management Within the Crime Lab	63
C. Lack of Adequate Quality Control and Quality Assurance.....	64
D. Isolation of the DNA/Serology Section.....	65
Conclusion	67
Appendix A - Stakeholders Committee Members	
Appendix B - Acronyms	

Introduction

This is the Third Report of the Independent Investigator for the Houston Police Department (“HPD”) Crime Laboratory and Property Room. This report, like our First Report issued on April 29, 2005 and our Second Report issued on May 31, 2005, is intended to advise the City of Houston (the “City”) and the public of our progress in fulfilling the mandate to conduct a comprehensive independent investigation of the Crime Lab and Property Room.¹

We now have concluded the first phase of the independent investigation. In the roughly 90 days since we began our work, we have made rapid and substantial progress gathering facts, conducting preliminary reviews of cases analyzed by the Crime Lab, and reviewing the operations of the Property Room. We also have developed a plan for the second phase of our investigation, which will involve the continued investigation into the historical operations of the Crime Lab and Property Room as well as reviews, performed by our team of forensic scientists, of hundreds of cases analyzed by the Crime Lab in each of the forensic science disciplines practiced in the Crime Lab during the review period. This report summarizes our work, presents our findings developed during the initial phase of this investigation, and discusses the developing themes of the investigation.

A. Background of the Independent Investigation

The public crisis that eventually led to the hiring of an independent investigator to review the Crime Lab’s operations began on November 11, 2002, with the first in a series of investigative news reports that aired on KHOU-Channel 11, a local Houston television station. These television news reports, which were reported to be the product of a three-month investigation performed by KHOU in consultation with outside forensics scientists, severely criticized the forensic analysis performed by the DNA/Serology Section of the Crime Lab in a number of specific cases.

Within a month of the airing of the first of these news reports, Acting Chief of Police Timothy Oettmeier commissioned an outside review of the Crime Lab’s DNA/Serology Section. Representatives from the Texas Department of Public Safety (“DPS”) Crime Lab Headquarters and the Tarrant County Medical Examiner’s Office performed an audit of the Crime Lab’s DNA/Serology section

¹ Our reports are posted on our Web site at www.hpdlabinvestigation.org.

over the course of two days, December 12 and 13, 2002. On December 18, 2002, based on the preliminary oral report of the auditors prior to the issuance of their final audit report, HPD suspended the performance of all DNA analysis by the Crime Lab. The final report documenting the audit's findings was issued on January 10, 2003. DNA work by the Crime Lab has remained continuously suspended to this day, although HPD is hoping to re-open the DNA Section by the end of this calendar year.

In early 2003, HPD, in close consultation with the Harris County District Attorney's Office, began a time-consuming process of identifying all cases in which some form of DNA analysis had been performed by the Crime Lab. This process evolved into a long-term re-testing project coordinated among HPD, the Harris County District Attorney's Office, and outside DNA laboratories, which has identified for re-testing a total of 407 criminal cases involving DNA analysis performed by the Crime Lab.

On or about February 21, 2003, Donald Krueger, the head of the Crime Lab, retired after serving in that capacity for approximately eight years. Following Mr. Krueger's retirement, Robert Bobzean, a senior manager in the Crime Lab, took over leadership of the Lab on an interim basis. In mid-July of that year, Frank Fitzpatrick of the Orange County (California) Sheriff-Coroner's Office was appointed Interim Director of the Crime Lab as part of a contract entered into by the City with the National Forensic Science Technology Center ("NFSTC"), a non-profit entity whose mission is "to provide quality systems support, training and education to the forensic science community in the United States."² During the course of its consultation with the Crime Lab, the NFSTC produced written evaluations of various aspects of the Crime Lab. In October 2003, questions arose related to the performance of the Toxicology Section, which led to the suspension that month of toxicological analysis by the Crime Lab. Also in October 2003, Irma Rios was appointed to be the new permanent head of the Crime Lab. Ms. Rios had been with the DPS crime laboratory system for over nineteen years and was a member of the outside audit team that reviewed the Crime Lab's DNA/Serology Section in December 2002.

On or about September 1, 2004, Chief Hurtt announced that HPD would seek an independent review of the Crime Lab. Chief Hurtt formed a Stakeholders Committee -- composed of Houston-area public officials, civil rights advocates, academics, attorneys, and scientists -- to oversee the selection and

² www.nfstc.org/aboutus.htm.

progress of the independent investigator. In November 2004, the Stakeholders Committee met for the first time, and, on December 2, 2004, the City issued a Request for Proposals (“RFP”) to conduct an independent review of the Crime Lab and Property Room. On February 2, 2005, the Stakeholders Committee announced its selection of our team of lawyers and forensic scientists to perform a comprehensive, independent investigation of HPD’s Crime Lab and Property Room.

On March 30, 2005, the Houston City Council approved a contract authorizing us to conduct this investigation, and we began our work immediately thereafter.

B. The Investigative Team

We have assembled a highly experienced team of lawyers and forensic scientists for the HPD Crime Lab investigation. Our team is led by Michael R. Bromwich, who is a partner in the Washington, D.C. and New York offices of Fried, Frank, Harris, Shriver and Jacobson LLP and who heads the Firm’s internal investigations, compliance, and monitoring practice group. Mr. Bromwich is a former federal prosecutor and, from 1994 to 1999, served as Inspector General of United States Department of Justice. Mr. Bromwich is supported by a team of Fried Frank lawyers and legal assistants.

Our Scientific Advisory Board, comprised of three renowned forensic scientists and retired crime laboratory managers, has worked closely on the investigation throughout Phase I.³ Each member of the Scientific Advisory Board has visited the Crime Lab and Property Room, participated in interviews, and performed preliminary reviews of cases analyzed by the Crime Lab. In addition, throughout Phase I we have held regular weekly teleconferences with the Scientific Advisory Board in order to apprise it of the status of the investigation and to receive the members’ input and guidance. The members of the Scientific Advisory Board are:

Margaret Kuo retired as Deputy Director of Forensic Science Services after 27 years with the Orange County Sheriff-Coroner’s Office. Among other things, Ms. Kuo has participated in or led approximately 30 crime laboratory inspections or audits.

³ The *curricula vitae* for each of the members of the Scientific Team are posted on our Web site.

Douglas M. Lucas is the retired Director of the Centre of Forensic Sciences of the Province of Ontario, Canada. Among his many leadership positions in the forensic science community, Mr. Lucas is a past president of the American Society of Crime Laboratory Directors (“ASCLD”) and has led approximately 13 accreditation inspections performed by the American Society of Crime Laboratory Directors/Laboratory Accreditation Board (“ASCLD/LAB”) as well as audits of 12 other crime laboratories.

Bruce W. Vander Kolk retired in 2001 as the Commander of the Illinois State Forensic Sciences Command, where he oversaw the operations of eight regional forensic science laboratories and a research and development laboratory. During his career, Mr. Vander Kolk has, among other things, served on the strategic planning committee as well as the Board of Directors of ASCLD.

Our team includes a Scientific Team Coordinator, **Roger J. Bolhouse**, who is responsible for overseeing and coordinating the case reviews to be performed by our forensic scientists. Mr. Bolhouse also is our primary expert in trace evidence examination. He was an officer with the Michigan State Police (“MSP”) for 26 years, including 22 years in the MSP’s crime laboratory system. He retired in 2000 as Director of the MSP’s Grand Rapids Laboratory and currently is a forensic scientist with Speckin Forensic Laboratories in Okemos, Michigan.

The following forensic scientists involved with the investigation have been drawn from across North America and are experts in their respective fields. These scientists will be largely responsible for the case reviews that we will perform during the second phase of the investigation. During Phase I, we have held bi-weekly conference calls to advise and consult with the members of the Scientific Advisory Board and forensic science team.

Robert P. Bianchi is a former Director of the Drug Enforcement Administration Special Testing and Research Laboratory in McLean, Virginia.

Michael A. Evans, Ph.D., is the President and Chief Executive Officer of the American Institute of Toxicology Laboratories located in Indianapolis, Indiana.

Patricia P. Hamby has over thirty years of experience in forensic serology and has been a criminalist in several law enforcement crime laboratories.

Edward E. Hueske is a firearms and toolmark expert who retired as a Supervising Criminalist with the Arizona Department of Public Safety in 1996.

Karen L. Irish retired in 2003 as the Director of the Forensic Services Section of the Baltimore County Police Department.

Carll Ladd, Ph.D., is the Lead Criminalist and supervisor of the Forensic Biology Unit of the Connecticut State Forensic Laboratory.

Michael Sinke spent 20 years as a forensic scientist with the Michigan State Police Crime Laboratory and is a questioned document examiner with Speckin Forensic Laboratories.

Rick W. Staub, Ph.D., has a doctorate in genetics and is a Director of Operations at Orchid Cellmark.

Mark D. Stolorow is a General Manager with Orchid Cellmark and has been a forensic serologist for over 30 years.

C. Structure of the Independent Investigation

Pursuant to our agreement with the City and HPD, our investigation into the management, operations, and performance of the Crime Lab and Property Room is divided into two phases.

During Phase I, which began on March 30, 2005 and is now complete, we have made substantial progress gathering facts related to the current and historical operations and practices of the Crime Lab and Property Room. Among other things, this fact-gathering and related analysis has been designed to lead, in consultation with HPD, to the development of a detailed plan for the second phase of the investigation, which is described in the final section of this report. In addition to our factual investigation and the development of the plan for Phase II, we also have issued monthly public reports. The Crime Lab, HPD, the City Council, and the Stakeholders Committee all have agreed that a critical component of our work is the transparency provided by these monthly public reports. This is our third report and covers the period March 30, 2005 through June 20, 2005.

The second phase of our investigation will involve reviewing a sample of cases analyzed by the Crime Lab during defined time periods, which will be drawn from each of the Crime Lab's forensic science disciplines -- DNA/serology, controlled substances, toxicology, trace evidence, questioned

documents, and firearms.⁴ These cases will be reviewed by our team of forensic scientists and evaluated with reference to the HPD Crime Lab's own standards in place at the time, as well as to applicable standards and practices generally accepted within the forensic sciences community during the time the analyses were conducted. During Phase II, we will issue quarterly reports regarding the status of the investigation and our findings as well as report monthly to the Stakeholders Committee. At the end of our investigation, we will issue a comprehensive report that will present in detail our investigative findings regarding the historical practices within the Crime Lab and Property Room, as well as provide recommendations, based on our team's expertise and our observations of the Crime Lab, intended to assist HPD in putting the Crime Lab on a trajectory to become a first-rate forensic science laboratory that has the full confidence of the citizens of Houston.

Status of the Investigation

During the three-month period covered by our Third Report, we have made rapid and substantial progress in our investigation by, among other things, gathering and reviewing relevant documents, including electronic documents such as e-mail; interviewing current and former Crime Lab and HPD personnel; consulting on a weekly basis with our Scientific Advisory Board and on a bi-weekly basis with our entire forensic science team; meeting with the Harris County District Attorney and representatives from the Houston criminal defense bar; holding discussions with critics of the Crime Lab and experts who have reviewed work performed in the Crime Lab; and conducting a small-scale review of historical cases analyzed by the Crime Lab. These limited case reviews we conducted during Phase I contributed to our preliminary assessments of the quality of work performed by the Crime Lab over time and assisted us in developing our plan for Phase II of the investigation.

⁴ HPD's initial estimate for the number of case reviews we will conduct, which HPD formulated prior to the beginning of our work, is 1,966. With the approval of HPD and the Stakeholders Committee, we have retained statisticians from PricewaterhouseCoopers LLP to assist us in reviewing the methodology and statistical calculations used by HPD to arrive at this overall number and the number of cases to be reviewed in the specific areas of the Crime Lab's operations. Moreover, in light of the controlled substances drylabbing incidents discussed in our Second Report, HPD has requested that we conduct a comprehensive review of the cases performed by the two analysts involved in those incidents. Our plan for the Phase II case reviews being submitted separately to the Stakeholders Committee and to HPD will be issued publicly once an agreement has been reached regarding the specifics of our Phase II case reviews.

A. Documents

On April 4, 2005, we submitted a letter to HPD containing a broad range of document requests calling for all information, in whatever form, responsive to the requests, including but not limited to correspondence, memoranda, reports, journals, manuals, hard copy paper files, e-mail, computer files, electronic databases, and videotapes. On April 4, 2005, we also provided HPD with a letter requesting that it take steps to ensure that all materials potentially relevant to our investigation be preserved.

Throughout the first phase of our investigation, HPD has been very cooperative in providing access to relevant documentation, and we are generally pleased with the flow of information from HPD. A partial list of the materials we have reviewed during Phase I includes: correspondence files maintained by the office of the Chief of Police; files maintained by the Crime Lab, including correspondence files;⁵ e-mail and other electronic documents from the hard drives of current, and some former, Crime Lab employees; personnel files; files kept by individual current and former Crime Lab analysts and supervisors; lab journals; laboratory case files; investigative files maintained by the Internal Affairs Division (“IAD”); documents obtained, with the Crime Lab’s authorization, from ASCLD/LAB related to the accreditation process; and budgetary and grant-related documents.⁶

B. Interviews

During the first phase of this investigation, we have conducted a total of 83 interviews of 61 people, including current and former Crime Lab personnel,

⁵ The Crime Lab has retained correspondence files going back only to 1998. Crime Lab correspondence files for the years 1997 and prior were discarded pursuant to routine practice of the Crime Lab Division prior to the adverse publicity surrounding the Crime Lab beginning in November 2002. At that time, documents were ordered preserved and we have found no evidence that any documents were destroyed after that time. We have interviewed personnel responsible for the document destruction in earlier years and have concluded that it was performed consistent with long-existing document retention practices within the Crime Lab.

⁶ During our interview with former HPD Chief C.O. Bradford, on June 21, 2005, Chief Bradford supplied us with an extensive set of Crime Lab-related documents that had been copied for him while he was still serving as Chief. We had not previously received some of these documents from HPD. We will be exploring why we failed to receive these documents from HPD and will take further steps to ensure that we receive all responsive documents.

HPD officers, a representative from the Harris County District Attorney's Office, and the former interim director of the Crime Lab. In particular, since our last report we have interviewed all of the members of HPD's command staff over the Crime Lab during the period 1997 through 2003, including former Chief of Police C.O. Bradford, Executive Assistant Chief of Police Timothy Oettmeier, former Executive Assistant Chief Dennis Storemski, and former Assistant Chief of Police Milton Simmons. The recollections and perspectives of these current and former HPD executives in the chain of command over the Crime Lab are central to our efforts to develop a complete and balanced picture of the challenges and problems that have confronted the Crime Lab over time and the reasons for its documented failures.⁷

We greatly appreciate the cooperation we have received from all of the people we have interviewed. Many of our interviews of persons central to our investigation have lasted four or more hours -- our interview with former Chief Bradford lasted nearly nine hours, and several of the key witnesses have been interviewed more than once. With the exception of a single individual, former DNA analyst Christy Kim, we have been successful in meeting with all of the former Crime Lab and HPD personnel we have contacted. There remain a few former employees with whom we would like to meet, but have not yet, including Ms. Kim. We have discussed with the Stakeholders Committee alternative methods of obtaining subpoena power if that proves necessary in the future to secure the cooperation of key witnesses, and the Committee has given us its full support.

We continue to find current HPD and Crime Lab personnel to be extremely helpful and cooperative. Following the issuance of our Second Report, we met for a third time with all available current Crime Lab personnel to discuss the report and the status of our investigations and to answer any questions they had. Press coverage related to our Second Report, and in particular the attention devoted to the past instances of drylabbing discussed therein, has had a detrimental effect on the morale of many of the analysts in the Crime Lab.

⁷ We circulated a draft of this report for comment to the members of the Stakeholders Committee and to HPD. In addition, in the interests of accuracy, we provided approximately ten witnesses who are quoted and to whom specific views and opinions are attributed with his or her quotations and attributions. We did so to confirm that the quotations and attributions were accurate and that they were presented in appropriate context. We reserve the right to accept or reject any changes or modifications requested by witnesses based on our review of the evidence we have collected.

Nevertheless, we continue to receive exceptional cooperation from the Lab's staff, who are generally supportive of this investigation.

Finally, since the issuance of our Second Report, we have met with representatives of the Houston criminal defense bar to get their perspective on issues related to the criminal justice system in Houston generally and the Crime Lab in particular. We found the meeting very instructive, and we intend in the near future to meet with additional attorneys who have had involvement in issues related to the Crime Lab. We also have had extensive discussions with two critics of the Crime Lab who had prominent roles in bringing problems in the DNA/Serology Section to light, Professor William Thompson and Dr. Elizabeth Johnson. Finally, we met with representatives from the Innocence Project in New York, including Barry Scheck, Peter Neufeld, and Texas State Senator Rodney Ellis (who sits on the Board of Directors of the Innocence Project), to gain their perspective on the HPD Crime Lab and on related problems associated with crime laboratories in the United States generally.

C. Case Reviews

The RFP issued by HPD in connection with commissioning this review of the Crime Lab and Property Room suggested that 1,966 individual case reviews be performed across six forensic science disciplines historically worked in the Crime Lab. With respect to the areas of trace, controlled substances, firearms, questioned documents, and toxicology, the RFP calls for the cases to be drawn from the seven-year period 1998 through 2004. The DNA and serology cases are to be selected from cases analyzed between the years 1987 through 2002, the year in which the operations of the Crime Lab's DNA section were suspended.

As discussed in our Second Report, during Phase I all of the members of our Scientific Advisory Board as well as our Scientific Team Coordinator spent a week at the Crime Lab performing a limited review of cases. The purpose of these case reviews was threefold: (1) to obtain a preliminary assessment of the quality and documentation of the work and reports generated by the Crime Lab across analysts and time periods; (2) to get a sense of the volume of the case work performed by the Lab during the relevant time periods; and (3) to develop estimates as to the time that our forensic scientists will need during Phase II to review cases selected from each of the forensic science disciplines. We selected and reviewed cases analyzed by many of the forensic scientists currently and formerly employed in each of the sections of the Crime Lab across the relevant periods.

Preliminary Factual Findings

We have gathered a wealth of information from interviews and from our review of the substantial volume of documents we have received from HPD, the Crime Lab, the Property Room, and other sources. This section of the report is a summary of the preliminary factual findings we have made over the past 90 days. At appropriate points, this section of the report also discusses areas that we believe warrant further investigation. Although our investigation is ongoing, and although there remain significant former employees whom we believe it is necessary to interview to develop a full and complete perspective on the issues that have faced the Crime Lab and Property Room, we have already gathered significant information that forms a central part of understanding and assessing the serious problems that have existed in the Crime Lab.

During Phase II, we will issue quarterly reports describing our progress with the case reviews as well as discussing additional factual information that we have developed regarding the historical operations, performance, and management of the Crime Lab and Property Room. At the conclusion of our investigation, we intend to issue a detailed report containing, among other things, our comprehensive factual findings and recommendations for improvement in the Crime Lab.

A. Early History of the Crime Lab (1953-1989)

HPD's Crime Lab was established in 1953. For thirty years until his retirement in 1983, Floyd McDonald served as the Crime Lab's first and only director.⁸ Under Mr. McDonald, the Crime Lab performed four types of forensic analysis -- toxicology/breath alcohol testing, controlled substances, trace evidence examination, and serology. Although the Crime Lab staff tended to specialize in certain areas of analysis, most of the Crime Lab's analysts during this period were generalists and had case experience in more than one discipline, as was typical in most crime laboratories around the country at the time. The Crime Lab was located at 61 Reisner Street until the late 1980s, when it was moved to 33 Artesian Place.

⁸ After retiring from HPD in 1983, Mr. McDonald started the Pasadena (Texas) Police Department's crime laboratory. Over the years, several HPD criminalists left the Crime Lab to work in the Pasadena lab, including that lab's current director.

In the very early days of the Crime Lab, all analysts including Mr. McDonald were sworn police officers, known at HPD as “classified” employees. The long-term Crime Lab employees with whom we have spoken believe that Mr. McDonald had close relationships with members of the HPD command staff and was reasonably effective in obtaining resources and equipment for the Crime Lab, including the Lab’s first gas chromatograph/mass spectrometer (“GC/MS”) in the late 1970s.⁹

Over time, the Crime Lab became increasingly civilianized, in part as a cost saving measure: HPD has traditionally paid civilian employees less and afforded them fewer employment-related benefits than classified officers. Thus, as demands on the Crime Lab increased throughout the 1970s and early 1980s, the Crime Lab under Mr. McDonald found it could staff more new analyst positions if those positions were held by civilians rather than sworn officers. By the early 1980s, the number of classified positions within the Crime Lab had become frozen, and the opportunity for an employee to become classified was available only if an existing classified position was vacated.

When Mr. McDonald retired in 1983, his deputy, Peter Christian, became the head of the Crime Lab. A competitive examination was administered within the Crime Lab to determine who would be promoted to be Mr. Christian’s deputy, a classified position. Robert Bobzean and Donald Krueger, who joined the Crime Lab in August 1972 and November 1978, respectively, competed, along with a third Crime Lab analyst, for the number two spot in the Lab.¹⁰ Mr. Krueger scored highest on the test, was classified, and was promoted to the assistant director position.

The distinction between classified and unclassified -- *i.e.*, sworn officers and civilians -- is significant at HPD in terms of salary, benefits, and respect afforded by the Department. Nearly all of the current and former Crime Lab employees with whom we have met believed that the Department has traditionally regarded civilian employees as second-class citizens. Crime Lab employees have felt that, as a division within the support services command -- as opposed to an operations command -- and a division populated predominantly

⁹ A GC/MS is an essential laboratory instrument that separates, identifies, and quantifies the components of complex mixtures. The gas chromatograph separates components of mixtures and directs them into the mass spectrometer where they are identified by patterns unique to each chemical compound. Mass spectrometry has its widest application in the identification of drugs.

¹⁰ Mr. Bobzean eventually attained classified status.

by civilian analysts, the Crime Lab was relegated to a doubly marginalized status in the eyes of high-level HPD executive command staff and budget planners.

B. The Crime Lab During the DNA Era (1989–2002)

During the late 1980s, DNA typing became a new and extremely powerful identification tool for forensic scientists. Forensic DNA profiling was pioneered by Sir Alec Jeffreys, a professor at Leicester University in England. Professor Jeffreys' DNA profiling technique was first employed in connection with a criminal investigation in the famous Colin Pitchfork case, in which DNA analysis was used to exonerate a wrongly accused young man and to identify and help convict the murderer of two 15-year-old girls in 1988. Since then, DNA profiling has become an extremely sophisticated and effective scientific tool in criminal investigations and is now a fundamental discipline in most crime laboratories.

1. Background Regarding DNA Profiling

The nucleus of each of the 60 trillion nucleated cells in the human body contains strands of genetic material called chromosomes, along which a person's genes are arranged. Genes -- which are composed of molecules carrying the body's genetic information known as deoxyribonucleic acid (DNA) -- are the fundamental units of heredity and contain code for individual traits such as hair or eye color. The term "allele" refers to characteristics of a specific gene or a specific location on a DNA strand.

Most human DNA (99.9%) is the same for everyone. Therefore, because forensic scientists are interested in the individualization of samples containing DNA -- *e.g.* blood, semen, and saliva -- they focus only on the relatively few chromosomal locations -- alleles -- that vary widely among individuals. Moreover, a DNA analyst only needs to examine enough locations -- or loci -- to render negligible the statistical probability that two people could have the same DNA profile purely by chance. Under current DNA standards in the United States, a DNA profile for an individual is generally considered to be one which consists of the alleles present at 13 specified chromosomal loci. Generally speaking, there is less than a 1 in 200 billion chance that two DNA profiles for unrelated persons consisting of alleles present at all 13 of these locations will be the same (the total population of the world is only about 6.4 billion persons).

The first step in DNA analysis is determining whether DNA is present on evidence of any kind recovered from a crime scene. Forensic scientists perform preliminary testing to determine whether certain body fluids that might contain DNA are present. After a sample is determined to be a potential source of DNA,

several techniques may be used to attempt to extract DNA from the evidentiary sample. With mixed specimens such as those typically examined in sexual assault cases, the “male” and “female” components are separated, purified, and profiled separately. While the actual DNA analysis process is now highly standardized and computerized, this preliminary aspect of the analysis is quite labor intensive.

DNA analysis techniques have evolved rapidly and become much more sophisticated since the advent of forensic DNA profiling twenty years ago. From the beginning, forensic scientists interested in developing profiling techniques have focused on regions of the DNA chromosome that contain multiple copies of DNA sequences arranged in a repeating fashion.¹¹ These regions are known as “tandem repeats.” Tandem repeats are useful in profiling because, while all humans have the same types of repeats, there is enormous variation in the number of repeats among individuals.

The original form of DNA analysis, which continued to be the predominant method of DNA typing through the mid-1990s, is known as restriction fragment length polymorphisms (“RFLP”). The RFLP process, while very discriminating, requires many manual steps in the process and is therefore labor intensive and is time consuming. It also requires a relatively large amount of DNA in non-degraded condition.

DNA profiling technology made a major advance in the late 1980s with the development of a technique known as polymerase chain reaction (“PCR”), which is an “amplification” process designed to copy or multiply DNA strands. Development of the PCR process gave forensic scientists the ability to analyze minute samples of DNA and made DNA profiling available in cases involving sample amounts too small for effective RFLP analysis.

The most common form of DNA typing used today is short tandem repeats (“STR”) analysis, which was developed in the early 1990s and for which commercial “kits” became available in the late 1990s. STRs are regions on the chromosome (loci) containing a small DNA sequence that is repeated. STR analysis also involves three steps: amplification, electrophoresis, and interpretation. The forensic science community in the United States has

¹¹ DNA is composed of four building blocks called “bases.” These are adenine (“A”), cytosine (“C”), guanine (“G”), and thymine (“T”). These bases combine with each other (C with G and A with T) to form “base pairs.” It is the sequence and numbers of these base pairs that are determined in profiling.

standardized DNA typing based on 13 STR loci for entry into the national DNA profiling database known as the Combined DNA Index System (“CODIS”),¹² which is managed by the Federal Bureau of Investigation (“FBI”).

DNA profiling has many advantages over the conventional serology procedures that were used prior to its development.¹³ In addition to the markedly improved discrimination capability of DNA profiling, it is a very robust system, particularly where PCR techniques are used, as compared to the more labile genetic markers involved with serology. Using differential extraction, the sperm (male) components of a mixture can be separated from the female components, which is extremely useful in interpreting results in sexual assault cases. In addition, DNA analysis is now highly automated, while conventional serology was a manual process that involved a somewhat subjective interpretation of results.

2. Peter Christian’s Management of the Crime Lab

Mr. Christian was the head of the Crime Lab from 1983 until his death in March 1995. During this time, the field of forensic science underwent a technological revolution, particularly with the advent of DNA profiling techniques. As discussed in the following section, under Mr. Christian, the Crime Lab established DNA analysis capabilities in the early 1990s.

The view of personnel in the Crime Lab -- and we interviewed many people who served under both directors -- is that Mr. Christian was not as effective in asserting the interests of the Crime Lab with the HPD chain of command as Mr. McDonald had been. Mr. Christian suffered from chronic health problems, including heart and back ailments, which caused him to be absent from the Crime Lab for significant periods of time. During

¹² CODIS is a system that “enables federal, state, and local crime labs to exchange and compare DNA profiles electronically, thereby linking crimes to each other and to convicted offenders.” CODIS is a hierarchical database with three tiers -- the National DNA Index System (NDIS) is the highest tier, with state (SDIS) and local (LDIS) databases flowing into it. See www.fbi.gov/hq/lab/codis/brochure.pdf.

¹³ Serology involves the identification of physiological fluids (*e.g.*, blood, semen, and saliva) and their comparison based on the analysis of genetic markers such as the ABO blood group system and other polymorphic enzyme and protein systems. Following the development of DNA profiling, serology in most forensic laboratories has been restricted to the identification of fluids and stains that might contain DNA.

Mr. Christian's absences, Mr. Krueger would assume leadership of the Crime Lab.

On January 25, 1993, five Crime Lab analysts directed a memorandum to Chief of Police Sam Nuchia in which they complained about the lack of opportunity for promotion, inequities in the evaluation system, and ethnically derogatory remarks among Lab employees. Attached to the memorandum was a diagram of the Crime Lab purporting to show that the Lab workbenches were racially segregated.

In 1994, HPD under Chief Nuchia developed a "Plan of Action for the Reversal of Civilianization," which would have given Crime Lab employees who met certain requirements the opportunity to become classified officers with the attendant salary and employment benefits. Although the initiative to reverse the gradual civilianization of the Crime Lab had widespread support among the Lab's supervisors and analysts, they also had several reservations about the plan. In a memorandum to Chief Nuchia dated February 28, 1994, twenty-four Crime Lab analysts stated that, while they appreciated the opportunity to receive the "benefits, career opportunities, and salary compensation" associated with classification, they had several concerns, including the physical requirements for classification and the proposed abolition of a civilian career ladder in the Lab. The memorandum concluded that "we feel that the reversal of civilianization, as it [is] proposed will be detrimental to the Houston Police Department Crime Laboratory." A program to classify Crime Lab supervisor and analyst positions was never implemented.

During Mr. Christian's tenure, there was relatively open communication among personnel in the Crime Lab. Supervisors and analysts participated in monthly Lab-wide meetings led by a rotation of supervisors from the various sections. According to the agendas of these meetings, topics of discussion included personnel and divisional concerns, safety, budget, cases of note in the Lab, and initiatives such as the development of the DNA Section.

After Mr. Christian passed away and Mr. Krueger became the head of the Crime Lab, the monthly meetings continued for a time and then abruptly stopped.¹⁴ Mr. Krueger reduced the frequency of staff meetings to approximately once or twice a year, and he believed the monthly meetings had

¹⁴ The monthly meetings continued until shortly after the Crime Lab moved to its current location in HPD headquarters at 1200 Travis Street in late 1997. The most recent Crime Lab monthly meeting agenda we have been provided is dated August 9, 1995.

lost their utility since they tended to devolve into “gripe sessions” over issues such as low pay.

3. Creation of the DNA Section

James R. Bolding joined the Crime Lab in October 1979 and worked as a drug chemist for approximately 18 months. In the spring of 1981, the Crime Lab’s head serologist invited Mr. Bolding to train in serology in order to replace recent departures from the Lab. Mr. Bolding has described his serology training as consisting of less than five months of on-the-job training under the supervision of the head of serology. Within a year after Mr. Bolding began training in serology, his supervisor died. Mr. Bolding was the only remaining serologist in the Crime Lab. He had not yet received any formal training in fundamental serological techniques, including ABO blood typing. Mr. Bolding told us that he “took books home and did the best he could.” On November 14, 1981, Mr. Bolding was promoted to Criminalist II.¹⁵

In July 1982, Mr. Bolding successfully completed an intensive course in bloodstain analysis at the Serological Research Institute (“SERI”) in Emeryville, California. That same month, and less than a year after his promotion to Criminalist II, Mr. McDonald recommended that Mr. Bolding be promoted to Criminalist III “as soon as possible” because he “is the only Criminalist II we have who is a qualified and experienced Forensic Serologist and he has recently completed the SERI course in Forensic Serology.” In the fall of 1982, he was promoted to Criminalist III, despite his minimal experience in serology.

By 1987, there were already hints of the personnel problems that would become even more distracting and debilitating in the DNA/Serology Section throughout the 1990s and early 2000s. In a memorandum to Chief of Police Lee P. Brown dated November 13, 1987 and entitled “Serology Section Work Load Increase,” Mr. Bolding complained that “the loss of trained staff and the increase in paperwork has had a devastating effect on sectional proficiency.” Mr. Bolding stated that workload problems in the Serology Section were “exacerbated by disgruntled employees” and that “[a]ccusations of incompetence and personal prejudice are part of my daily schedule.”

¹⁵ Criminalist I is the entry level position for personnel conducting forensic science analysis in the Crime Lab; Criminalist II is the more advanced position for a working analyst; Criminalist III is the title for first-line forensic science supervisors; and Criminalist IV is the top-level supervisory position, which generally involves the supervision of multiple sections in the Lab.

In the late 1980s, Mr. Bolding began to campaign for the addition of DNA analysis capability to the Serology Section. We have been told that Mr. Christian, who was skeptical about serology in general, was slow to recognize the potential of DNA profiling and was reluctant to make changes at the Crime Lab to accommodate developing a DNA capacity. In 1989, Mr. Bolding obtained Mr. Christian's agreement that, if Mr. Bolding were able to secure grant funding, he could move forward with establishing a DNA unit. That year, Mr. Bolding obtained approval from the Houston-Galveston Area Council for a \$300,000, five-year grant to start the DNA Section.¹⁶ The DNA Section's initial heavy reliance on grant funding for equipment and technological improvement, which existed from the very beginning, would continue throughout the 1990s and early 2000s.

With the initial funding, the Crime Lab hired two analysts for the newly created DNA/Serology Section in 1989, including Dr. Baldev Sharma. Dr. Sharma received a Ph.D. in Chemistry from Delhi University's All India Institute for Medical Sciences in 1966. Prior to joining the Crime Lab, Dr. Sharma had no experience in forensic science and only a basic theoretical knowledge of molecular biology. From November 26, 1989 through December 20, 1989, Mr. Bolding and Dr. Sharma attended the FBI Academy's Laboratory Application of DNA Typing Methods School, which covered RFLP analysis. Upon returning from the FBI Academy, Mr. Bolding and Dr. Sharma adopted the training manuals they had received from the FBI into the standard operating procedures ("SOPs") for the DNA Section.

In 1990, the DNA Section hired two more analysts, including Joseph Chu, bringing the size of the DNA Section to five analysts under Mr. Bolding.¹⁷ It took approximately a year for all of the new equipment to arrive and to reconfigure the Crime Lab to include a "hot room" for the labeling and handling of the radioactive probes used in RFLP analysis. The DNA Section began performing actual casework in early 1991. While the DNA/Serology Section under Mr. Bolding was working to establish the necessary infrastructure to bring RFLP

¹⁶ This original grant was of a "descending funding variety" that required the City to assume an increasing proportion of the funding responsibility for the grant each year. We understand that this same grant mechanism was used to develop a DNA capacity in the Harris County Medical Examiner's Office during this same period.

¹⁷ Ms. Kim joined the Crime Lab in 1982, and by 1990 she had been assigned to the DNA/Serology Section.

analysis on-line, HPD had been outsourcing cases requiring DNA analysis to a laboratory at the Baylor College of Medicine.

4. Operations of the DNA/Serology Section (1991-2002)

a. Dr. Sharma's Difficulty with RFLP Analysis

Although Mr. Bolding had attended the FBI training in RFLP analysis in 1989 and an FBI course in Advanced Aspects of Forensic DNA Analysis in 1992, he did not perform any analyses of the post-training samples required by the FBI to receive full course credit and, in fact, never performed casework analysis personally. Rather, Dr. Sharma supervised the casework performed by more junior analysts in the DNA/Serology Section. Dr. Sharma experienced profound difficulty generating conclusive results through RFLP analysis because, while he was able to extract DNA, his manual RFLP technique tended to generate weak or diffuse bands that made determinations difficult if not impossible. Mr. Bolding told us that, in some cases when Dr. Sharma failed to obtain results through RFLP analysis, he would request a different DNA analyst to perform PCR testing on the sample, which is more sensitive and requires a smaller sample than RFLP testing.¹⁸

b. Early Problems in the DNA/Serology Section

In mid-1993, Mr. Bolding was promoted to the Criminalist IV position overseeing the Trace and DNA/Serology Sections as well as the Crime Lab's Central Evidence Receiving ("CER") unit. Mr. Bolding acknowledges that, despite Dr. Sharma's seeming weakness as a bench DNA analyst, he supported the decision in 1993 to promote Dr. Sharma to the DNA/Serology Section Criminalist III line supervisor position that he had just vacated. At the time, Mr. Bolding believed Dr. Sharma was competent and that, as the only Ph.D. in the Crime Lab, he was appropriately credentialed for the supervisor position.

The new DNA/Serology Section began experiencing funding, workload, and morale problems within a very short time after DNA analysis began within the Crime Lab.

In a May 12, 1994 memorandum to a lieutenant in the Sex Crimes Unit, Mr. Bolding responded to the lieutenant's request for information regarding the needs of the DNA/Serology Section. In the memorandum, Mr. Bolding stated

¹⁸ Dr. Sharma was never trained in PCR analysis.

that the DNA/Serology Section was not funded to do the volume of DNA testing that he would like. In particular, Mr. Bolding explained that, due to “under funding and under staffing,” the DNA Section performed testing only to the point where it could be determined whether there was a “match” to a known sample. Mr. Bolding said that he would prefer his Section to perform testing to “absolute completion” and to have funding sufficient to build a local felon database “that would fit precisely into the national ‘Combined Offender DNA Information System’ (C.O.D.I.S.).” Mr. Bolding also anticipated the advent of STR sequencing analysis and said that the Section was “attempting to acquire all supplies[,] equipment and training required for this next step.”

In August 1994, Dr. Sharma held individual meetings with analysts in the DNA/Serology Section to address developing problems in the Section. Commenting on the Section’s system of processing a DNA case -- which involved the DNA extraction being performed by a serologist, who then passed the case to an RFLP analyst, who then, if necessary, passed the case to a third analyst for PCR testing -- Mr. Chu stated that he believed “too many chemists are involved in some cases” and that “[i]n a lot of cases[,] evidence shuffle from one to other we can miss some information”[sic]. Dr. Sharma dismissed these concerns and responded that the “evidence is transferred from one serologist to the next according to the SOP” and that Mr. Chu would have to be “more specific about what kind of information we can miss.” Unfortunately, Mr. Chu’s observations would prove prescient.

During these August 1994 meetings, members of the DNA/Serology Section raised concerns about the lack of consistency among analysts in the Section in adhering to the SOPs as well as the lack of specificity in some areas of the SOPs. This lack of specificity in the SOPs, one criminalist felt, could be used as a “weapon” against line analysts in the Section. Another analyst complained about the lack of training, stating that “I need to have a scheduled and more solid training in PCR.” In a staff survey conducted by Mr. Bolding in November 1994, members of the DNA/Serology Section complained about “destructive comments,” “cultural bias,” lack of standardized SOPs, and favoritism.

c. Feuding Between Mr. Bolding and Dr. Sharma

In October 1994, a specific conflict developed between Mr. Bolding and Dr. Sharma over the placement of a new analyst in the DNA/Serology Section. This gave rise to a turf battle between Mr. Bolding and Dr. Sharma over the appropriate level of supervision Mr. Bolding should exercise over the Section.

Dr. Sharma also made a serious error in a serology case in May 1995. While Dr. Sharma was training a new serology analyst, Mr. Bolding asked Dr. Sharma to determine whether semen was present in a dried fluid stain. Rather than test for the presence of semen using a P-30 or acid phosphatase test, Dr. Sharma simply viewed the sample under a stereo microscope and reported it negative for semen.¹⁹ Later, while attempting to remove fibers from the sample for analysis, a trace evidence examiner discovered that no chemical analysis for semen had been performed. Upon learning of the error, Mr. Bolding directed that a chemical test be performed on the sample, and this test indicated the presence of semen.²⁰ Dr. Sharma received no significant discipline as a result of this error.²¹

Following the discovery of his error, Dr. Sharma resisted Mr. Bolding's attempts to supervise him and the members of the DNA/Serology Section directly. In mid-1995, Mr. Bolding lowered Dr. Sharma's overall evaluation rating, which led to a prolonged grievance process that extended into early 1996.

On February 22, 1996, Mr. Bolding lodged a formal complaint with the IAD against Dr. Sharma alleging "official repression" and citing numerous incidents of alleged misconduct on the part of Dr. Sharma, some dating as far back as late 1994 and 1995.²² In June 1996, Dr. Sharma filed a broad set of allegations against Mr. Bolding with IAD, none of which were sustained. The investigator commented that "[t]his IAD investigation is another episode of the on going [sic] problems between Mr. Sharma and Mr. Bolding" and that "Mr. Sharma continues to demonstrate that he is a disgruntled and contentious employee."

¹⁹ P-30 is a protein present in seminal fluid. Acid phosphatase is an enzyme that is secreted by the prostate gland into seminal fluid.

²⁰ By the time Dr. Sharma's error was discovered, the Assistant District Attorney involved in the case already had agreed to a lesser-charge plea bargain based on Dr. Sharma's original assessment that no sperm was present in the sample.

²¹ Mr. Bolding included this incident in the February 22, 1996 IAD complaint he filed against Dr. Sharma. The IAD investigator found that the incident already had been resolved through an informal procedure known as PPI (an acronym for "policy, procedures and issues") and considered the matter closed.

²² After an IAD investigation of Mr. Bolding's charges against Dr. Sharma, the allegations were determined to be "not sustained."

In short, the DNA/Serology Section at this time had become embroiled in bitter internal conflicts between the Section's supervisor and its manager, which were obvious to everyone in the Section, if not the entire Crime Lab. Indeed, both Mr. Bolding and Dr. Sharma acknowledge that they were in frequent conflict with each other during this period. Yet, these corrosive internal battles were allowed to continue, without any apparent recognition by more senior management that they would almost surely have an adverse impact on the proper functioning of the work in the Section.

On August 28, 1996, Mr. Krueger removed Dr. Sharma as the Criminalist III in the DNA/Serology Section and placed him in a newly created QA/QC position that reported directly to Mr. Krueger. Witnesses, including Mr. Krueger, recall that Dr. Sharma was removed as the supervisor in the DNA/Serology Section as a consequence of the Lynn Jones matter, discussed below, which came to light in October 1996.²³ As discussed later in this report, Dr. Sharma was not effective in the QA/QC position and little progress was made toward the goal of accreditation, which was never pursued in an aggressive or sustained manner.

Because Dr. Sharma retained the only Criminalist III position allocated to the DNA/Serology Section despite his removal as its line supervisor, no one replaced Dr. Sharma as the Criminalist III supervisor for the Section. Although the vacancy appeared on the Crime Lab's organization chart, as discussed in our Second Report, the Criminalist III vacancy remained a gaping hole in the supervisory structure of the DNA/Serology Section for six years, through December 2002, when the Crime Lab's DNA analysis function was suspended.

d. The Lynn Jones Case and the 1996 Inspections Division Audit of the DNA/Serology Section

On January 26, 1996, Lynn Jones was arrested and charged with sexual assault of a child. A rape kit was completed and investigators gathered evidence in the form of sheets, bedding, and clothing from the alleged crime scene. On February 1, 1996, the District Attorney's office requested that the Crime Lab process the rape kit, and an initial examination of the kit was performed on February 12, 1996. On March 20, 1996, hair, blood, and saliva samples were

²³ There appears to be a conflict between the date on which problems related to the Lynn Jones case were discovered and the date of Mr. Krueger's memorandum advising Chief Simmons of the reorganization. We will attempt to resolve this issue as our investigation continues.

collected from Mr. Jones, who remained in custody. The lab case number for Mr. Jones's case was handwritten on a stenographer's note pad that, at that time, constituted the sole log and tracking system for cases requiring DNA analysis. Over three months later, on July 2, 1996, the serologist responsible for extracting DNA samples transferred the case to an RFLP analyst and at that time told the DNA analyst that the case was "extremely urgent." Because the RFLP analyst had difficulty obtaining results from the sample, the analyst requested that PCR testing be performed. On September 23, 1996, the case was transferred to a third analyst in the DNA/Serology Section for PCR testing.

On October 9, 1996, a television news story ran on Mr. Jones's case, and, on October 11, 1996, the Houston Chronicle reported that he had been jailed on a sexual assault charge for nearly nine months while awaiting the Crime Lab's completion of the DNA tests that eventually cleared him and resulted in his release. An IAD investigation was immediately opened, and Dr. Sharma was cited for incompetence in connection with his failure to properly manage the DNA/Serology Section's case distribution and for modifying Lab procedures without prior review and authorization.²⁴ On April 23, 1997, Dr. Sharma was given a five-day suspension.

In the immediate wake of the debacle surrounding the Jones case, on or about October 15, 1996, HPD Chief Nuchia directed HPD's Inspections Division to audit the DNA/Serology Section's procedures for receiving evidence requiring DNA analysis and for assigning, tracking, and managing DNA cases. The following month, the Inspections Division issued a detailed report containing the following four findings:

- The Crime Lab had no system to ensure that requests for DNA analysis contained in offense report supplements prepared by HPD officers are received by analysts.
- The offense report supplements used to request Crime Lab analysis did not provide sufficient information to allow for the assignment of priorities to analysis requests and to determine the level of analysis that would be required.
- Case files maintained by the Crime Lab did not contain timeline data necessary for case management.

²⁴ IAD also concluded that Dr. Sharma had not been truthful with investigators.

- The Crime Lab lacked management oversight with respect to the assignment, transfer, monitoring, and tracking of cases, and cases were assigned on an *ad hoc* or crisis basis.

The report concluded that, “[a]lthough the DNA/Serology Unit diligently strives to complete as many DNA requests as possible, a comprehensive case management system is needed to provide resource accountability and guidance toward prioritizing the cases worked.”

The 1996 Inspections Division Audit Report also encouraged the Department to purchase equipment necessary to bring STR testing on-line in order to reduce the time necessary to complete DNA analyses. The report anticipated that the CODIS offender database would be made available on the state level in the near future and predicted that:

The DNA/Serology Unit workload will be *significantly increased* due to the fact that all sexual assault kits will require testing and DNA data entry into the CODIS database. If the Crime Lab is to contribute to the CODIS system, the ability to rapidly turnaround [sic] DNA sample testing through the use of STR-PCR testing *is mandatory*. [Emphasis in original.]

As anticipated in the 1996 Audit Report, the backlog of rape kits that the Crime Lab failed to process and enter into CODIS swelled in the late 1990s and early 2000s to approximately 19,500 unanalyzed kits as of mid-2002. Indeed, between 1998 and the end of 2002, the Crime Lab entered fewer than 350 profiles into CODIS.

e. DNA/Serology Section Criminalists Raise Concerns Regarding the Absence of a Line Supervisor

After Mr. Krueger removed Dr. Sharma as the line supervisor for the DNA/Serology Section, management of the Crime Lab failed to emphasize the urgency of filling the supervisory position in the Section and to communicate that urgency up the chain of command within HPD. On February 9, 1997, Chief Bradford convened a meeting attended by, among others, Assistant Chief Simmons, Mr. Krueger, Mr. Bolding, and a representative from HPD’s Budget and Finance Division to discuss the recommendations contained in the 1996

Inspections Division Audit Report.²⁵ Rather than take this opportunity to raise the need for a replacement line supervisor with command staff in the presence of budget personnel, Messrs. Krueger and Bolding reported that “case management problems will be eliminated” because “the Crime Lab has instituted procedures and installed a new supervisor over the DNA Testing Section.” The “new supervisor” referenced in the minutes was Mr. Bolding himself, who had never been a bench DNA analyst and who, as a Criminalist IV, at that time had administrative responsibility over both the Trace and DNA/Serology Sections. In his interviews with us, Mr. Bolding has said that he was acutely aware of the problems associated with the absence of a first-line supervisor and that he believed, in part for that reason, that the DNA Section was in troubled waters from at least that point forward. However, the documentary record, at least at this stage of our investigation, fails to demonstrate that Mr. Bolding’s recognition was translated into sustained advocacy for filling the Criminalist III vacancy. Chief Bradford has advised us that he was unaware as of the time of this February 1997 meeting of the supervisory gap in the DNA/Serology Section.

The Crime Lab’s budget submissions in the late 1990s also failed to make the case for filling the Criminalist III vacancy. For example, the Crime Lab’s budget submission for fiscal year 1998, dated January 14, 1997, stated that the Crime Lab’s DNA/Serology and Toxicology Sections were without “the direct line supervision of a Criminalist III” and rather meekly suggested that the “[c]reation of the two Criminalist III positions will complete the laboratory’s organizational structure by providing the needed direct line supervision for all sections.” This budget document contains no explanation of the potential problems that would arise -- and indeed had already arisen -- as a result of the absence of a Criminalist III supervisor in the DNA/Serology Section. The Crime Lab’s fiscal year 1999 budget submission contained no reference at all to the DNA/Serology supervisor vacancy.

On September 14, 1999, a group of six Criminalist I and II bench analysts in the DNA/Serology Section signed a memorandum addressed to Chief Bradford entitled “Restoration Criminalist III Position to Serology/DNA Section.” This memorandum described the period between 1993 and 1996, when Dr. Sharma was the line supervisor of the DNA/Serology Section, as a “total disaster” due to Dr. Sharma’s “mismanagement” of the Section. The

²⁵ Chief Bradford advised us that, well before this meeting, when he became Interim Chief of Police in November 1996, and then Chief of Police in December 1996, he was well aware of the issues raised in the Inspections Division Audit Report.

memorandum stated that “it is critical” that the DNA/Serology supervisor position, which had remained vacant since Dr. Sharma’s removal from the position three years earlier, “be restored and occupied by one of the most qualified Criminalists in the section.”

On October 20, 1999, a group of line analysts from the DNA/Serology Section met with Chief Bradford to discuss their request that the position of Criminalist III in the DNA/Serology Section be restored, as well as other issues related to equipment and training for the Section.²⁶

There is an important issue relating to whether Chief Bradford received and read the September 14, 1999 memorandum before, during, or after the October 20, 1999 meeting. Because Mr. Krueger was opposed to the memorandum being sent to Chief Bradford, presumably because the complaints of the DNA/Serology Section analysts reflected poorly on his stewardship of the Crime Lab, the analysts did not send the memorandum through the normal chain of command. This means that the memorandum was not transmitted through either Assistant Chief Milton Simmons or Executive Assistant Chief Storemski. HPD procedures require that each official who receives a piece of correspondence sign his name to reflect his review of the document. Neither Assistant Chief Simmons nor Executive Assistant Chief Storemski signed the document, and both of them deny they saw the document in 1999.

Chief Bradford also denies that he saw the memorandum at or about the time of the meeting. He advised us that, when the memorandum came to light in 2003, he and his staff conducted an exhaustive search for the memorandum but failed to locate it. Chief Bradford says that, in particular, he does not recall being informed, either in writing or orally, of the pressing need for a first-level supervisor in the DNA/Serology Section. Chief Bradford told us that, had he been aware of the urgent need, he would have taken action to fill the gap. By contrast, more than one of the DNA/Serology Section analysts specifically recall that the memorandum was provided to Chief Bradford at the outset of the meeting and that he was holding it during the meeting. Whether or not Chief Bradford received the memorandum, the notes of the meeting, taken by a

²⁶ Although Mr. Krueger recalled the DNA analysts preparing a letter for Chief Bradford, he told us that he was not aware, at the time, of their meeting with the Chief. Mr. Krueger has said that he was hurt and upset that the criminalists were going up the chain of command with their issues because he felt it reflected a view that Mr. Krueger had not been advocating forcefully for them. Mr. Krueger recalls feeling this was a stinging reproach to his leadership.

member of Chief Bradford's staff, reflect that the need for a Criminalist III was the first issue discussed at the meeting. Chief Bradford, on review of the notes, takes issue with whether he was made aware of whether it was a DNA supervisor that was needed.

Whether or not Chief Bradford saw the September 14, 1999 memorandum, accounts from numerous people whom we have interviewed and who were present at the October 20, 1999 meeting have described an extremely positive response from Chief Bradford. Indeed, the criminalists were euphoric after the meeting. They immediately convened a meeting with other personnel in the Crime Lab to report the reception from Chief Bradford, which they believed boded well for positive action on their requests. Building on their perceived success in getting Chief Bradford's attention, two criminalists had a second meeting with him in late December 1999.

The criminalists' optimism was short-lived. In an undated memorandum apparently issued after the second meeting, Chief Bradford responded that the "Criminalist III position has been put on hold until sufficient funding is acquired. Funds may be converted if future vacancies within Criminalist I or II classifications occur." This memorandum from Chief Bradford effectively sentenced the DNA/Serology Section to continue functioning without a supervisor for the indefinite future. We have been told that the members of the DNA/Serology Section were devastated by this response from Chief Bradford. After receiving the Chief's memorandum, Mr. Bolding, in particular, felt that the DNA/Serology Section's "ship had sunk" and that major problems in the Section at that point were inevitable. Chief Bradford was not aware of the impact his memorandum had on Crime Lab personnel.

Thus, as DNA analysis grew in importance as a forensic technique in the mid- and late-1990s, the DNA/Serology Section was the only section in the Crime Lab without a Criminalist III line supervisor. This result was dictated by several factors, including the lack of funding once the QA/QC position was created for Dr. Sharma; the failure of Crime Lab management to effectively emphasize that the extended gap in supervision was bound to create a crisis for the quality of the work being performed in the DNA/Serology Section and to forcefully make the case up the chain of command for filling the position; and the failure of the chain of command to recognize the importance of providing the DNA/Serology Section with a line supervisor, as well as providing the Crime Lab generally with more resources.

f. Inadequate Internal Quality Control Reviews in the DNA/Serology Section

Section 300/2.07 of the Crime Lab's SOPs in effect from November 30, 1992 until after the DNA Section was closed in December 2002 provided that "[e]ach section of the Crime Laboratory Division will be inspected in November of each year" and that these inspections will be conducted by the assistant Lab director and the Criminalists IV and Criminalists III assigned to each section. During the course of IAD's investigation into issues related to the Crime Lab, both Mr. Krueger and Mr. Bolding acknowledged that compliance with the inspection requirements of the SOPs had lapsed in the late 1990s.

In fact, the last quality inspection performed pursuant to the SOPs was conducted between December 2, 1996 and January 14, 1997 and involved the review of a sample of 1995 cases.²⁷ Mr. Bolding's review of DNA/Serology Section cases focused entirely on issues related to the organization and completeness of the documentation contained in the case files. The March 21, 1997 Property and Documentation Inspection Report related to this review does not reflect that areas such as Crime Lab conditions, equipment, or analyst training and qualification were addressed at all. After 1997, even these inspections stopped.

The CODIS program in Texas went into effect on January 1, 1996. In June 1998, Mr. Bolding submitted formal documentation to enable the Crime Lab to participate in the CODIS program. Among the federal requirements for crime laboratories participating in CODIS are that DNA data entered into CODIS must have been analyzed by qualified personnel, internal audits of the lab must be completed each year, and the lab must be audited by an outside agency every other year. These conditions are to ensure that the database is not corrupted by inaccurate or incomplete information.

Until the December 2002 audit that resulted in the suspension of DNA analysis by the Crime Lab, the DNA/Serology Section was never audited by an outside agency. Mr. Bolding, however, performed two quality assurance audits of the DNA/Serology Section, using the Quality Assurance Standards for Forensic DNA Testing Laboratories and Convicted Offender DNA Databasing

²⁷ Pauline Louie, the Criminalist IV over the Controlled Substances and Toxicology Sections, reviewed those sections as well as the CER unit and the photography laboratory. Mr. Bolding reviewed cases worked by the DNA/Serology Section.

Laboratories issued by the FBI in October 2000.²⁸ The first of these audits was completed in December 2000 or January 2001.²⁹ The second is dated September 2001.

Neither of Mr. Bolding's audits of the DNA/Serology Section reflects the widespread and serious deficiencies found by the outside team that performed the December 2002 audit and which resulted in the closure of the DNA/Serology Section. For example, in Mr. Bolding's 2000 audit, he filled out the audit form to indicate that the technical leader of the DNA Section -- *i.e.*, Mr. Bolding -- possessed all of the educational requirements called for under the standards, including coursework in statistics. In 2001, Mr. Bolding left this area blank, but checked "no" next to the question asking whether the technical leader possessed minimum coursework in statistics. The DPS audit in 2002 found that Mr. Bolding did not -- at any time -- satisfy the educational requirements for technical leaders. Mr. Bolding also rated the Crime Lab as having satisfied FBI standards relating to procedures for preparing case notes and the Section's lab reports as containing all required information. Among other problems it identified, the 2002 DPS audit found that no such written procedures existed and identified numerous deficiencies in the documentation contained in the lab reports. Mr. Bolding also found in 2001 that managerial staff of the DNA/Serology Section had been "provided the resources needed to discharge their duties and meet the requirements of the [FBI] standards." The 2002 DPS audit team found to the contrary.³⁰

In a January 18, 2000 memorandum to Chief Bradford, Mr. Krueger requested that the educational requirements for the criminalist positions be modified to conform to the FBI's "mandated minimum qualifications for those personnel who perform DNA analysis." Mr. Krueger reported to Chief Bradford that the "laboratory's current DNA personnel either already meet the guidelines

²⁸ The standards Mr. Bolding used in his two internal audits were the same quality assurance standards used by the auditors from DPS and the Tarrant County Medical Examiner's Office in December 2002.

²⁹ The first audit is stamped with the date "Sep 00," which is inconsistent with the date the FBI standards were issued in October 2000. Mr. Bolding explained to IAD that he began the audit in September 2000 using a prior version of the FBI standards, was called away by other tasks, and eventually completed the audit in December 2000 or January 2001.

³⁰ Mr. Bolding submitted his 2001 quality assurance audit to the DPS CODIS laboratory in Austin, Texas.

or will have the additional educational requirements in the near future.”³¹ In his 2000 and 2001 quality assurance audits, Mr. Bolding found that Lab personnel have the “education, training and experience commensurate with the examination and testimony” they provide. In December 2002, the DPS audit team again found to the contrary.

5. Early Consideration of Accreditation

ASCLD/LAB was incorporated in 1988. Although it is frequently confused with ASCLD (the American Society of Crime Lab Directors), ASCLD/LAB is a distinct organization with a specific mission -- establishing and monitoring standards for crime laboratories. The stated objectives of ASCLD/LAB’s accreditation program are to (1) improve the quality of laboratory services provided to the criminal justice system; (2) develop and maintain criteria which may be used by a laboratory to assess its level of performance and to strengthen its operation; (3) provide an independent, impartial, and objective system by which laboratories can benefit from a total operational review; and (4) offer the general public and users of laboratory services a means of identifying those laboratories that have demonstrated that they meet established standards.

By the mid-1990s, management of the Crime Lab was considering accreditation as a goal. Mr. Krueger told us that no one within HPD ever prompted him to obtain accreditation for the Crime Lab, but he was somewhat concerned about the possibility that grant funding might one day be contingent on accreditation. Although Mr. Krueger consciously did not raise the issue of accreditation up the chain of command at that time, because he felt the Crime Lab was not ready for it, he recalls discussing accreditation with Assistant Chief Simmons. In his August 29, 1996 memorandum advising Assistant Chief Simmons that he was reorganizing the Crime Lab to move Dr. Sharma from the DNA/Serology Section to a newly created QA/QC position reporting directly to him, Mr. Krueger portrayed the move as a necessary step towards accreditation. Mr. Krueger stated, “[I]t is becoming more apparent that the crime laboratory is going to be required to work toward accreditation by ASCLD.”

Mr. Krueger’s hope that he could accomplish twin objectives by moving Dr. Sharma out of the DNA/Serology Section, where he had been an ineffective

³¹ Chief Bradford states that assurances such as this from Mr. Krueger, together with certifications provided to him in connection with various DNA-related grant applications, led him to believe that the Crime Lab’s DNA program was on track.

and widely disliked supervisor, to the position devoted to getting the Crime Lab's SOPs, training programs, and facilities prepared for accreditation, proved to be an exercise in wishful thinking. Dr. Sharma proved to be even less productive in the QA/QC position than he had been in the DNA/Serology Section. Many Lab employees recall seeing him asleep in his office, and they joked about videotaping him. When we asked Dr. Sharma why he failed to make more progress on the SOPs since he appeared to have the bulk of four-and-a-half years to devote to them in his new position, Dr. Sharma shifted blame to Mr. Krueger and claimed that he was not permitted to do any independent work on the SOPs. Dr. Sharma acknowledges that he viewed his transfer to the QA/QC position as punishment, and it is clear that his reaction was to pay little attention to taking ownership of what could have been a very significant position in advancing the QA/QC function.

Given his experience with Dr. Sharma, it was highly unrealistic for Mr. Krueger to expect that Dr. Sharma would make a meaningful contribution in the QA/QC position. By Dr. Sharma's own admission, he did approximately a year's worth of work in the four-plus years he remained in the position; a more exacting assessment, would put the volume of work performed by Dr. Sharma at much less than that. In February 2001, acceding to the reality that Dr. Sharma was providing no meaningful assistance in the QA/QC position, Mr. Krueger assigned Dr. Sharma to assist the Controlled Substances Section by analyzing marijuana cases.

Ultimately, Mr. Krueger came to believe that accreditation was not a realistic possibility in light of the Crime Lab's chronic manpower shortages and the conditions created in the Crime Lab by the chronic roof leaks at 1200 Travis.³² Assistant Chief Simmons believed that accreditation was not a priority for HPD because there were more pressing "structural problems" with the roof and obtaining equipment for the Lab. Nevertheless, in a draft letter, dated June 17, 2002, that Mr. Krueger prepared for Chief Bradford to send to Houston City Council Member Carol Alvarado, Mr. Krueger wrote that "[t]he laboratory staff has been working towards meeting all the guidelines necessary for accreditation. Approximately 80% of the documentation is complete." Based on the findings of the 2002 DPS audit and the substantial work on the SOPs and in other areas that was necessary for the Crime Lab to achieve accreditation in May 2005, it is clear

³² As noted earlier in this report, HPD headquarters and the Crime Lab moved to their current location at 1200 Travis Street in late 1997. The problems the Crime Lab experienced as a result of persistent roof leaks are discussed later in this report.

that Mr. Krueger's assessment of the state of the Crime Lab was, at best, exceedingly optimistic.

6. Controlled Substances Section and Drylabbing Incidents

The Controlled Substances Section has analyzed the vast majority of cases processed by the Crime Lab -- between 14,500 and 16,000 cases each year between 1996 and 2004. The Controlled Substances Section has had the largest number of analysts of any Section in the Crime Lab, and there have been as many as three Criminal III supervisors assigned to it from the early 1990s to the present.³³ Drug analysts use a wide range of techniques and technologies to identify controlled substances, including microcrystalline tests, chromatography, mass spectrometry, spectrophotometry, and microscopic identification. All of these methods of identification have been used by forensic scientists in the Controlled Substances Section.

In our Second Report, we discussed four separate instances of alleged "drylabbing"³⁴ involving two Criminalist I analysts in HPD's Controlled Substances Section, Vipul Patel and James Price.³⁵ Each of the incidents was detected by a Criminalist III supervisor in the Section, and each resulted in an investigation by IAD. As discussed in our Second Report, we have no evidence at this point that these incidents reflect broader problems in the Controlled Substances Section.³⁶ In fact, these episodes were common knowledge within the Crime Lab, although not well known outside the Lab. These incidents, in ways perhaps not obvious on the surface, highlight a number of important issues, including: the importance of Criminalist III line supervisors in performing quality assurance and quality control, the difficulty the Crime Lab has

³³ Since January 2005, there has been only one Criminalist III supervisor in the Controlled Substances Section.

³⁴ "Drylabbing" is the most egregious form of scientific misconduct that can occur in a forensic science laboratory -- it means the fabrication of scientific results. In the HPD Crime Lab, the instances of drylabbing took the form of controlled substances analysts creating false documentation intended to reflect analytical procedures that were never performed. As one of the members of the Stakeholders Committee put it, drylabbing is a "hanging offense" in the scientific community.

³⁵ We did not name either analyst in our Second Report. HPD, however, in response to press inquiries following publication of the Second Report, released both of their names.

³⁶ Case reviews during Phase II of this investigation involving the Controlled Substances Section -- and our reviews of cases analyzed by Messrs. Patel and Price -- will help determine whether these were isolated incidents.

experienced in disciplining analysts found to have been involved in misconduct, and the lack of support for imposing appropriate discipline on Crime Lab personnel from the HPD command staff.

a. Mr. Patel's Drylabbing Incidents

On December 20, 1999, while performing a routine case review, a Criminalist III supervisor determined that, on October 14, 1999, Mr. Patel had misidentified three tablets as Diazepam. The supervisor recognized that tablets with the same markings had been analyzed in the past and determined to be Clonazepam. The supervisor retrieved the evidence and, in the presence of a second Criminalist III, re-analyzed the tablets and confirmed that they were, in fact, Clonazepam and that Mr. Patel's identification of the tablets as Diazepam was false. The supervisors observed that the tablets had been scraped, as if they had been analyzed, but, because the analytical data supporting Mr. Patel's identification of the tablets as Diazepam could not have been generated through testing those tablets, they concluded that the test results obtained by Mr. Patel must have been falsified. After being confronted by all three of the Controlled Substances Section supervisors with the misidentification, Mr. Patel charged each of the supervisors with harassment.³⁷ Despite the supervisors' conviction that the incident involved deliberate falsification of test results, the only discipline Mr. Patel received as a result of this incident was a written reprimand, which was the same discipline issued to one of the supervisors based on the harassment charge.³⁸

An IAD investigator contacted the Assistant District Attorney responsible for prosecuting the underlying criminal case. The Assistant District Attorney reported that Mr. Patel's erroneous identification did not meaningfully affect the case because the defendant was likely to accept a misdemeanor plea.³⁹ The misidentification was disclosed at the time of the plea, and the court pleadings were corrected appropriately.

³⁷ During the meeting, a third Criminalist III supervisor commented that a person off of the street "with a brain the size of a peanut" would not make this mistake. The other supervisors reportedly chuckled at the comment. This formed the basis of Mr. Patel's harassment charges against the supervisors.

³⁸ Mr. Patel told an internal investigator that, although he could not recall how he erroneously identified the tablets as Diazepam, the misidentification was the result of "human error" and was not intentional.

³⁹ Both Diazepam and Clonazepam are Schedule IV drugs.

The second incident involving Mr. Patel occurred on December 17, 1999 and was detected by the same Criminalist III supervisor in the Controlled Substances Section on January 10, 2000. During a routine review of Mr. Patel's case files, the supervisor discovered that a file contained identical Fourier Transform Infrared ("FTIR") spectra for two separate tablets.⁴⁰ The supervisor's suspicions were aroused because it is virtually impossible for tablets analyzed separately to produce identical spectra due to variances in drug concentration, the presence of excipient materials in the sample, and minor instrument variability. The supervisor consulted with another Criminalist III supervisor and the Criminalist IV over the Controlled Substances Section, and they ran an experiment demonstrating the extreme improbability of the FTIRs producing identical spectra, even from the same sample. At least one of the supervisors concluded that Mr. Patel tested one tablet and re-printed or copied that spectrum for the second tablet. Mr. Patel denied intentionally copying the printout and claimed that the FTIR instrument may have malfunctioned and printed the spectrum twice. A supervisor disputed Mr. Patel's hypothesis, and told investigators that no one else in the Controlled Substances Section had ever reported such a problem with the FTIR instrument. Although the supervisor was convinced that this was a second incident of intentional scientific fraud on the part of Mr. Patel, he was charged with poor judgment.⁴¹ When we interviewed Mr. Patel about the two drylabbing incidents, we found his explanations utterly unconvincing.

Mr. Patel's punishment for this second drylabbing incident was a three-day suspension. Mr. Krueger also removed Mr. Patel from drug analysis and assigned him to the CER unit. After some period of time in the CER unit, Mr. Patel took advantage of Chief Bradford's open door policy to complain that he was overqualified for his assignment to CER and asked the Chief to take action to have him reinstated as a drug analyst. While neither Chief Bradford nor Mr. Krueger claims to recall any conversation about returning Mr. Patel to an analyst's role,⁴² Mr. Patel was reinstated to the Controlled Substances bench a

⁴⁰ FTIR spectroscopy is a technique used to identify an unknown substance based on the absorption of a spectrum of infrared wavelengths by the substance.

⁴¹ The file maintained by the District Attorney's Office related to the underlying prosecution associated with this incident does not reflect that Mr. Patel's misidentification impacted the case. Apparently, the defendant never contested the charges against him, and quickly entered into a cooperation agreement with the District Attorney's Office.

⁴² Although Chief Bradford said he does not recall speaking to Mr. Krueger about returning Mr. Patel to an analyst's role, he acknowledged that communicating with Mr. Krueger

short time after his visit with the Chief. For his part, Mr. Patel had no doubt that Chief Bradford's intervention was the reason he was transferred back to the Controlled Substances Section. Neither HPD nor the Crime Lab performed a review of other cases handled by Mr. Patel to determine whether any of those cases were affected by similar misconduct.⁴³

At the time of our Second Report, Mr. Patel remained an analyst in the Controlled Substances Section. The Crime Lab responded to our discussion of Mr. Patel's drylabbing incidents by once again taking him off the bench and reassigning him to the CER unit. On June 13, 2005, the Public Safety and Homeland Security Committee of the Houston City Council passed a resolution calling for Mr. Patel's termination. That same day, Mr. Patel resigned from the Crime Lab.

b. Mr. Price's Drylabbing Incidents

The first of Mr. Price's drylabbing incidents was discovered by a Criminalist III Drug Section supervisor on May 12, 1998 during a routine review of Mr. Price's cases. The supervisor observed that Mr. Price had identified four tablets as the tranquilizer Flunitrazepam, a date rape drug the possession of which is a felony under Texas law. The supervisor recognized that tablets with similar markings had been identified by the Crime Lab in the past as Clonazepam, the possession of which was only a misdemeanor. A re-analysis of the tablets was performed by the supervisor, who confirmed that the tablets, in fact, were Clonazepam. The supervisor brought the issue to the attention of Mr. Krueger. The supervisor believed that the only way Mr. Price could have obtained the results he did was by analyzing a known sample of Flunitrazepam and representing the results as related to the substances in the case. Although Mr. Price denied intentionally testing a standard sample of Flunitrazepam, he had no explanation for the results he obtained. Mr. Price's error was caught relatively early in the underlying criminal proceedings, and the charge against the defendant was reduced to a misdemeanor.

Footnote continued from previous page

would "not be inconsistent" with actions he took in the wake of complaints brought to him.

⁴³ In its statement issued in response to our Second Report, HPD acknowledged that, although the review of cases handled by Mr. Price had been performed, "for reasons unknown, the same was not done relative to Patel." HPD Press Statement, June 1, 2005.

Administrative charges of criminal activity/tampering with a government record, disobedience to laws, and lack of truthfulness against Mr. Price were sustained. On July 24, 1998, Mr. Krueger recommended that Mr. Price be suspended for ten days. The matter was referred to the District Attorney's Office as a potential criminal matter. By letter dated September 30, 1998, the District Attorney's Office declined to prosecute Mr. Price. On October 5, 1998, Chief Bradford suspended Mr. Price for only four days. Mr. Price's supervisor felt strongly that Mr. Price acted intentionally and that it was a "no-brainer" that he should have been terminated.

The second drylabbing incident involving Mr. Price was detected by the same Criminalist III supervisor two years later on August 29, 2000. In this case, Mr. Price misreported the presence of a steroid, stanozolol, in a sample. During a routine check of one of the Crime Lab's GC/MS instruments, a Criminalist III supervisor discovered that Mr. Price had printed the test results obtained by another analyst, who had in fact detected stanozolol in a different sample, and then had inserted those results in his case file. The substance that Mr. Price had been assigned to test was re-analyzed and found to contain no controlled substance.

This incident also was referred to the District Attorney's Office, which on November 29, 2000 declined to bring charges against Mr. Price. Nevertheless, the Assistant District Attorney wrote that "[w]e hope that the declination of criminal charges will not serve as an endorsement of this chemist's behavior, which we find very disturbing." Because no stanozolol was present, the charges against the defendant had to be changed.

In a memorandum dated January 11, 2001, Mr. Krueger advised Chief Bradford that, at the request of the District Attorney's Office, the Crime Lab had reviewed all 574 cases Mr. Price had analyzed since June 2000. According to the memorandum, discrepancies were found in six cases, none of which affected charges against a defendant or the outcome of a criminal case.⁴⁴ Mr. Krueger closed the memorandum by recommending that Mr. Price be terminated.

On February 21, 2001, Chief Bradford forwarded a memorandum to the City Attorney's Office indicating that he was considering an "indefinite suspension" of Mr. Price. On March 6, 2001, before any further action was taken, Mr. Price resigned from the Crime Lab.

⁴⁴ We will explore further the nature of the discrepancies in these six cases.

In each of the drylabbing incidents involving Mr. Price and Mr. Patel, diligent Criminalist III line supervisors identified the problems and took swift and appropriate action. At least one of the supervisors believed strongly that both analysts should have been terminated immediately once the frauds were identified. As discussed in our Second Report, this supervisor was extremely frustrated when the system for investigating and disciplining personnel in the Crime Lab failed to produce those results.

7. Firearms Section

In approximately 1991, the Firearms Section was moved out of the Crime Lab Division and placed in HPD's Identification Division, where it remained for seven years. The Firearms Section rejoined the Crime Lab, effective on or about March 30, 1998, after the Lab moved from 33 Artesian to its current location in HPD headquarters at 1200 Travis Street. Also in 1998, C.E. Andersen, the longtime head of the Firearms Section, retired. With Mr. Andersen's retirement, Robert Baldwin was promoted to the Criminalist IV position over the Firearms Section.

Analyses performed by the Firearms Section have been called into question in several cases. On March 23, 2003, the Houston Chronicle reported that firearms work performed by the Crime Lab had been questioned in the cases of Nanon Williams and Johnnie Bernal, both of whom were convicted of murders and received capital sentences.

We have not yet performed detailed case reviews of any cases analyzed by the Firearms Section, including the examinations performed in the Williams and Bernal cases. As discussed in the Phase II plan described at the end of this report, we will be reviewing a statistical sample of Firearms Section cases examined between 1998 and 2004. More specifically, we will be conducting a detailed review of the Williams case.

8. Trace Evidence Section

Trace evidence -- such as hairs, fibers, gunshot residues, paint, and glass -- may be transferred between individuals and objects during the commission of a crime. The Trace Evidence Section of the Crime Lab was involved with analyzing such evidence as well as processing a significant volume of arson-related evidence. The Trace Evidence Section has traditionally been relatively small -- only one or two analysts in addition to Reidun Hilleman, who, until she was recently appointed the QA/QC leader for the entire Crime Lab, was the Criminalist III supervisor of the Trace Section.

The Crime Lab performed trace analysis on hair evidence related to the 1987 case of George Rodriguez. On October 8, 2004, Mr. Rodriguez was released from prison after serological evidence used at trial was found unreliable, and a question has been raised as to the reliability of the trace evidence analysis in the case as well. The Rodriguez case will be among the limited number of cases on which we will perform a very detailed and comprehensive review of all aspects of the case.

9. Toxicology Section

Forensic toxicology involves the detection and identification of alcohol and other drugs in body fluids such as blood and urine. The Toxicology Section of the Crime Lab also was involved with overseeing the calibration and maintenance of breath testing devices used by HPD officers in the field, as well as training officers in their use. In 1992, Pauline Louie was promoted to Criminalist IV supervisor over both the Toxicology and Controlled Substances Sections. The Toxicology Section Criminalist III supervisor position vacated by Ms. Louie was never filled and remains vacant to this day.

As a Criminalist IV supervisor, Ms. Louie should have been involved primarily in managing rather than performing casework. However, due to the departure of several analysts from the Toxicology Section in the early 2000s, Ms. Louie, after being away from benchwork for a significant period of time, personally resumed working toxicology cases. This casework was in addition to her other duties, including supervising the Controlled Substances Section.

In July 2003, in connection with the Needs Assessment of the Crime Lab performed by the NFSTC, Frank Fitzpatrick was hired as the interim director of the Crime Lab.⁴⁵ Among other things, Mr. Fitzpatrick required all working analysts to take competency tests. Ms. Louie was provided three samples, one urine and two bloods, for analysis. According to the samples' manufacturer, the urine sample contained Phencyclidine, commonly known as PCP, and Triazolam; the first blood sample contained morphine; and the second blood sample contained Cyclobenzaprine and Nordiazepam.

In October 2003, Ms. Louie was found to have failed her competency test after, among other things, she indicated the presence of PCP in both blood samples where it was not present, did not detect the morphine present in the first

⁴⁵ The NFSTC's Needs Assessment and Mr. Fitzpatrick's tenure as the Crime Lab's interim director are discussed further below.

blood sample, and did not detect either substance in the second blood sample.⁴⁶ As a result of the failed competency examination, Ms. Louie was suspended from performing toxicological analysis, and the Toxicology Section currently only performs blood-alcohol tests. Ms. Louie retired on July 30, 2004.

In March, 2004, the District Attorney's Office requested that 369 toxicology cases analyzed by Ms. Louie for which viable samples still exist be re-tested by an outside laboratory. That re-testing project is complete, and we are advised by HPD that a discrepancy was found in only one of these cases. In that case, involving a urine screen performed in 1992, Ms. Louie identified the presence of numerous substances, including Butalbital. The re-testing laboratory found that while the drug appeared to be present in the sample, the outside laboratory could not confirm the presence of Butalbital possibly due to its being masked by another substance in the sample.

10. Compensation, Personnel Levels and Workload

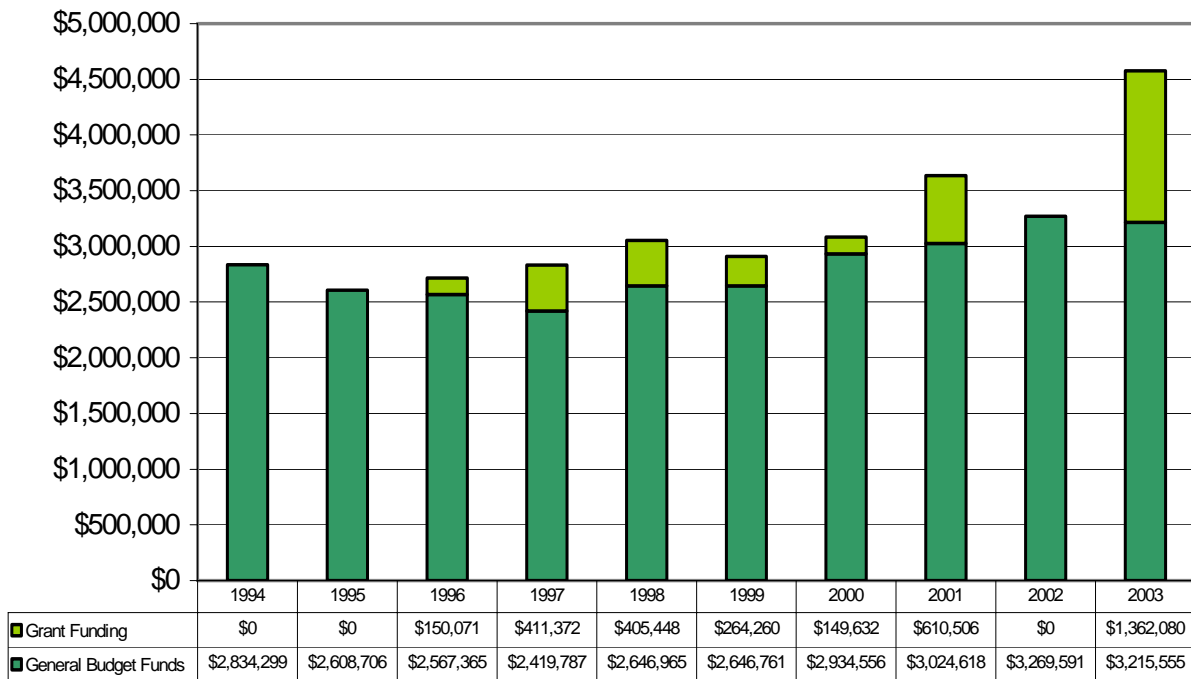
In addition to focusing on issues relating to the internal operations of the Crime Lab -- including examiner competence, training, and laboratory management -- our investigation is also focusing on issues relating to resource allocation by the City and HPD to the Crime Lab. At this stage, one thing seems clear: the Crime Lab was never provided adequate financial support to hire and train the number of criminalists necessary to handle the Lab's ever-increasing workload, pay the salaries required to attract and retain qualified forensic scientists, acquire much-needed equipment and supplies, and maintain and repair the Lab's infrastructure.

The following chart tracks the Crime Lab Division's total allocated budgets during the ten-year period between 1994 and 2003. As reflected below, the dollars that the Crime Lab received from HPD's general fund remained relatively flat through the late 1990s and increased only slightly in the early 2000s. As it did in establishing the DNA Section in 1989, the Crime Lab continued to rely heavily on grant money, which in some years either was not available, or, at a minimum, not obtained. The significant spike in grant funding that the Crime Lab received in 2003 related to a \$1.1 million grant through the "No Suspect Casework DNA Backlog Reduction Program" and was largely used

⁴⁶ Ms. Louie is highly critical of the manner in which her competency test was administered and evaluated. The fairness of Ms. Louie's competency test is an area we will continue to evaluate as the investigation progresses.

to outsource unanalyzed rape kits to private labs after the DNA Section was closed in December 2002.

HPD Crime Lab Budget Funding
1994-2003



We already have discussed the low pay and benefits traditionally provided to civilian Crime Lab employees. Throughout the history of the Crime Lab, the salaries HPD paid to civilian employees in the Lab were not only lower than salaries paid to HPD sworn officers but also lower than those paid by other publicly funded forensic science laboratories in the region and around the country. For example, HPD job postings issued in 1993 show that the salary range for Criminalists I was \$21,138 - \$28,574, Criminalists II was \$24,440 - \$33,332, and Criminalists III was \$29,146 - \$40,456. According to job postings collected by the Crime Lab at the time, the Kansas Bureau of Investigation, by comparison, advertised salaries in 1993 for Forensic Scientists I in the range of \$25,728 - \$36,192 and for Forensic Scientists II in the range of \$31,260 - \$43,992 -- a range greater than that offered by HPD for Criminalist III

supervisors. Senior criminalists in the Mesa, Arizona Police Department Crime Lab in 1993 were paid between \$40,443 and \$54,574, which is between 34 and 39% higher than HPD's salary range for Criminalists III.

In 1998, Crime Lab personnel conducted a salary survey that compared the salaries paid to Crime Lab analysts with the salaries for comparable level analysts in the DPS, Harris County Medical Examiner's Office, and the Pasadena (Texas) Police Department. According to this survey, which was provided to Chief Bradford, the average salaries paid by these three Houston-vicinity crime labs were 20% higher for Criminalists I and II, 6% higher for Criminalists III, and 14% higher for Criminalists IV. The salary survey process that began in 1998 eventually resulted in pay increases for Criminalists I, II, and III in the fall of 2002 of 12%, 9%, and 4%, respectively. While these pay raises were welcome, HPD Crime Lab employees remained undercompensated relative to their peers at other Houston-area labs.

The low salaries offered by HPD made it difficult for the Crime Lab to recruit qualified scientists and to retain them after they received training. It was not uncommon for entry-level analysts to spend a short time at the Crime Lab to gain training and work experience and then to leave for higher paying jobs in other laboratories. Mr. Krueger told us that economic downturns worked perversely in the Crime Lab's favor because during slow economic times the Crime Lab was able to hire the most highly-qualified personnel and retain them for some period of time.

Historically, many Crime Lab analysts worked second jobs. Even Mr. Krueger and Mr. Bolding had outside employment while they were senior managers in the Crime Lab -- Mr. Krueger worked in an underwater photography store and Mr. Bolding ran an antique store. Indeed, the Crime Lab's hours of operation -- from approximately 7 a.m. to 3 p.m. -- appear to be structured to permit analysts to have outside employment in the afternoons and evenings. While these hours may facilitate outside employment, they would seem to limit hours during which analysts are available to communicate with prosecutors, investigators, and others.⁴⁷ Given the comparatively low salaries offered to Crime Lab personnel, it is easy to understand the strong attraction

⁴⁷ Mr. Krueger told us that he did not believe that the prevalence of outside employment impaired the performance of Crime Lab staff. Outside employment appears to be an aspect of the culture of HPD as a whole, and many sworn officers hold second jobs as well. We will further explore issues relating to the impact of a culture that encourages second jobs on the quality of work performed in the Crime Lab.

outside employment held -- and continues to hold -- for many analysts, but the prevalence of outside employment does not contribute to a culture that enshrines the importance of hard work in the Crime Lab.

From the early 1990s through the present, numerous authorized positions within the Crime Lab have remained vacant due to a lack of funding to fill them. These vacancies have persisted despite the steady growth in the volume of cases. Although, as in most crime laboratories, the vast majority of cases referred to the Crime Lab involved controlled substances, the demand for DNA analysis increased substantially in the late 1990s and early 2000s. During this period, as discussed in greater detail later in this report, there also developed a very substantial backlog of rape kits related to cases in which there were no known suspects. These cases were not analyzed and therefore not loaded into the CODIS database. The DNA Section's *de facto* policy at the time, born out of the workload demands placed on its limited human resources, was only to conduct DNA analysis on cases involving known suspects from whom samples had been obtained for comparison.

By 2001, the Crime Lab was struggling to cope with various issues relating to workload, including a major spike in the number of controlled substances cases. In February 2001, Mr. Krueger assigned Dr. Sharma, the Lab's putative QA/QC supervisor, to analyze marijuana cases full time. On July 11, 2001, Mr. Krueger sent a memorandum to Chief Bradford entitled "Crime Laboratory -- Personnel Needs" in which he stated, "The caseload in the chemistry sections of the laboratory has increased rapidly in the last several years. . . . In 1994, the chemistry sections of the lab had 35 criminalists and received 13168 cases. In the calendar year 2000, the chemistry sections of the lab are still staffed with 35 criminalist [sic] and 17597 cases were received, an increase of 33.6%." Mr. Krueger also explained that he intended to include requests for additional personnel in the Crime Lab's fiscal year 2002 budget, but removed the request in light of a January 2, 2001 memorandum from the Director of Budget and Finance for HPD instructing all commands not to include requests for new personnel in their budgets due to "fiscal constraints."

The following year, Mr. Krueger again raised the staffing issue. In a memorandum to Chief Bradford dated January 28, 2002 and entitled "Additional Information for the Position Justification Committee," Mr. Krueger advised the Chief that "[t]he caseload for the Chemistry Sections of the Crime Laboratory has risen steadily over the years and since 1986 there has been no increase in authorized strength other than a few grant funded positions for specific purposes

(DNA and DRUGFIRE)."⁴⁸ Mr. Krueger concluded his plea for additional personnel by stating:

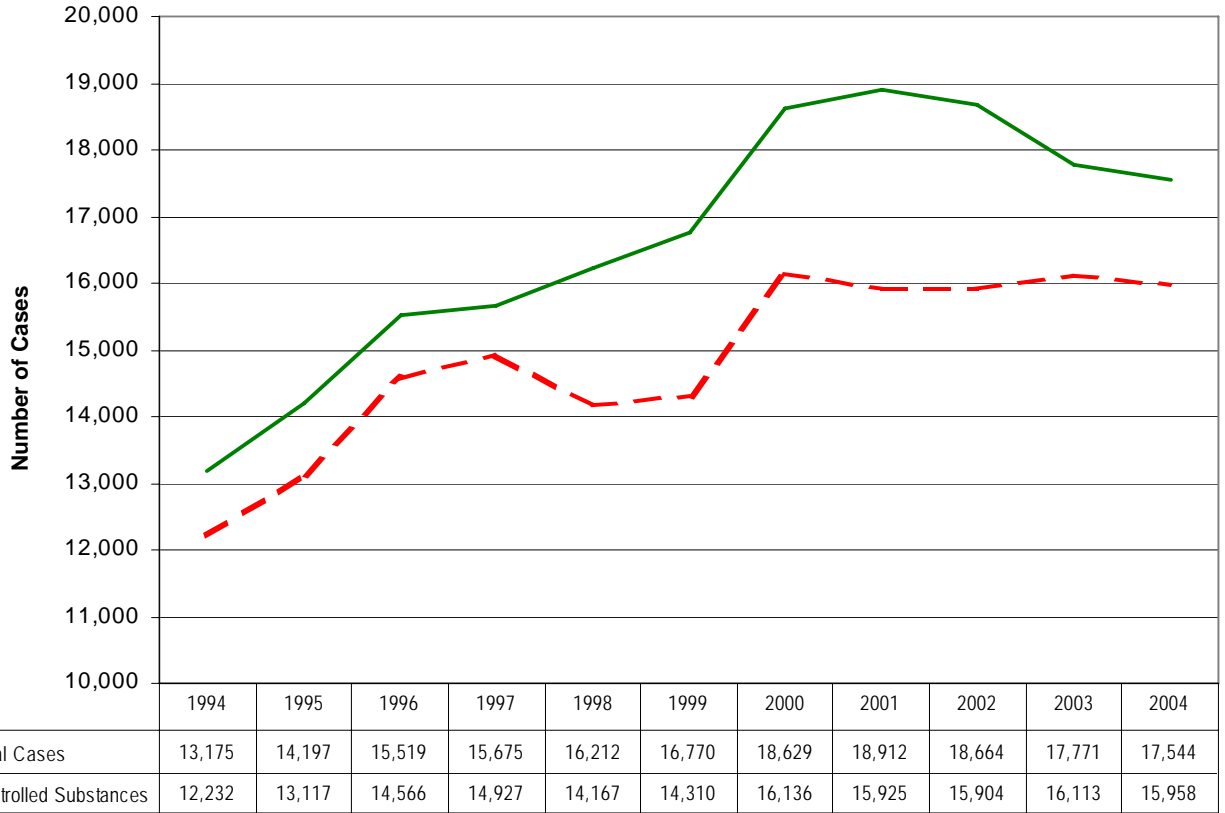
Personnel have been moved; duties have been changed; analytical procedures have been streamlined, reduced and even eliminated in an attempt to maintain a reasonable level of service. Without the authorized vacancies filled[,] backlog will likely increase, delaying investigative information, grand jury indictments and court trials.⁴⁹

The following charts compare the growth in the Crime Lab's workload, overall and broken out into the Controlled Substances and DNA/Serology Sections, with the number of analysts employed by the Crime Lab and the number of vacancies.

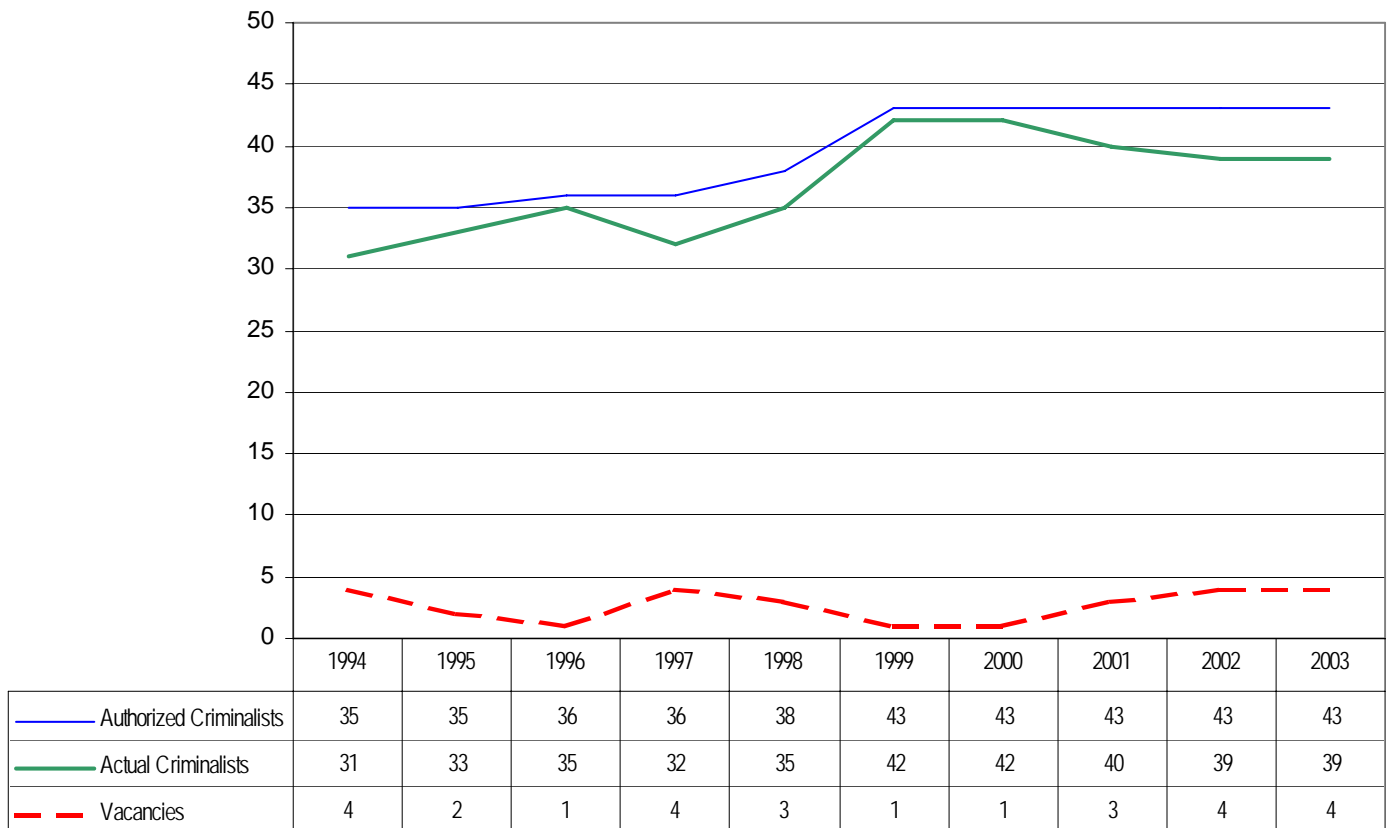
⁴⁸ The DRUGFIRE program is a computerized forensic imaging database system into which participating forensic firearms laboratories enter images of firearms and ammunition components in order to link shootings that have taken place at different times and locations.

⁴⁹ This memorandum was reviewed and signed by both Executive Chief Storemski and Assistant Chief Simmons.

HPD Crime Lab Cases 1994 - 2004



HPD Crime Lab Criminalists 1994 - 2004



In 2002, the Crime Lab received an allocation of \$600,000 to address the backlog of unprocessed rape kits that had accumulated. In a June 25, 2002 memorandum to Chief Bradford, Executive Assistant Chief Storemski recommended that HPD “tak[e] this opportunity to increase DNA staffing which will benefit us in the future. . . . If we use all of the \$600,000 to outsource without triage we could analyze 500 to 1000 cases. If we hire additional personnel as recommended and triage the cases, and then use the remaining \$300,000 to outsource we could analyze 1071 to 2500 cases.” In a handwritten note, Chief Bradford rejected Executive Assistant Chief Storemski’s recommendation that a portion of the \$600,000 be used to hire additional DNA analysts -- including finally filling the long-vacant Criminalist III supervisor position -- stating, “We can not hire new personnel. This is a ‘one-time’ pool of money.” Consistent with his position in early 2000 when he rejected the DNA analysts’ request for a Criminalist III supervisor, Chief Bradford was unwilling to use this temporary source of funding to fill criminalist positions that eventually would require a funding commitment by the Department.

The adequacy of Crime Lab training is also an area we will continue to explore. Among other things, the 2002 DPS audit found that the Crime Lab lacked “a documented program to ensure that technical qualifications are maintained through continuing education.” Funding for training is among the first areas to be trimmed when an institution faces budget cuts. Indeed, even after the 2002 DPS audit and the closure of the DNA Section, Mr. Krueger was under pressure to reduce his budget. In a January 28, 2003 memorandum to Chief Simmons regarding “FY04 Budget Cuts,” Mr. Krueger wrote, “The FY03 budget has already been reduced; most notably a 23% reduction in training.” Numerous Crime Lab employees felt inadequately trained and have advised us that they found it exceedingly difficult to attend offsite training. This proved to be truly one of the Crime Lab’s Achilles heels, particularly in the rapidly evolving area of DNA analysis.

11. The Roof at 1200 Travis Street

The building at 1200 Travis Street, which became the headquarters for HPD in the fall of 1997, was built in the 1960s. In October 1994, the City purchased the building, and, in February 1995, it hired a contractor to begin renovations. The City and HPD were aware of problems with the building’s roof prior to moving into the facility. A memorandum to Chief Bradford dated May 9, 1997 reported that there was a “problem causing water to get under the new roofing materials and saturate the new roof from underneath.” In February 1998, repairs to the roof were discontinued, and for the next nearly five years -- until January 2004 -- the project to repair the roof was on hold while the City was

experiencing a prolonged series of fits and starts in connection with its attempts to hire contractors to design and construct a new roof for the building.

In the meantime, most of the components of the Crime Lab -- including the DNA/Serology, Controlled Substances, Toxicology, and Trace Analysis Sections -- were operating on the 26th floor of 1200 Travis Street, which is the top floor of the building.⁵⁰ In a September 1998 memorandum to Chief Bradford reporting damage to the Crime Lab following a major storm, Mr. Krueger wrote, "The Crime Laboratory Division has experienced leaks from the roof since its move to 1200 Travis in August 1997." In this memorandum, Mr. Krueger advised Chief Bradford that "[a]pproximately fifty different leaks have been identified on the 26th floor."

In May 2001, Tropical Storm Allison hit Houston, and, due to problems with the roof, the storm caused significant damage to the Crime Lab. Not only was the ceiling of the Crime Lab damaged and certain equipment affected but also a significant volume of evidence related to homicides and sexual assaults was water damaged. On May 11, 2001, Mr. Krueger reported to Assistant Chief Simmons:

Thirty-four Homicide and Sexual Assault cases, in the Trace/Serology vault on the 26th floor, were badly water damaged. Many of these cases have been at least partially analyzed. At this time it appears that most of the items will dry to the state that the evidence will not be totally ruined.

In a June 18, 2001 status report, Mr. Krueger advised Chief Simmons that "[t]hirty-five Trace/Serology/DNA cases were damaged and segregated to begin drying." In 2003, several Crime Lab employees told internal affairs investigators that this biological evidence had become so saturated with water that they observed bloody water dripping out of the boxes containing the evidence and pooling on the floor.

It is not clear to us at this point how the Crime Lab ultimately handled the evidence in the 34 or 35 cases damaged by roof leaks during Tropical Storm Allison. In 2003, Mr. Bolding told IAD investigators that he believed all of the evidence in those cases already had been analyzed and was awaiting return to the Property Room, which is inconsistent with the initial report Mr. Krueger

⁵⁰ The main Crime Lab is located on the 26th floor of the building, and the Firearms Section and the CER unit are located on the 24th floor.

provided to Assistant Chief Simmons in 2001. It also does not appear that the Crime Lab was able in 2003 to identify the specific cases associated with the evidence affected by the storm.⁵¹

Although the chain of command above the Crime Lab was aware of the leaky roof and that the leaks had affected evidence, no relief was forthcoming. The Crime Lab was forced to continue operating under the most troubling of environmental and facility-related conditions. For example, on July 9, 2001, Mr. Bobzean requested Assistant Chief Simmons' authorization to use an HPD purchasing card to purchase a wet/dry vacuum so Crime Lab employees would not have to "use[] mops to clean up after heavy rains."

C. The Crime Lab's Problems Become Public (2001-2004)

The multitude of problems plaguing the Crime Lab began to come to the attention of the public in September 2001 when local Channel 13 reported that only approximately 25% of sexual assault kits are analyzed by HPD. In May 2002, Jennifer LaCoss, an analyst in the DNA/Serology Section, resigned citing numerous problems with respect to resources afforded the Crime Lab. By the end of that year, following an investigative series aired by KHOU-Channel 11, serious questions regarding the work performed by the Crime Lab, and the DNA/Serology Section in particular, would lead HPD to commission an outside audit of the Section. Almost immediately after the December 2002 audit, DNA analysis at the Crime Lab was suspended. Since then, one defendant convicted in part on the basis of DNA testing performed by the Crime Lab, Josiah Sutton, has been released from prison and exonerated.⁵² Throughout 2003 and up to the present day, HPD and the Crime Lab have been plagued by a steady stream of negative press reports questioning the integrity of work performed by virtually every section of the Lab.

⁵¹ In March 2003, Mr. Bolding requested that the Crime Lab staff provide any information they had regarding specific cases damaged by the roof leak and how the cases were handled. All of the written responses to Mr. Bolding's inquiry that we have seen indicate that the Crime Lab employees had no information about which cases were specifically affected.

⁵² We will perform a detailed, comprehensive review of the Sutton case, along with such reviews of a small number of other cases, during Phase II.

1. Sexual Assault Kit Backlog

In September 2001, local Houston Channel 13 reported that the Crime Lab analyzes only approximately 25% of sexual assault kits received by HPD, and that the only kits that are tested are those for which there is a known suspect. During a City Council “pop off” session on September 19, 2001, then-Council Member Annise Parker stated that she was disturbed by the report and concerned that a powerful tool for the identification of sex offenders was not being used. Ms. Parker suggested that the City should find the money to provide the Crime Lab with the personnel and supplies necessary to process the backlogged and incoming sexual assault kits.

In response to Ms. Parker’s comments, on September 20, 2001, Executive Assistant Chief Storemski directed Mr. Krueger to estimate the funding and personnel that the Crime Lab would require in order to process all incoming rape kits. On September 26, 2001, Mr. Krueger responded that the DNA/Serology Section would require, at a minimum, ten additional criminalists, including one Criminalist III and three Criminalists II, to process 100% of the incoming sexual assault kits and additional supplies, at a total cost of approximately \$525,000.

In response to the sexual assault kit issue, the City Council allocated \$600,000 to reduce the backlog of DNA cases. In a memorandum to Chief Bradford dated June 25, 2002, Executive Assistant Chief Storemski -- after consulting with Assistant Chief Simmons, Mr. Krueger, and other personnel from the Crime Lab --recommended that approximately half of these funds be devoted to hiring four new criminalists for the DNA/Serology Section -- including a Criminalist III supervisor -- and purchasing supplies for the Crime Lab, while the other half of the money be used to outsource rape kits to other laboratories. As discussed above, Chief Bradford rejected this recommendation, responding, “We can not hire new personnel. This is a ‘one time’ pool of money.” According to a memorandum dated July 11, 2002, ultimately it was decided to devote \$135,000 of the City Council allocation to overtime compensation for existing analysts to work on rape kits, \$65,000 to supplies for the Crime Lab, and \$400,000 to have kits analyzed by outside laboratories.

In March 2002, Mr. Bolding estimated that there were 19,500 sexual assault kits received by HPD that had never been processed, some dating as far back as

1980.⁵³ During our tours of the Property Room, we were struck by the number of unprocessed rape kits currently being stored in the Property Room's freezers.⁵⁴ DNA analysis of sexual assault kits involving unknown suspects, and the loading of the results of these analyses into CODIS, are very significant issues. Because the Crime Lab has not yet restored its DNA analysis capability, those "cold case" rape kits must be outsourced to other laboratories along with evidence related to open investigations and the DNA cases selected for re-testing by the District Attorney's Office. The storage and processing of sexual assault kits is an area that we will continue to pursue.

2. The Resignation of Jennifer LaCoss

Jennifer LaCoss joined the DNA/ Serology Section as a Criminalist I in December 2000. A year and a half later, in May 2002, she resigned from the Crime Lab. In a letter dated May 28, 2002, Ms. LaCoss cited the following reasons for her decision to leave the Crime Lab:

- "Horrendous" working conditions, including, in particular, the roof leaks that created safety hazards and allowed water to come into contact with "biological materials such as blood soaked items" and "compromise[] the integrity of biological evidence."
- "Dismal" salaries that were "50 percent lower than the national average for criminalists, particularly DNA Analysts." Ms. LaCoss found it "disturbing that full-time employees must hold extra jobs just to support their families" and was frustrated that there was "virtually no opportunity for promotion, step increases, or merit raises."
- The "appalling" lack of support for the Crime Lab shown by HPD and the City. Ms. LaCoss wrote that the Lab was "severely under-staffed and under-funded" and that analysts could not possibly keep up with the "huge backlog" of cases. (Emphasis in original.) Ms. LaCoss

⁵³ In a letter to Council Member Shelley Sekula-Gibbs, M.D. dated May 22, 2002, Chief Bradford stated that "current estimates indicate that there are 7200 sexual assault cases dating back to 1992 with usable DNA evidence at HPD which have not been processed."

⁵⁴ The Property Room freezer currently contains 2,233 rape kits, most of which (2,116) date from the period 2000 to present. Of the kits in the Property Room freezer, 112 are from the 1990s and 5 pre-date 1990. Approximately 7,886 sexual assault kits are being stored at HPD headquarters at 1200 Travis Street. In sum, HPD is currently storing over 10,000 sexual assault kits.

believed that, under the current conditions, the Crime Lab had “no hope” of becoming accredited, which would jeopardize the Lab’s ability to continue to receive the federal grants upon which it had come to rely.

- Finally, Ms. LaCoss lamented the unrealized potential of the Crime Lab in light of the fact that “suspectless cases are rarely analyzed due to the desperate staffing and funding situation.” As a result, DNA analysts were unable to process “no suspect” or “cold” cases in order to add them to the CODIS database.

On June 4, 2002, Assistant Chief Simmons forwarded Ms. LaCoss’s resignation letter to Chief Bradford. In a cover memorandum, Chief Simmons outlined Ms. LaCoss’s concerns and added that the Crime Lab’s need for additional personnel and supplies had been “thoroughly documented.” Chief Bradford asked Assistant Chief Simmons to develop an action plan to address the issues raised by Ms. LaCoss. Assistant Chief Simmons responded with a very general one-page memorandum dated July 1, 2002. Chief Bradford told us that he considered the response from Assistant Chief Simmons totally inadequate.⁵⁵

Ms. LaCoss also addressed her concerns about the Crime Lab to the Houston City Council during a “pop off” session where she spoke about conditions in the Lab and the backlog of sexual assault kits that the Lab had been unable to process. In the summer of 2002, Council Member Alvarado toured the Crime Lab.

3. KHOU-Channel 11 News Reports Regarding the DNA Analysis by the Crime Lab

The crisis that ultimately enveloped the DNA/Serology Section of the Crime Laboratory, and led to its closure five weeks later, was triggered by a series of investigative reports aired by KHOU-Channel 11 beginning on November 11, 2001. These reports referred to seven DNA or serology cases in which Crime Lab analysts allegedly made analytical errors or misrepresented

⁵⁵ Chief Bradford signed Assistant Chief Simmons’ memorandum with the notation “Reviewed!” According to Chief Bradford, that notation signified his dissatisfaction with the memorandum, which would have been well understood by other members of the HPD command staff.

their findings. KHOU-Channel 11 consulted with two outside experts, Professor William Thompson and Dr. Elizabeth Johnson.

Among the problems Professor Thompson and Dr. Johnson found with these seven cases were deficient documentation of procedures and results; mistakes in performing analyses of samples containing mixtures of more than one person's DNA; errors in calculating statistical probabilities, particularly in mixture profiles; and mischaracterization of results in testimony. We have interviewed both Professor Thompson and Dr. Johnson more than once, and we appreciate their cooperation in providing us with their perspectives and views with respect to the work performed by the Crime Lab.

4. December 2002 Audit of the DNA/Serology Section

On November 15, 2002, Mr. Krueger wrote to Ron Urbanovsky, director of the DPS Crime Laboratory System based in Austin, Texas, confirming his oral request that DPS assemble an "independent team, comprised of several individuals from different agencies, to perform a technical in-depth review of [the Crime Lab's] DNA casework." On December 12 and 13, 2002, a three-member team led by Irma Rios, then the head of DPS's DNA laboratory, performed an audit of the DNA/Serology Section based on the same FBI quality assurance standards that Mr. Bolding used in his 2000 and 2001 internal reviews of the Section.

The DPS audit found widespread deficiencies related to virtually every area covered by the FBI standards, including the lack of an established quality assurance and internal auditing system, inadequate resources, a technical leader with inadequate qualifications, an inadequate training program for DNA analysts, insufficient educational backgrounds for analysts, inadequate standard operating procedures, and poor documentation in case files. Ms. Rios told us that the DNA/Serology Section at that time was in the worst shape of any laboratory she had ever inspected, an adverse conclusion she shared, in only a slightly different form, when she testified before the Texas State legislature on March 3, 2003.⁵⁶

On December 13, 2002, the audit team briefed Mr. Krueger on its findings. Mr. Krueger recalls that the audit team told him the DNA Section was in

⁵⁶ At the time of the DPS audit, the DNA/Serology Section, unlike the other crime laboratories Ms. Rios had previously inspected, had not been accredited or undergone preparations in connection with accreditation.

shambles. He told us that he was completely surprised by this report and that he had expected the audit to exonerate the Crime Lab. On December 13, 2002, Mr. Krueger prepared a memorandum to Assistant Chief Simmons summarizing what the audit team had told him during the briefing, and he met with Assistant Chief Simmons that day.⁵⁷ The results of the audit were then communicated to Acting Chief of Police Oettmeier, probably the next day.⁵⁸ The DNA Section was closed almost immediately thereafter.

5. The DNA Case Re-Testing Program

In early 2003, the District Attorney's Office and HPD began a process with the goal of re-testing all cases resulted in a conviction -- whether at trial or through a guilty plea -- in which DNA evidence analyzed by the Crime Lab may have played a role. The central purpose of the re-testing program has been to identify any cases in which the results of DNA analysis performed by the Crime Lab cannot be confirmed.

The first step in the post-conviction re-testing process involved the Crime Lab's identifying all of the cases in which some DNA testing was conducted by the Lab. By April 1, 2003, the Crime Lab had identified offense reports related to 1,322 such cases. The next step in the re-testing project was to match these 1,322 offense reports with "cause numbers" (cases) associated with prosecutions, which are maintained by the District Attorney's Office. In the end, the 1,322 offense reports tied to just over 1,000 cause numbers.

The next step in the process involved prosecutors from the Harris County District Attorney's Office reviewing each of the cases associated with the over 1,000 cause numbers to determine whether the case was appropriate for re-testing. The guidelines provided to prosecutors for determining whether the DNA-related evidence in the case should be re-tested were as follows:

- (1) Determine whether, if there was a trial, DNA evidence analyzed by the Crime Lab was introduced at trial. If it was, then the DNA evidence would be re-tested.

⁵⁷ Mr. Krueger recalls that Mr. Bolding refused to attend this meeting with Chief Simmons.

⁵⁸ At the time of the KHOU-Channel 11 reports and the DPS audit of the DNA/Serology Section, Chief Bradford was on administrative leave pending his prosecution for perjury, and Mayor Lee Brown had appointed Executive Assistant Chief Oettmeier Acting Chief of Police.

- (2) If there was a trial and the DNA evidence analyzed by HPD was not introduced at trial, then the case would not be selected for re-testing.
- (3) If there was a guilty plea and the case involved any DNA analysis performed by the Crime Lab, then the evidence was selected for re-testing.

Ultimately, the District Attorney's Office identified 407 cases to be re-tested. Four of these 407 cases identified for re-testing have subsequently been withdrawn from the re-test list because the District Attorney's Office determined that they did not belong on the list, leaving 403 cases to be analyzed.

HPD has been responsible for sending the DNA evidence related to the 403 post-conviction re-test cases to one of the following three outside laboratories for re-testing: Identigene in Houston, Reliagene in New Orleans, and Orchid-Cellmark in Dallas. HPD reports that, as of June 13, 2005, re-testing has been completed on 333 of the 403 cases.

For obvious reasons, the optimal evidence for re-testing purposes is raw evidence, such as stains on clothing or bedding, that have not been processed by the Crime Lab. In cases where such raw evidence does not exist, the next best alternative is to test DNA that already has been extracted or already has undergone some form of processing. The bulk of the cases reviewed -- 248 -- have confirmed with raw evidence the original Crime Lab findings. Seventy-five cases have confirmed the Crime Lab's findings with DNA extracted or processed evidence. In one case, there apparently was no remaining sample to be re-tested and only the Crime Lab's case file was available for review. The results in eight cases have been confirmed by outside laboratories, but with significant differences in the statistics reported by the outside laboratories from those originally reported by the Crime Lab. In one case, involving Josiah Sutton, the Crime Lab's findings were reversed by the outside laboratory.

The distribution of the 333 post-conviction re-tests in which HPD's tests have been confirmed across these four categories thus is as follows:

Confirmed with raw evidence	248
Confirmed with DNA extract or processed evidence	75
Confirmed through case review only	1
Confirmed, but with significant statistical differences	8
Crime Lab’s findings reversed	1

Re-testing in 70 cases is still in progress. In 14 of these cases, HPD has not yet received any results from the outside laboratory. Sixteen of the 70 cases will have to be evaluated on a paper review basis because, apparently, no DNA evidence remains to be re-tested.

The remaining 40 cases have undergone an initial round of re-testing with inconclusive results. At this point it is not clear whether the Crime Lab’s results in each of these 40 cases will be confirmed.

Finally, the District Attorney’s Office has retained its own outside laboratory, Bode Technology Group of Springfield, Virginia, to review the analyses performed by the three laboratories originally involved with the post-conviction re-testing project. The Assistant District Attorney coordinating the re-testing for the prosecutor’s office told us that the purpose of Bode’s involvement is to serve as a second check on the cases and to assist the District Attorney’s Office in reviewing the reports generated by the outside laboratories involved in the re-testing program.

6. The National Forensic Science Technology Center Needs Assessment and Interim Director Frank Fitzpatrick

Mr. Krueger resigned as head of the Crime Lab on February 21, 2003. Although it is not clear whether Mr. Bobzean received a formal appointment, it was understood that he functioned as the interim director of the Crime Lab following Mr. Krueger’s resignation.

After Mr. Krueger’s resignation, HPD entered into a contract with the NFSTC to provide a Needs Assessment with respect to the Crime Lab. ASCLD established the NFSTC in 1995 with the goal of creating a not-for-profit corporation, independent of ASCLD, that would “provide quality systems support, training and education to the forensic science community in the United States.” On or about April 21, 2003, the NFSTC began performing its needs assessment of the Crime Lab.

On May 14, 2003, the NFSTC issued an Initial Summary of its findings to HPD concluding, among other things, that base funding for the Crime Lab had not historically included an equipment replacement fund or sufficient training funds. Even so, with the exception of computer hardware and networking, which were extremely limited, the Crime Lab's equipment -- and, in particular, its DNA equipment -- was modern and state of the art. The Initial Summary also found that, with the exception of the Controlled Substances and Firearms Sections, the Crime Lab did not have documented training programs in place.

The NFSTC's immediate recommendation was that "a strong manager, not necessarily a forensic scientist, be placed in control of the lab." Following that recommendation, HPD began searching for an interim director. On July 23, 2003, HPD and the City entered into an agreement with the NFSTC to hire Frank Fitzpatrick as the interim director of the Crime Lab. Mr. Fitzpatrick was then the Director of the Forensic Science Division of the Orange County Sheriff-Coroner's Office. Under the agreement, Mr. Fitzpatrick accepted a 13-week assignment running the Crime Lab. Personnel who worked in the Crime Lab during Mr. Fitzpatrick's tenure have told us that his open and supportive style was a breath of fresh air in a Crime Lab that they believed had operated under remote and isolated leadership for nearly a decade.

On July 31, 2003, the NFSTC issued its Needs Assessment, which contained detailed recommendations across a range of areas including laboratory supervision and management, training, communication within the Crime Lab, quality control, the space and design of the Lab, health and safety, and recommendations for the individual Sections of the Crime Lab. These recommendations were provided to Ms. Rios when she became the head of the Crime Lab in October 2003.

7. Investigations of the Crime Lab

On December 16, 2002, after the DPS audit of the DNA/Serology Section had been completed and the decision to close the Section had been made, the first of what was to become many Crime Lab-related IAD investigations began. All told, after December 2002, a total of 25 IAD investigations related to the Crime Lab were conducted. Many of these investigations were quite intensive, involving multiple rounds of interviews and witness statements. As Mr. Fitzpatrick observed, these investigations, coupled with the persistent negative press coverage regarding the Crime Lab, contributed to a period of extremely low morale for Lab staff.

On or about April 9, 2003, the 22 Harris County criminal district judges called for a grand jury investigation to be opened with respect to potential criminal conduct within the Crime Lab. Later that day, the Harris County District Attorney announced he had already been investigating the Crime Lab for several weeks. In mid-May 2003, a second grand jury, apparently operating independent of the District Attorney's Office, also began investigating the Crime Lab. In October 2003, this second grand jury concluded its investigation without issuing any indictments. To date, no indictments have issued from the first grand jury either.

8. Accreditation

On May 10, 2005, the HPD Crime Lab was accredited by ASCLD/LAB in the disciplines of controlled substances, blood alcohol analysis, questioned documents, firearms, and serology. ASCLD/LAB is a voluntary program in which a "crime laboratory may participate to demonstrate that its management, personnel, operational and technical procedures, equipment and physical facilities meet established standards."⁵⁹ We congratulate the Crime Lab on this significant achievement, which is the product of a sustained effort on the part of personnel in the Lab and is an important milestone to the continuing improvement of the quality of analysis in the Lab.

D. The Property Room and Project 280

On August 26, 2004, Chief Hurtt disclosed that evidence from 8,000 criminal cases had been improperly stored in the Property Room. At the time, HPD officials stated that the evidence was contained in 280 boxes and related to cases processed between 1979 and 1991. Although the boxes were found in the Property Room in August 2003, they were not opened for a year. As a result of that disclosure, and the public concern associated with it, a review of the Property Room was included within the scope of our investigation. During the past 90 days, we have begun reviewing the operations of the Property Room, and members of our team responsible for the Property Room, as well as other members of the investigative team, have toured the Property Room and met with Property Room personnel.

⁵⁹ www.ascl-d-lab.org/dual/aslabdualaboutascl-d-lab.html.

1. Facilities

The Property Room is located at 1103 Goliad Street and is comprised of two main areas. One area houses central receiving; the evidence tracking system; the administrative area; file storage; a vault for high value evidence; and property storage areas for firearms, knives, digital equipment, and small item evidence. Although this area is air-conditioned, it remains susceptible to high heat and humidity.

The second, and much larger, component of the Property Room consists of a large, single-floor warehouse and an annexed three-story warehouse, known as the Volker Building. Most of this area has shelving containing evidence and property stored in bins and boxes, as well as tools, bicycles, and other large items of evidence. We observed that some of the boxes stored in this area are marked with bio-hazard labels. This area is not air-conditioned and is subject to extreme heat and humidity. The floors are dirty and dusty. Currently, the area lacks space for the storage of additional property.⁶⁰ This area also houses two walk-in freezers containing sexual assault kits and other biological evidence.⁶¹

The Property Room facility has two major deficiencies as a property storage facility -- (1) inadequate storage space and (2) lack of humidity and temperature control. In addition, the facility has had major ongoing maintenance problems over the last 15 years, which have included roof leaks, faulty electrical wiring and lighting, inoperable elevators, asbestos concerns, and the need for new windows and doors. Managers of the Property Room have documented these major facility issues.

The roof at 1103 Goliad Street was repaired in 2004, but many of the other problems with the facility still exist. Even if repairs are made to the present facility, it may not be adequate for the proper storage and handling of evidence due to the lack of temperature and humidity control and inadequate storage space. In recognition of these deficiencies, HPD has committed to building a

⁶⁰ HPD is attempting to address overcrowding in the Property Room by storing evidence at the 1200 Travis Street building and exploring the alternative of auctioning items through the Web site www.propertyroom.com.

⁶¹ During a tour of the Property Room, one freezer appeared not to be maintaining the proper temperature, and we observed a considerable amount of water on the floor around the freezer. HPD advised us that the freezer was subsequently inspected and that it did not malfunction. HPD has suggested that the water we observed may have been attributable to condensation.

state-of-the-art Property Room and has recently acquired the land on which it will build the facility. HPD has identified a property room design expert to assist with the development of the new facility.

2. Project 280

Beginning in the early 1980s, the Property Room allowed various divisions of HPD to store items on the third floor of the Volker Building. The items stored on the third floor were considered to be under the control of the divisions that deposited the items and were not logged or inventoried by the Property Room. The Crime Lab was one of the divisions that stored items on the third floor of the Volker Building. The items stored by the Crime Lab included evidence as well non-evidentiary items, such as excess office furniture. The evidence was stored in envelopes and boxes placed inside larger white boxes, which were stacked against a wall and under several windows.

In the 1980s and 1990s, the Volker Building's roof was in poor condition and experienced leaks. Rainwater leaked through the windows and roof, damaging some of the evidence stored by the Crime Lab. In addition, rats were present on the third floor, and they ate through a number of envelopes and boxes containing evidence.

In early 2000, the Property Room began to run out of space to store the evidence in its custody. Divisions storing property on the third floor of the Volker Building were asked to remove their property to free up space. When Crime Lab personnel came to the Property Room to remove the Lab's property, they took the contents of the damaged white boxes of evidence and placed the items in 283 new, large cardboard boxes. Each of the 283 boxes contained multiple pieces of evidence from multiple cases. Some boxes contained evidence from as many as 100 cases. The evidence dated from the 1960s to the early 1990s.

Once the evidence had been placed into the 283 boxes, Crime Lab personnel tagged the boxes to transfer custody to the Property Room so that the boxes could remain there. In doing so, the Crime Lab personnel identified each box by the incident number related to only one of the many items of evidence contained in each box, which misleadingly suggested that each box contained evidence related to only a single case. In fact, each box contained evidence relating to many cases. At some point, two of the 283 boxes were checked out of the Property Room by Crime Lab personnel. The pieces of evidence contained in these two boxes were individually tagged as individual pieces of evidence, and checked back into the Property Room. Thus, these two boxes ceased being part of the original 283-box collection.

On September 21, 2000, the Property Room received a routine destruction order to dispose of certain evidence. The evidence subject to the order was contained in one of the 281 remaining boxes. Coincidentally, the incident number related to the evidence subject to the destruction order was the incident number that happened to be listed on the outside of the box. Because the Property Room personnel believed, based on the box's label, that the box contained evidence related only to the one incident identified in the destruction order, Property Room personnel destroyed all of the box's contents. Subsequently, it was determined that this box contained evidence from 33 cases in addition to the one case identified on the box label.

In November 2003, the remaining 280 boxes were moved from the Property Room to a section of the 24th floor of the HPD headquarters, located at 1200 Travis Street, to protect the evidence from further degradation. On August 1, 2004, the Inspections Division began cataloguing and tagging the evidence contained the original 283 boxes of evidence. Approximately 8,000 individual evidentiary items have been identified in the boxes. We will continue reviewing this area, and we will provide additional information regarding Project 280 in future reports.

3. Storage of Biological Evidence

The storage of biological evidence has been an ongoing problem for the Property Room. The primary issue is the lack of sufficient temperature-controlled space for the storage of such materials. Prior to 1998, the Property Room stored sexual assault kits and other bodily fluid evidence in a freezer for a period of 18 months. After 18 months, the evidence was moved to air-conditioned areas within the Property Room for long-term storage. By 1998, the Property Room was running out of space in the freezers as well as the air-conditioned storage area. In March 1998, the head of the Property Room, Ron Cobb, asked Mr. Bolding if it was necessary to provide air-conditioned storage for this evidence after the initial 18-month period of storage in the freezer. In a March 18, 1998 memorandum to the Captain of HPD's Homicide Division, Mr. Cobb relayed the response he had received from Mr. Bolding:

[T]here is **NO** need to provide air-conditioned storage for any type of body fluid evidence after the original freezer period of 18 months. [Mr. Bolding] related that he has taken evidence that was stored on the third floor of this building (which reaches extremely high temperatures in the summer), and has achieved successful DNA testing. [Emphasis in original.]

On April 1, 1998, in reliance on the information received from Mr. Bolding, Property Room personnel began relocating sexual assault kits and other biological evidence to general property storage areas. The general property storage areas are not air-conditioned and, therefore, are subject to high humidity and temperatures.

Both of the Property Room's freezers are overloaded and additional storage space is needed. Some biological evidence is commingled with other general evidence and stored in the general property room storage areas. This practice raises serious concerns about proper storage of biological evidence.⁶² HPD has advised us that it expects delivery very soon of an additional freezer, which has been on order for several months, to the Property Room.

4. Evidence Tracking and Chain of Custody

The Property Room first began using a computerized evidence tracking system and bar-coded evidence tags in 1991. The evidence tracking system is used to track the location of items of evidence inside and outside of the Property Room. The computerized evidence tracking system currently used by the Property Room is obsolete, requires a significant amount of paperwork, and does not satisfy the needs of the HPD. The Property Room has been working on tagging with barcodes all of the evidence that was in the Property Room's possession prior to 1991. That process is nearly complete. The Property Room currently uses a number of forms to track chain of custody. The forms are cumbersome and archaic and increase the chances of errors and the risk of misplaced evidence.⁶³

5. Audits of Inventory and Destruction of Property

HPD performed annual audits of samples of evidence in the Property Room by HPD in 1998, 1999, 2000, and 2002. All selected evidence was reported to have been located in these audits. Although annual audits have not occurred

⁶² For example, in May 2004, water caused damage to 10 to 12 boxes of evidence due to a roof leak. Nine of these boxes contained clothing with possible biological evidence. The wet clothing was removed and hung to dry before being checked back into the Property Room.

⁶³ HPD advised us that it expects to have an improved electronic evidence tracking system, known as EMAPS, on line within the next four months. As a long-term solution, HPD advises us that it is investing in a LIMS system that it expects will be implemented in about a year from now.

since 2002, HPD advises us that an internal audit team has been reviewing the Property Room's operations over the past 12 months. The Property Room manager reports that theft and misplaced evidence are not serious problems in the Property Room. Crime Lab personnel have reported delays on a several occasions in the retrieval of various pieces of evidence from the Property Room. We have not, however, yet learned of instances where the evidence could not be located at all. Management of the Property Room believes that it currently lacks sufficient staff to perform a full inventory.

6. Standard Operating Procedures

The Property Room lacks a comprehensive, updated set of SOPs available to all Property Room personnel. The procedures governing the Property Room's operations are contained in various memoranda that lack revision dates, and some of those procedures do not reflect current practices. The Property Room currently uses paper bags for the storage of most pieces of evidence, which among other things makes the evidence difficult to see. Many law enforcement agencies use clear plastic envelopes for the storage of most kinds of evidence in order to improve the ability to observe and retrieve pieces of evidence.

Our review of the Property Room during Phase II will continue to explore issues related to the handling of evidence and the integrity of HPD's evidence processing and preservation systems.

E. Limited Case and Proficiency Test Reviews

During Phase I, the members of our Scientific Advisory Board and the investigative team's Scientific Team Coordinator spent a week at the Crime Lab performing a limited review of cases. The purpose of this limited case review was threefold: (1) to obtain a preliminary assessment of the quality and documentation of the laboratory work and reports generated by the Crime Lab across analysts and time periods in order to help define our confidence levels in establishing the size of our samples for Phase II, (2) to get a sense of the volume of the case work performed by the Lab during the relevant time periods, and (3) to develop estimates as to the time that our forensic scientists will need during Phase II to review cases selected from each of the forensic science disciplines. We selected and reviewed cases analyzed by many of the forensic scientists currently and formerly employed in each of the areas of the Crime Lab across the relevant periods.

We also conducted a preliminary review of the proficiency tests performed by scientists the Crime Lab in the areas of DNA/Serology and

Toxicology. The Toxicology Section appears to have administered proficiency tests to toxicology analysts, except for a period between 1995 and 1999 when it appears no toxicology proficiency testing was done.⁶⁴ We also reviewed proficiency examinations performed in the late 1980s and early 1990s in the areas of serology and DNA analysis. We found numerous errors in the typing results in the serology proficiency tests. The analyst or analysts involved with these tests are not identified. With respect to RFLP tests, all three of the proficiency tests we reviewed that were performed by Dr. Sharma had errors, one of which appears to have been clerical. In the few PCR DNA analysis proficiency tests we reviewed, we found only one error, which was in connection with a DQ-alpha analysis performed in 1993. We were unable to determine at the time whether this was a post-training competency test of a new analyst, or a proficiency test of an experienced one.

Results of proficiency tests are perhaps the best gauge of the quality of a laboratory's casework. In the areas of DNA and serology, the results from dozens of participating crime laboratories constitute the yardstick by which a lab's results can be objectively measured. Our review of proficiency testing records in all disciplines for which they are available will continue in Phase II.

Themes of the Investigation

As reflected by the above narrative, we have made enormous progress during the first 90 days of the investigation in developing information about the history, operations, and management of the Crime Lab. Although we have made considerable progress, much important work remains to be done. The investigation is continuing, however. The case reviews to be performed during Phase II of the investigation will be our primary means for evaluating the quality of the scientific work performed by analysts in the Crime Lab as well as the Lab's level of adherence to its own SOPs and with generally accepted forensic science practices and analytical procedures. Throughout Phase II, we will issue quarterly reports describing our continuing work and the additional information we have developed about HPD, the Crime Lab, and the Property Room. At the end of this investigation, we will release a final report containing our ultimate findings and conclusions.

⁶⁴ Ms. Louie, the Criminalist IV supervisor over the Toxicology Section at the time, acknowledged that proficiency testing in the Toxicology Section lapsed for a period of several years, although her un-refreshed recollection was not clear as to when.

Although the investigation is ongoing, several themes already have emerged as we have examined the root causes of the problems that gave rise to the crises in the Crime Lab.

A. Lack of Support for the Crime Lab Within the Department and at the Political Level

It is clear that, over the 15 years preceding the DNA/Serology Section's closure in December 2002, HPD and the City failed to provide the Crime Lab with adequate resources to meet growing demands. From the very beginning, the DNA Section was left to fend for itself to obtain grant funding for personnel, equipment, and training. As the enormous investigative potential of DNA profiling came to be realized during the 1990s, and as technological advancements in DNA analysis evolved at a rapid pace, the City and the Department failed to support the Crime Lab to ensure that the DNA/Serology Section was adequately staffed and supervised, and its scientists well trained to perform high quality scientific work.

During these fifteen years, the City of Houston grew to become the fourth largest metropolitan area in the United States, and the level of criminal activity grew along with the City. Yet, as the Crime Lab's caseload swelled, it struggled to keep up. We have heard consistently from witnesses that, as a support function populated by civilian employees, the Crime Lab was marginalized within the Department. Salaries for Crime Lab personnel were significantly lower than the compensation offered in other laboratories, even other public laboratories in the Houston area. Accordingly, the Crime Lab experienced difficulty attracting and retaining well qualified forensic scientists. Many of the Crime Lab's scientists, including its director and some senior managers, had secondary outside employment. Although between 1994 and 2002 there was some modest growth in the number of criminalists authorized for the Crime Lab, there were always positions left vacant as a result of turnover or inadequate funding to fill the positions. The calcified organization of the Crime Lab afforded analysts very little opportunity for promotion and pay increases.

Moreover, and quite problematically, there has been no Criminalist III line supervisor over the Toxicology Section since 1992 and the line supervisor position in the DNA/Serology Section was vacant between August 1996 and December 2002, when DNA analysis at the Crime Lab was suspended. The issue was brought directly to the attention of Chief Bradford by analysts in the DNA Section in 1999, but, after providing an initially encouraging response, no action was taken to fill the position, with Chief Bradford claiming a lack of funding. Two years later, when funding was available as a result of a grant provided by

the City Council to reduce the backlog of approximately 19,500 unanalyzed sexual assault kits, Chief Bradford rejected his command staff's recommendation that a portion of the funds be devoted to hiring additional DNA criminalists, including a Criminalist III supervisor. Chief Bradford's reason for doing so appeared to be an unwillingness to use grant money to create a position that eventually would have to be funded by the Department.

Shockingly, the City and HPD failed to repair the roof leaks that allowed water to pour into the Crime Lab for over six years. The City and HPD were aware of problems with the 1200 Travis building's roof before the Crime Lab moved into the facility. In 2001, Tropical Storm Allison flooded the Crime Lab, and boxes containing biological evidence became soaked and the evidence likely contaminated. Yet the roof leaks continued unabated in a scientific laboratory charged with the enormous responsibility of processing sensitive biological evidence for use in criminal matters. The roof problem was not addressed until after the Crime Lab scandal erupted.

Finally, as illustrated by the drylabbing incidents involving Mr. Price and Mr. Patel, there appears to have been a lack of support within the Crime Lab and the chain of command for disciplining line analysts for serious misconduct. Although it appears that the Department was prepared to terminate Mr. Price after his second drylabbing incident, he received relatively light punishment after his first incident for scientific misconduct that at least one of his immediate supervisors believed should have resulted in termination. Mr. Patel was never severely disciplined for his incidents, and it appears that Chief Bradford intervened directly to have Mr. Patel reinstated as a bench analyst, which may have undermined the ability of lower level managers and supervisors to respond effectively to misconduct.

B. Ineffective Management Within the Crime Lab

Although HPD and the City must be faulted for failing to provide the Crime Lab with the resources it needed, there appears also to have been a lack of strong and effective leadership within the Crime Lab. The information we have developed so far indicates that Mr. Krueger was an isolated and detached manager in the Lab. Mr. Krueger rarely met with Crime Lab analysts as a group, and he relied heavily on Mr. Bolding and the other managers to run their sections, while providing little oversight of them. Mr. Krueger told us that he was surprised and shocked by the findings of the DPS audit in 2002 and that he expected the DNA/Serology Section to be vindicated. Given the state of affairs described by the auditors, this could only have been the reaction of a manager extremely far removed from the activities of his subordinates.

It also appears that Mr. Krueger failed to make a forceful case with HPD command staff for critical needs, such as the DNA/Serology Section Criminalist III position. Although requests for funding were made persistently over the years, Mr. Krueger failed -- probably because he did not fully appreciate the problem himself -- to explain the potential for disaster caused by the lack of supervision in the DNA/Serology Section.

We have also found that there was inadequate management of the strong and difficult personalities within the Crime Lab. Morale was consistently low among Crime Lab analysts and discontent was widespread. After Dr. Sharma was made the line supervisor over the DNA/Serology Section, open and prolonged feuding developed between Dr. Sharma and Mr. Bolding. Grievances and IAD complaints between and among analysts and supervisors, some of which were quite petty, were commonplace. As discussed above, Crime Lab managers found it difficult to discipline or remove incompetent personnel. These personnel problems fostered a highly dysfunctional, and, in some respects, unprofessional, laboratory environment.

C. Lack of Adequate Quality Control and Quality Assurance

Managers and supervisors within the Crime Lab also failed to ensure that the analytical and quality control procedures employed by the Crime Lab were up to date, well designed, and complete. SOPs for several of the Sections in the Crime Lab consisted of procedures and reference materials cobbled together over time without periodic re-evaluation and reorganization. Although the supervision and quality control in some Sections of the Crime Lab appear to have been effective, as demonstrated at least to some extent by the detection of four drylabbing incidents by the Controlled Substances Section supervisors, this does not appear to have been the case across all Sections in the Crime Lab. The Crime Lab stopped performing lab-wide quality control audits in 1997. Mr. Bolding's reviews of the DNA/Serology Section, using the FBI's Quality Assurance Standards for Forensic DNA Testing Laboratories, performed at the end of 2000 and 2001 described a very different picture of the state of that Section than did the DPS audit in December 2002.

Although we have not yet begun our Phase II reviews of the cases worked by the Crime Lab, based on the materials we have reviewed and our interviews, we are attuned to several potential problem areas. For example, several of the problematic cases processed by the DNA/Serology Section involved analysis of samples containing mixtures of body fluids and DNA from more than one person. Such cases involve complexities in performing the actual DNA analysis and calculating the statistics associated with the results. As the 2002 DPS audit

found, Mr. Bolding, who had served as the technical lead of the DNA/Serology Section following Dr. Sharma's removal from the Section in 1996, lacked sufficient training and education in statistics. Our preliminary reviews suggest that in several cases involving mixtures, the DNA analysts performed the statistical calculations incorrectly. We also already have encountered deficiencies in the documentation contained in analysts' case files.

D. Isolation of the DNA/Serology Section

Major problems beset the DNA/Serology Section of the Crime Lab almost from its inception, but these problems were insufficiently recognized by Crime Lab management and the HPD command staff for many years. By the time of the 2002 DPS audit, the DNA Section was in shambles -- plagued by a leaky roof, operating for years without a line supervisor, overseen by a technical leader who had no personal experience performing DNA analysis and who was lacking the qualifications required under the FBI standards, staffed by underpaid and undertrained analysts, and generating mistake-ridden and poorly documented casework. A critical component of the FBI standards, to which the Crime Lab agreed to abide when it registered to participate in CODIS in 1998, is a requirement for bi-annual reviews by outside agencies. Such a review, of course, never occurred until the fate of the Section already was sealed. The internal reviews of the Section, performed by Mr. Bolding in 2000 and 2001, made findings regarding the condition of the DNA Section that were largely contradicted by the 2002 DPS audit, which used the same standards. Despite Lab management's recognition as early as 1996 that accreditation was becoming a necessity, the Crime Lab's efforts towards achieving accreditation quickly dissipated; no outside inspection of the DNA Section related to accreditation was ever performed.

The purpose of outside scrutiny is to shed light on a laboratory's practices and to focus attention on existing deficiencies and potential problems. By insulating itself from outside scrutiny, the Crime Lab never received this benefit. Flawed practices and embedded misunderstandings -- for example about the way to present the statistics about DNA mixtures -- became accepted by analysts within the DNA/Serology Section as the correct way to do things. These misunderstandings infected the work of the Section's analysts from the analysis through trial testimony -- indeed, the Lab's most vociferous critics, including Professor Thompson and Dr. Johnson, have claimed that the Section's work was plagued by serious errors in virtually every case they have reviewed.

The fact that Mr. Krueger was, by all accounts, genuinely shocked to learn of the DPS audit's highly critical findings, speaks volumes about his isolation

from what was going on in the DNA/Serology Section -- and of the Crime Lab's isolation from the outside world. The fact that Mr. Bolding acknowledges that, without a line supervisor in the DNA/Serology Section, he knew its "ship was sunk" -- and yet no one from the outside was invited into the Lab, and the DNA Section kept churning out cases -- is extremely troubling. We will continue to explore the isolation of the Crime Lab from outside scrutiny, the effects of that isolation, and the extent to which the Crime Lab's problems may have been purposefully hidden from managers and command staff within the Department and from the larger forensic science community.

Conclusion

This report concludes Phase I of our investigation. Although Phase I was originally conceived as the planning stage for the in-depth review of the Crime Lab that was to be conducted during Phase II, we have accomplished far more than that over the past three months.

We have conducted more than 80 interviews, reviewed thousands of pages of documents, and made substantial progress in understanding the development of some of the most significant issues in the Crime Lab over the course of well over a decade. Those issues include the promising start and then the steady deterioration of the DNA analysis function during the 1990s; chronic shortages of personnel, including the failure to provide adequate supervision of DNA analysts virtually since the Crime Lab began doing DNA analysis; inferior pay and status accorded to Lab personnel within HPD; the absence of the most fundamental personnel, management, and quality assurance systems within the Lab; and a workforce demoralized by low pay, inadequate training, ineffective leadership, and the continuing exodus of some of its most talented personnel. Along the way, we have exposed scientific fraud in isolated cases in the Controlled Substances Section.

The downward spiral in the Crime Lab was only stopped because of the public attention that focused on the Crime Lab starting in the summer of 2002, first with the public resignation of Ms. LaCoss, followed by the investigative series by KHOU-Channel 11 and subsequent intensive and extensive coverage of problems relating to the Lab, most notably in the Houston Chronicle. The exposure of the Crime Lab's problems led, over the next year, to the departure of most of the Lab's top managers, the hiring of a new Lab director, and a commitment to raising the standards of work in the Lab. The Crime Lab's progress over the past two years is reflected in its accreditation by ASCLD/LAB in May 2005.

Although there has been undeniable and important progress in the Crime Lab, our job is, among other things, to conduct a thorough exploration of the quality of work performed in the Lab, especially during the period before the leadership of the Lab changed and the push to raise standards, with high level HPD and political support, was launched. At the heart of our investigation is the review of a large number of cases analyzed by the Crime Lab in all disciplines in which the Lab did its work. We have now framed the context of those case reviews and understand much better the institution within which the work was

done, but we do not yet know whether the well-publicized cases of the Crime Lab's failures are isolated analytic breakdowns or only the tip of an iceberg of widespread analytic failures, incompetence, or worse. Our Phase II case reviews will show comprehensively, not anecdotally, the extent to which Crime Lab analysts did or did not do good work. Only then will we grasp the answers to the questions that have driven this investigation -- most centrally, how did the work of the HPD Crime Lab facilitate or impair the proper functioning of the Harris County criminal justice system. And, to the extent there were widespread failures, what were the human consequences?



Michael R. Bromwich

Independent Investigator

Fried, Frank, Harris, Shriver & Jacobson LLP

June 30, 2005

Stakeholders Committee Members

Adrian Garcia
Houston City Council

Fran Gentry
National Association for the Advancement of Colored People

Sylvia Gonzalez
League of United Latin American Citizens

Rusty Hardin, Esq.
Rusty Hardin & Associates

Richard Li, Ph.D.
Sam Houston State University

Ashraf Mozayani, PharmD., Ph.D., D-ABFT
Harris County Medical Examiner Office

Frank Parish, Esq.
Justice for All and Parents of Murdered Children

Annise Parker
Houston City Controller

Wayne Riley, M.D.
Baylor College of Medicine

Benjamin Roa, Ph.D.
Baylor College of Medicine

Kent W. "Rocky" Robinson, Esq.
Houston Bar Association

Andrews Kurth LLP
Richard Ward, Ph.D.
Sam Houston State University

Anthony Woods, Ph.D.
Texas Southern University

ACRONYMS

ASCLD	American Society of Crime Laboratory Directors
ASCLD/LAB	American Society of Crime Laboratory Directors/Laboratory Accreditation Board
CER	Central Evidence Receiving
City	The City of Houston, Texas
CODIS	Combined DNA Index System
DNA	deoxyribonucleic acid
DPS	Department of Public Safety
FBI	Federal Bureau of Investigation
FTIR	Fourier Transform Infrared
GC/MS	gas chromatograph/mass spectrometer
HPD	Houston Police Department
IAD	Internal Affairs Division
MSP	Michigan State Police
NFSTC	National Forensic Science Technology Center
PCR	polymerase chain reaction
QA/QC	Quality Assurance/Quality Control
RFLP	restriction fragment length polymorphisms
RFP	Request for Proposals
SERI	Serological Research Institute
SOP	standard operating procedure
STR	short tandem repeats