Evaluation
Report

Alabama Law Enforcement Planning Agency
Evaluation Management Unit
Office of Public Service and Research
Auburn University

CRIME LABORATORIES REPORT

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CRIME LABORATORIES REPORT

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March 1978

EXECUTIVE SUMMARY

Project Description:

In 1970 the Alabama Law Enforcement Planning Agency (ALEPA) established the Crime Laboratories Delivery System Program in order to assist the Alabama Department of Toxicology and Criminal Investigation in carrying out the expansion outlined in its Master Plan. The purpose of this expansion was to enable the Department to meet the increasing crime laboratory needs in Alabama. ALEPA support of this program from 1971 through September 1978 totals $3,509,760.00 in funding.

In 1970 the Department of Toxicology and Criminal Investigation was operating five regional laboratories across the state: at Auburn, Birmingham, Huntsville, Mobile, and Montgomery. With the aid of the Crime Laboratories Delivery System Program, the Department opened five satellite laboratories in three years: at Enterprise (in 1971), Jacksonville (1972), Selma (1972), Florence (1973), and Tuscaloosa (1973). The satellite laboratories were established to relieve the caseloads of the five regional laboratories and to improve the accessibility of crime laboratory services in specific regions.

Evaluation Methodology:

This evaluation has a three-fold focus. It examines the expansion of services as revealed in crime statistics, crime laboratory caseload statistics, and the opinions of evidence collection officers from law enforcement agencies across the state; case turn-around-time as revealed

in sample crime laboratory statistics and as analyzed through a survey of toxicology personnel; and the responses of district attorneys and circuit court judges to the Department of Toxicology and Criminal Investigation as revealed in opinion surveys.

Findings:

1. Expansion of Services

Statistics from the Uniform Crime Report indicate that crime in Alabama, as in the surrounding states, has increased steadily in recent years. Whereas Alabama's crime index was at 1,576.0 in 1969, it reached 3,803.3 in 1976. This increase, insofar as it resulted in additional cases requiring crime laboratory services, supports the position that the Department of Toxicology and Criminal Investigation needed to expand during this period.

From 1969 through 1972, the Department's five regional laboratories were experiencing rapidly increasing caseloads. During the same period that the satellite laboratories began to establish themselves (1972-1975), however, the caseloads at the regional laboratories for the most part either stabilized or decreased in relation to the 1972 levels. Since analysis of the UCR statistics does not reveal a decrease in crime rates during these years, the evaluator concludes that the decreases or stabilizations in caseloads at the regional level are largely the result of relief provided by the establishment of the satellite laboratories. Moreover, the caseloads at the satellite laboratories were large enough to indicate not only that the laboratories gave relief at the regional level, but also that

they met some local law enforcement needs that previously might have gone unattended. Each satellite laboratory generated substantial caseloads by the second year of its operation and either maintained or increased its caseloads through 1975.

The results of the survey of evidence collection officers show, in fact, that the establishment of satellite laboratories has enabled many agencies to increase the number of laboratory submissions. Fifty-seven percent of the respondents reported increasing the number of submissions since the advent of the satellite laboratories. The evidence collection officers rated the services provided by the Department highly, with 91% saying they were good or very good. The training programs at the regional laboratories received almost equally high marks with 87% rating them good or very good. Overall, the survey results show that the Department is regarded as exceptional by the law enforcement agencies it serves.

2. Turn-Around-Time

A sample of cases processed between October 1973 and March 1976 reveals that although the regional and satellite laboratories have reduced turn-around-time significantly in recent years, in general they have not met the seven-day objective. The average for all laboratories decreased from 21 days in 1973 to 10 days in 1976. Only the Huntsville and Mobile laboratories reached or surpassed a turn-around-time of seven days in 1976. Three categories of cases showing the most improvement--drug identifications, physical evidence, and death investigations--however, include the types of cases for which the caseload trends show the satellite laboratories providing the most relief to regional laboratories. In each

of those categories turn-around-time was reduced by more than a week. The evaluator believes, therefore, that there is a link between the impact of satellite laboratories on the regional laboratories and the general reductions in turn-around-time.

Two issues related to turn-around-time that surfaced during the evaluation are Department personnel's court time requirements and individual workloads. Although the amount of time spent by Department personnel serving as witnesses decreased by 49% from 1973-1974 through 1975-1976, in 1975-1976 the total time commitment was 5,695 hours. Of this time, 1,124 hours were spent traveling and waiting on occasions when testimony was not given. As for the issue of individual workloads, despite the relief provided by regional laboratories, Department statistics show that individual workloads increased from 255 cases per technical employee in 1972-1973 to 332 cases in 1975-1976, with projections indicating further increases.

The survey of Department personnel primarily addressed two issues as related to turn-around-time. The high majority of personnel responding to the survey (20 of 29, or 69%) expressed a belief that turn-around-time in their laboratory was too slow. An equal majority (21 of 30, or 70%) said that the amount of time spent in court had a direct effect on turn-around-time. A slight majority (16 of 30, or 53%), however, indicated they did not think the amount of time spent in court was excessive.

The evaluator asked whether the use of video-taped depositions, an alternative that pending judicial reform may make highly acceptable, would reduce turn-around-time. The majority of the crime laboratory

technicians (15 of 29, or 52%) answered that it would, though a substantial number (11 of 29, or 38%) did not believe this type of testimony would reduce turn-around-time, and some (3 of 29, or 10%) were undecided. The technicians were almost evenly split as to whether the use of video-taped depositions would increase individual productivity. Fourteen (48%) said this method of testimony would allow them to handle more cases, 13 (45%) said it would not, and 2 (7%) were undecided.

The most common suggestion on how to improve individual productivity given by the Department personnel was to improve instrumentation (11 of 31, or 35%). A check by the evaluator revealed that although the amount of equipment bought or transferred for each laboratory has fluctuated in recent years, neither the Jacksonville nor the Selma laboratory has received any major equipment since 1974. In the face of rising individual workloads, many Department technicians believe new and better equipment could be a key to reducing turn-around-time.

3. Opinions of District Attorneys and Circuit Court Judges

The survey responses of the district attorneys and circuit court judges indicate a positive regard for the Department of Toxicology and Criminal Investigation. A full 91% (30 of 33) of the district attorneys said that the preparation of Department personnel for testimony was very good. The majority (52%) reported using scientific evidence in 21-40% of their cases, and 65% said they would like to use it in more cases than they do. A full 97% expressed a belief that jurors find scientific evidence more credible than other forms of evidence.

The evaluator asked both the district attorneys and the circuit court judges for their opinions on the use of video-taped depositions by

Department personnel. The largest group of district attorneys (46%) said they did not approve of this form of testimony, and a higher percentage (49%) said they did not believe it would speed up the courtroom process. The majority of the judges (54%), however, indicated they approved of the use of video-taped depositions by technicians from the Department, even though a higher percentage (66%) said they did not believe their use would speed up the courtroom process.

The judges were unanimous in their approval of the toxicologists' preparation for testimony, with 17% (10) saying it was good and 83% (49) saying it was very good. They were virtually unanimous in their belief that jurors find scientific evidence more credible than other kinds of evidence, with 95% answering that jurors do.

Conclusions:

During a period of increasing forensic science and toxicology needs, ALEPA's Crime Laboratories Delivery System Program enabled the Department of Toxicology and Criminal Investigation to expand its services, to provide services with increased expeditiousness, and at the same time to maintain a high quality of service.

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I. INTRODUCTION

A. BACKGROUND

The Alabama Department of Toxicology and Criminal Investigation was created by a resolution brought before the Alabama State Legislature in 1935 and passed as Act #225. Prior to the establishment of the Department of Toxicology and Criminal Investigation (referred to as "the Department" in this report) virtually no facilities existed within the state for the analysis of various types of evidence. By providing services such as drug identification, evidence collection and storage, and criminalistics, the Department enabled law enforcement officials to solve many cases that previously would have been dismissed.

The Department began its criminal investigative services in 1939 by establishing a laboratory at Auburn. The years that followed showed an increasing need for laboratories around the state, and by 1970 the Department had established regional laboratories in Birmingham, Huntsville, Mobile, and Montgomery. At that time, though serving competently, the Department had not reached its desired level of performance. Specificially, Department officials felt that the period of time between the delivery of evidence to the laboratory and the return of evidence to the submitting agency--the turn-around-time--needed to be reduced. Also, the number of cases submitted to the Department's laboratories was increasing greatly, and the Department's growth in personnel and facilities was not keeping pace with the increasing demand for services. It was evident that unless the Department increased its personnel, improved its equipment, and

expanded its facilities, its ability to serve the criminal justice system would be impaired.

In response to these increasing demands, the Department prepared a Crime Laboratory Delivery System Master Plan that established goals and priorities for the future growth of the Department. One important point of emphasis in the Master Plan was that an apparent relationship existed between the percentage of cases submitted by an agency for laboratory work and the distance from the laboratory to the submitting agency. Therefore, a principal recommendation of the Master Plan was to increase the accessibility of toxicology and forensic services by building five satellite laboratories across the state.

To assist the Department in implementing its Master Plan and meeting the crime laboratory needs in the state, the Alabama Law Enforcement Planning Agency (ALEPA) established the Crime Laboratories Delivery System Program and provided funding for the Department. With ALEPA's assistance many improvements were realized in Alabama's crime laboratory services.

This report is an evaluation of ALEPA's Crime Laboratory Delivery System Program. It contains an examination of the Crime Laboratories Delivery System for all the years ALEPA has provided support as well as information pertinent to future funding decisions.

B. PROGRAM DESCRIPTION

In this section is a description of ALEPA's Crime Laboratories Delivery System Program for fiscal year 1977. This description serves as an indication of the type of support ALEPA has provided this program since its inception in 1970.

1. GOAL

The goal of the Crime Laboratories Delivery System Program is to meet the increasing forensic and toxicology needs in Alabama.

2. OBJECTIVES

The objectives of this program are as follows:

a. To continue the expanded operations of the five regional and five satellite crime laboratories in order to efficiently deliver forensic science services to the Alabama Criminal Justice System.

b. To improve employee productivity as a means of coping with increasing workloads and improving case turn-around-time.

c. To direct efforts toward attainment of the goals and objectives set out in the Alabama Master Plan for the Crime Laboratories Delivery System. (See Appendix A, page 81, for specific goals and objectives.)

d. To implement applicable standards and goals adopted by the National Advisory Commission on Criminal Justice and endorsed by the Alabama Standards and Goals Committee. (See Appendix B, page 83, for specific goals and objectives.)

e. To provide pertinent expertise to law enforcement officers by coordinating the Department's equipment and personnel at each laboratory with the most frequently made request of the officers in that territory.

3. METHODS AND PROCEDURES

ALEPA funding has been used to: (1) pay the salaries of clerical and technical personnel (criminalists, toxicologists, and crime laboratory technicians) employed in the five regional and five satellite

crime laboratories located throughout the state; (2) to provide for an upgrading of technical instrumentation within the crime laboratory (specifically, an infrared spectrophotometer, gas chromatographs, and electrophonesis equipment); and (3) to install new furniture in the new regional crime laboratory located at the University of Alabama in Birmingham.

4. RELATIONSHIP OF PROJECT TO ADOPTED ALEPA STANDARDS AND GOALS

The Department of Toxicology and Criminal Investigation relates to Goal Four of the Police Goals, Standards, and Priorities Section of the Multi-Year Plan, Volume V. It also complies specifically with Standard 12.2, the Forensic Laboratory.

5. DETAILED BUDGET FOR THE CRIME LABORATORIES DELIVERY SYSTEM PROGRAM

(All budget figures are for a ten-month period, FY77.)

PERSONNEL		
Payroll Employees	$312,209.00	
Pathology Assistance	5,320.00	
TOTAL PERSONNEL		$317,529.00
TRAVEL		
24 Technical Employees x 5 Traveling Units x 10 months x $5.00	$ 6,000.00	
TOTAL TRAVEL		$ 6,000.00
OPERATING EXPENSES		
Supplies and Materials	$ 25,280.00	
Postage (1,157 cases/month x $0.26 postage/case x 10 months)	3,008.00	

Telephone (10 facilities x $60/month/ facility x 10 months)	6,000.00	
Utilities (4 facilities x 200/month/ facility x 10 months)	8,000.00	
Motor Vehicle Operation (20 vehicles x 500 miles/month x 10 months x $0.15/mile)	15,000.00	
Copying ($200/month x 10 months)	2,000.00	
Instrumentation and Building Repairs (10 facilities x $40/month/facility x 10 months)	4,000.00	
Burglar Alarm Security	1,002.00	
TOTAL OPERATING EXPENSES		$ 64,290.00
TOTAL BUDGETED COSTS		$387,819.00
LESS MATCHING CONTRIBUTION		$ 96,955.00
TOTAL ALEPA SUPPORT		$290,864.00

C. EVALUATION METHODOLOGY

The evaluation of the Crime Laboratories Delivery System Program examines three areas that are directly related to the program's goal of meeting Alabama's increasing forensic science and toxicology needs. First, the evaluation addresses the issue of expansion of services: was expansion necessary and has expansion helped. Secondly, it looks at case turn-around-time: has the desired standard been met and what are the impediments to achieving the standard. Finally, the evaluation considers the responses of district attorneys and judges to the services provided by the Department of Toxicology and Criminal Investigation. By thoroughly examining each of the above areas the evaluation answers the question of how efficient the Department has been in providing services to the Alabama Criminal Justice System.

For each area studied different types of data and analysis are offered. By considering the same issue from several different

perspectives, the evaluation not only assesses past performance thoroughly, but also yields insights about existing problems and needs, insights which point toward recommendations for future development.

In examination of the expansion of services, the evaluator analyzes four sets of data: the Uniform Crime Report for Alabama and surrounding states for 1969 through 1975; the caseload totals for the regional and satellite laboratories for 1969 through 1975; the trends for caseload totals for 1969 through 1975; and a survey of evidence collection officers from law enforcement agencies across the state. The Uniform Crime Report statistics show in what direction the incidence of crime in Alabama has been moving and how that direction compares with the incidence of crime in surrounding states. These statistics are at the basis of the justification for expansion.

The evaluator looks at the Department's regional laboratory caseload totals to see what types of cases were increasing to demanding levels prior to the establishment of the satellite laboratories and whether the caseload totals for the regional laboratories show any relief as a result of the advent of the satellite laboratories. The trend analysis of caseload totals serves a similar purpose. The survey of law enforcement agencies complements the quantitative analysis of crime and caseload totals. Through it the evaluator presents the opinions of law enforcement officers in charge of evidence collection not only on how the satellite laboratories have affected their rate of evidence submissions but also on the general quality of the Department's services and the evidence collection training provided by regional laboratories.

For case turn-around-time the evaluator uses two sets of data: a trend analysis of case turn-around-time from the various laboratories and a survey of the Department's personnel. The case turn-around-time data is based on a sample of cases processed during four two-month time frames between October 1973 and March 1976. The evaluator looks at turn-around-time for each laboratory both in the aggregate and according to case categories to determine whether the department has achieved its objective of a seven-day turn-around-time and what impact the satellite laboratories have had toward achieving that objective. The survey of Department personnel focuses on two issues related to turn-around-time, court attendance and individual workloads. Through their responses to the survey the personnel consider various problems that affect turn-around-time and ways to improve it.

The opinions of district attorneys and circuit court judges regarding the services provided by the Department as analyzed in this study are the result of a survey of each group. Through the surveys the evaluator establishes the estimation these two parties have for Department personnel as witnesses and for the influence of scientific evidence on a trial. The evaluator also seeks to discover whether these parties encounter any difficulties with services provided and what suggestions they have for the Department.

The evaluation methodology, then, has a three-fold focus. Through it the evaluator looks at the expansion of services as revealed in caseload statistics and the opinions of evidence collection officers from law enforcement agencies across Alabama; turn-around-time, or

the expeditiousness with which services are provided, as revealed in sample statistics and as analyzed through the survey of toxicology personnel; and the opinions of the Department held by two other highly relevant members of the law enforcement community, district attorneys and circuit court judges. Taken together these evaluation activities provide a thorough appraisal of the Crime Laboratories Delivery System Program, one that examines many issues of mutual interest to ALEPA and the Department of Toxicology and Criminal Investigation.

II. DATA PRESENTATION AND ANALYSIS

This section of the evaluation is divided into three major parts: expansion of services, turn-around-time, and opinions of district attorneys and circuit court judges.

A. EXPANSION OF SERVICES

In 1971 the Department decided to build five satellite laboratories around the state to meet the increasing criminal investigation needs created by a rising crime rate. The primary purpose of the satellite laboratories was to process physical evidence and identify drugs for the law enforcement agencies within designated areas of the state. By fulfilling this purpose, the satellite laboratories could relieve the workloads of the regional laboratories.

To determine whether the satellite laboratories have aided the law enforcement community by relieving some of the workload of the regional laboratories, the evaluator analyzed the trends of Alabama's Uniform Crime Report (UCR) and the Department's caseload for the period 1969 through 1975. This quantitative analysis was complemented by a survey of law enforcement personnel regarding the Department's services.

1. Trend Analysis of UCR Statistics

An analysis was made to determine whether Alabama experienced a substantial increase in crime during the past few years and whether the change in the crime rate in Alabama was comparable to the changes in other states in the southeast region. According to UCR statistics the crime index for Alabama, Kentucky, Mississippi, and Tennessee rose from 2,400.2 in 1969-1970 to 4,783.4 in 1975-1976, with the index

reaching 4,847.8 in 1974-1975 (Table 1). During this same period the crime index for Alabama rose from 1,576.0 in 1969-1970 to 3,808.3 in 1975-1976 (Table 2).

Table 1

Crime Index for Region

(Alabama, Kentucky, Mississippi, and Tennessee)

Type of Crime	Instances of Crime Per 100,000 People						
	1969-1970	1970-1971	1971-1972	1972-1973	1973-1974	1974-1975	1975-1976
Violent	362.2	386.9	391.4	411.8	447.0	460.8	429.3
Property	2,038.0	2,113.8	2,071.3	3,225.1*	3,906.7	4,387.0	4,354.1
Total	2,400.2	2,500.7	2,462.7	3,636.9	4,353.7	4,847.8	4,783.4

*Number of cases increased in part because of a change in the definition of larceny.

Table 2

Crime Index for Alabama

Type of Crime	Instances of Crime Per 100,000 People						
	1969-1970	1970-1971	1971-1972	1972-1973	1973-1974	1974-1975	1975-1976
Violent	250.4	311.4	313.2	350.1	372.9	392.9	388.8
Property	1,325.5	1,581.1	1,529.0	2,162.2	2,627.2	3,079.6	3,419.5
Total	1,576.9	1,892.5	1,842.2	2,512.3	3,000.1	3,472.5	3,808.3

On a year-to-year basis the trend has also been toward steady increase in both the region and Alabama. From 1970 to 1975 violent crimes (murder, robbery, rape, assault) increased each year before decreasing in 1975-1976 (Table 3). Property crimes (burglary, larceny) in the region increased every year but two from 1969 through 1975, and in Alabama they increased every year but one during that period.

Table 3

Change in Crime Index Yearly, 1969-1976

Type of Crime	Direction of Change						
	1969-1970	1970-1971	1971-1972	1972-1973	1973-1974	1974-1975	1975-1976
Violent:							
Region	+	+	+	+	+	+	-
Alabama	-	+	+	+	+	+	-
Property:							
Region	+	+	-	+	+	+	-
Alabama	+	+	-	+	+	+	+
Total:							
Region	+	+	-	+	+	+	-
Alabama	+	+	-	+	+	+	+

On the basis of the UCR statistics the evaluator concludes that crime in Alabama, as in the region, has been increasing steadily in recent years, and that this increase, insofar as it results in additional cases requiring toxicology services, supports the argument that the Department of Toxicology and Criminal Investigation needed to expand during this period.

2. Laboratory Caseloads

The Department responded to the increasing crime rate and rising demand in toxicology services by establishing five satellite laboratories to relieve the caseloads of the five regional laboratories and to improve the accessibility of services in specific regions. The first satellite laboratory opened in Enterprise in 1971 (Table 4). In 1972 satellite operations began in Jacksonville and Selma, even though full-scale laboratory facilities were not available in either location until 1973. Satellite operations began in Florence and Tuscaloosa in 1973, with a complete laboratory facility opening in Florence in 1974 and in Tuscaloosa in 1975.

Table 4

Operating Status of Regional and Satellite Laboratories, 1969-1975

Type of Laboratory* and Location	Year**						
	1969	1970	1971	1972	1973	1974	1975
R Auburn	X	X	X	X	X	X	X
R Birmingham	X	X	X	X	X	X	X
R Huntsville	X	X	X	X	X	X	X
R Mobile	X	X	X	X	X	X	X
R Montgomery	X	X	X	X	X	X	X
S Enterprise			X	X	X	X	X

Table 4 Continued

Type of Laboratory* and Location	Year**						
	1969	1970	1971	1972	1973	1974	1975
S Jacksonville				O	X	X	X
S Selma				O	X	X	X
S Florence					O	X	X
S Tuscaloosa					O	O	X

*R = regional laboratory and S = satellite laboratory
**O indicates the initiation of operation and X indicates the availability of a full-scale laboratory.

According to the officials at the Department of Toxicology and Criminal Investigation, the Enterprise satellite laboratory was established to relieve the caseloads of the Birmingham and Huntsville regional laboratories. The Jacksonville laboratory was established to relieve those in Birmingham, Huntsville, and Auburn. Selma was chosen as the location of a satellite laboratory in order to relieve the regional laboratories in Mobile and Montgomery. The Florence satellite laboratory was to relieve Huntsville, and the Tuscaloosa laboratory Birmingham and Montgomery. The locations of the ten laboratories were well chosen in terms of both geographic distribution and their accessibility to the population centers of Alabama (Figure 1, page 14).

Caseload data were collected for each regional laboratory for the period 1969-1975. In 1973 the Department began to break its caseload

Figure 1

Location of Regional and Satellite Laboratories and State Population Centers

* Regional Laboratory

* Satellite Laboratory

into 13 categories whereas it had used 33 categories up until that time. (See Appendix C, page 86 for the classification regrouping.) For this report the evaluator has regrouped the data for all years into 12 categories by combining all the cases for the post-mortem and death investigation categories of the 13-category system into the single category death investigation.

Over the period 1969-1975 the regional laboratories experienced notable increases in the number of cases classified as death investigations and drug identifications, with the number of cases in the other categories fluctuating continuously from year to year. The most dramatic increases in death investigations and drug identifications, however, came from 1969-1972. Inasmuch as the Enterprise satellite laboratory opened in 1971 and the Jacksonville and Selma satellite laboratories only began taking cases in 1972, in 1969 and 1970 the regional laboratories were without the assistance of the satellite laboratories and in 1971 and 1972 the satellite laboratories were just beginning to establish themselves. Therefore the impact of the satellite laboratories on the regional laboratories from 1969-1972 was, understandably, low. During the period 1973-1975, a period in which the satellite laboratories were approaching full operation, the number of death investigations and drug identifications at the regional laboratories for the most part stabilized at the levels that had been reached by 1972.

The number of death investigations at the regional laboratory in Auburn increased from 211 in 1969 to 302 in 1972 (Table 5, page 16). In 1973 and 1974 the total remained stable at 305 and 306, and then

Table 5

Caseload Totals for the Auburn Regional Laboratory, by Category, 1969-1975

Case Category	Number of Cases						
	1969	1970	1971	1972	1973	1974	1975
Death Investigation	211	185	190	302	305	306	190
Rape	9	8	12	13	8	7	21
Robbery	3	2	4	10	9	7	12
Burglary	33	36	34	49	77	68	87
Grand Larceny	1	2	2	3	14	2	19
Drug Identification	195	258	311	349	425	435	573
Analysis	195	74	74	68	103	49	35
DWI*	428	232	138	59	66	41	61
OCA**Person	36	16	16	18	11	15	23
OCA Property	16	37	9	64	50	46	73
Toxicology Human	147	200	184	135	230	42	38
Toxicology Animal	248	247	346	254	311	35	12

*DWI: Driving While Intoxicated
**OCA: Offensive Crime Against

decreased to 190 in 1975. The number of drug identifications rose from 195 in 1969 to 349 in 1972, an increase of almost 79%. The number of drug identifications continued to rise through 1975, but the rate of increase was slightly less than that for 1969 to 1972. In 1975 the total was 573, an increase of 64% over the 1972 total of 349.

At the Birmingham regional laboratory the number of death investigations rose from 242 in 1969 to 441 in 1972 (Table 6). Although the number of death investigations increased further in 1973 and 1974 to 478 and 585, in 1975 it decreased to 373. The number of drug identifications more than tripled from 1969 to 1972, moving from 563 to 1,793. After 1972, however, the number of drug identifications decreased each year, totaling 1,343 in 1975.

Table 6

Caseload Totals for the Birmingham Regional Laboratory, by Category, 1969-1975

Case Category	Number of Cases						
	1969	1970	1971	1972	1973	1974	1975
Death Investigation	242	227	89	441	478	585	373
Rape	10	6	10	7	9	18	24
Robbery	0	0	1	1	3	5	3
Burglary	17	21	11	21	7	15	12
Grand Larceny	0	0	0	0	3	2	9
Drug Identification	563	943	954	1,793	1,748	1,420	1,343
Analysis	86	75	92	10	13	24	25
DWI	268	233	169	1	2	3	5
OCA Person	9	15	11	36	18	11	17
OCA Property	2	19	9	35	19	20	32
Toxicology Human	18	17	171	33	12	11	14
Toxicology Animal	0	0	0	5	0	0	2

The regional laboratories in Huntsville and Montgomery also experienced increases in death investigations and drug identifications from 1969-1972 and then either stabilization or a decrease from 1973-1975. In Huntsville death investigations rose from 95 in 1969 to 280 in 1972, but were down to 155 in 1975 (Table 7). Drug identifications increased more than five times from 1969 to 1972, from 153 to 839. Three years later drug identifications were only up to 938, an increase of less than 12% over the 1972 total.

Table 7

Caseload Totals for the Huntsville Regional Laboratory, by Category, 1969-1975

Case Category	Number of Cases						
	1969	1970	1971	1972	1973	1974	1975
Death Investigation	95	138	85	280	280	213	155
Rape	0	0	0	10	5	2	4
Robbery	0	0	0	7	12	10	6
Burglary	0	0	3	25	16	12	9
Grand Larceny	0	0	0	2	3	2	3
Drug Identification	153	457	629	839	793	768	938
Analysis	45	85	78	16	12	3	6
DWI	782	608	221	265	274	237	150
OCA Person	0	0	1	19	16	15	13
OCA Property	0	0	0	44	37	27	33
Toxicology Human	70	52	53	72	51	50	31
Toxicology Animal	0	0	0	15	0	0	0

For the Montgomery regional laboratory, death investigations rose from 28 in 1969 to 275 in 1972, but in the next three years decreased steadily to 180 in 1975 (Table 8). Drug identifications increased from 62 in 1969 to 343 in 1972 and totaled 591 in 1975.

Table 8

Caseload Totals for the Montgomery Laboratory, by Category, 1969-1975

Case Category	Number of Cases						
	1969	1970	1971	1972	1973	1974	1975
Death Investigation	28	134	170	275	221	199	180
Rape	2	11	26	30	51	38	54
Robbery	0	3	5	8	3	18	16
Burglary	9	26	27	32	29	49	51
Grand Larceny	0	8	0	1	3	0	6
Drug Identification	62	206	307	343	492	402	591
Analysis	39	115	42	28	44	23	18
DWI	40	113	86	9	13	23	15
OCA Person	11	15	19	22	15	24	33
OCA Property	6	20	16	57	32	50	52
Toxicology Human	0	0	0	166	71	171	86
Toxicology Animal	0	0	0	7	2	1	3

The Mobile laboratory was the only regional laboratory that did not experience a sharp increase in death investigations from 1969 to

1972; its totals those two years were 117 and 78 (Table 9). By 1975, however, the total was up to 590 after totals of 798 and 877 in 1973 and 1974, respectively. Drug identifications followed a pattern similar to that of the other regional laboratories, increasing by almost four times from 283 in 1969 to 1,125 in 1972. After a high of 1,939 in 1974, the total drug identifications for the Mobile regional laboratory was down to 1,256 in 1975.

Table 9

Caseload Totals for the Mobile Regional Laboratory, by Category, 1969-1975

Case Category	Number of Cases						
	1969	1970	1971	1972	1973	1974	1975
Death Investigation	117	142	149	78	798	877	590
Rape	7	12	2	11	20	26	5
Robbery	6	8	8	10	8	15	7
Burglary	43	30	32	61	69	87	53
Grand Larceny	0	7	2	4	9	9	10
Drug Identification	283	594	901	1,125	1,220	1,939	1,256
Analysis	34	78	42	77	59	71	42
DWI	27	608	645	24	29	34	30
OCA Person	25	26	23	60	37	42	30
OCA Property	45	33	34	85	93	108	54
Toxicology Human	0	0	0	190	59	36	180
Toxicology Animal	0	0	0	52	59	13	14

During the period 1972-1975,when in general the caseloads for both investigations and drug identifications were either decreasing or leveling in the regional laboratories, each of the satellite laboratories were experiencing increasing caseloads from year to year. The satellite laboratory at Enterprise, the first one to go into operation, had 42 death investigations in 1971; however, the figure for this caseload item was 103 in 1972, 100 in 1973, 108 in 1974, and a high of 127 in 1975 (Table 10). Drug identifications during this period increased every year, rising from 199 in 1971 all the way to 803 in 1975.

Table 10

Caseload Totals for the Enterprise Satellite Laboratory, by Category, 1971-1975

Case Category	Number of Cases				
	1971	1972	1973	1974	1975
Death Investigation	42	103	100	108	127
Rape	1	3	3	3	7
Robbery	0	3	4	3	3
Burglary	11	40	33	35	35
Grand Larceny	2	6	8	10	0
Drug Identification	199	217	448	666	803
Analysis	36	9	10	4	21
DWI	71	21	28	28	28
OCA Person	24	16	15	26	33

Table 10 Continued

Case Category	Number of Cases				
	1971	1972	1973	1974	1975
OCA Property	53	34	181	167	0
Toxicology Human	38	33	35	42	0
Toxicology Animal	0	2	1	0	0

The Jacksonville and Selma satellite laboratories, both of which initiated operations in 1972, also experienced steadily increasing caseloads from 1972 through 1975. The Jacksonville laboratory had 170 death investigations in 1974 and 152 in 1975 after an initial total of 26 in 1972 (Table 11). Drug identifications for this satellite laboratory rose from 70 in 1972 to 474 in 1973, and reached 765 in 1975.

Table 11

Caseload Totals for the Jacksonville Satellite Laboratory, by Category, 1972-1975

Case Category	Number of Cases			
	1972	1973	1974	1975
Death Investigation	26	92	170	152
Rape	0	6	15	16
Robbery	0	8	12	9
Burglary	0	42	44	37
Grand Larceny	0	13	20	11

Table 11 Continued

Case Category	Number of Cases			
	1972	1973	1974	1975
Drug Identification	70	474	572	765
Analysis	1	28	33	15
DWI	0	2	2	20
OCA Person	1	13	16	25
OCA Property	3	23	10	12
Toxicology Human	1	10	12	32
Toxicology Animal	0	1	2	6

Death investigations for the Selma laboratory rose from 15 in 1972 to 82 in 1973, and reached 98 in 1975 (Table 12). Drug identifications also increased steadily, moving from 19 in 1972 to 337 in 1975.

Table 12

Caseload Totals for the Selma Satellite Laboratory, by Category, 1972-1975

Case Category	Number of Cases			
	1972	1973	1974	1975
Death Investigation	15	82	90	98
Rape	3	12	13	9
Robbery	0	5	20	21
Burglary	7	23	56	82

Table 12 Continued

Case Category	Number of Cases			
	1972	1973	1974	1975
Grand Larceny	1	6	6	2
Drug Identification	19	135	174	337
Analysis	11	50	80	42
DWI	3	6	2	0
OCA Person	1	10	18	25
OCA Property	9	48	35	77
Toxicology Human	2	6	2	35
Toxicology Animal	3	10	1	3

The Florence and Tuscaloosa satellite laboratories, both of which initiated operations in 1973, also experienced substantial increases in caseloads through 1975. The Florence laboratory handled 94 death investigations in 1974 and 78 in 1975 after an opening year total of 19 (Table 13). Drug identifications rose from 144 in 1973 to 267 in 1974, and then to 396 in 1975.

Table 13

Caseload Totals for the Florence Satellite Laboratory, by Category, 1973-1975

Case Category	Number of Cases		
	1973	1974	1975
Death Investigation	19	94	78

Table 13 Continued

Case Category	Number of Cases		
	1973	1974	1975
Rape	3	5	9
Robbery	2	7	9
Burglary	15	44	118
Grand Larceny	1	4	13
Drug Identification	144	267	396
Analysis	2	12	4
DWI	1	3	6
OCA Person	6	14	19
OCA Property	7	14	30
Toxicology Human	0	3	0
Toxicology Animal	0	3	1

The Tuscaloosa satellite laboratory conducted 27 death investigations in 1973, 78 in 1974, and 70 in 1975 (Table 14,page 26). The number of drug identifications moving through this laboratory also increased steadily, going from 254 in 1973, to 449 in 1974, and 646 in 1975.

In summary, each of the satellite laboratories generated substantial caseloads by the second year of operation and either maintained or increased its caseload through 1975. During the same period that the satellite laboratories began to establish themselves (1972-1975), the caseloads at the regional laboratories, which had increased drastically between 1969 and 1972, either stabilized or

Table 14

Caseload Totals for the Tuscaloosa Satellite Laboratory, by Category, 1973-1975

Case Category	Number of Cases		
	1973	1974	1975
Death Investigation	27	78	70
Rape	4	2	12
Robbery	4	6	8
Burglary	6	13	25
Grand Larceny	0	0	2
Drug Identification	254	449	646
Analysis	20	11	17
DWI	6	0	6
OCA Person	12	10	11
OCA Property	16	6	7
Toxicology Human	4	2	6
Toxicology Animal	0	0	0

decreased in relation to the 1972 levels. The evaluator concludes, therefore, that creating satellite laboratories provided needed relief to the regional laboratories, especially in the crucial areas of death investigations and drug identifications. Also, it should be stressed that the various satellite laboratories had substantial caseloads in categories other than death investigation and drug identification. This factor leads the evaluator to believe that the satellite laboratories

met some law enforcement needs that without the accessibility of the additional laboratories might have gone unattended.

3. Trend Analysis of Caseloads by Type of Case

With twelve different categories of cases, the information on caseload totals is unwieldy in terms of drawing trend graphs. In order to conduct trend analysis, which is an excellent means of depicting the impact of the satellite laboratories, the evaluator grouped the caseload information into four categories. The four categories used for this analysis are:

(1) Crimes against persons: rape, robbery, OCA persons, human toxicology, and death investigation and post mortem.

(2) Crimes against property: burglary, grand larceny, and OCA property.

(3) Drug identifications: drug identifications only.

(4) Other: DWI, analysis, and toxicology animal.

The caseload data for the category crimes against persons reveal a uniform trend. Cases in this category increased at each regional laboratory from 1969 to 1972, and then showed a marked decrease from 1972 through 1975, the years the five satellite laboratories began operations (Figure 2, page 28). The trend for each satellite laboratory reflects a steady increase in cases classified as crimes against persons. Taken together, then, the trends indicate that the satellite laboratories brought needed relief to the regional laboratories in the area of cases dealing with crimes against persons.

REGIONAL LABORATORIES

SATELLITE LABORATORIES

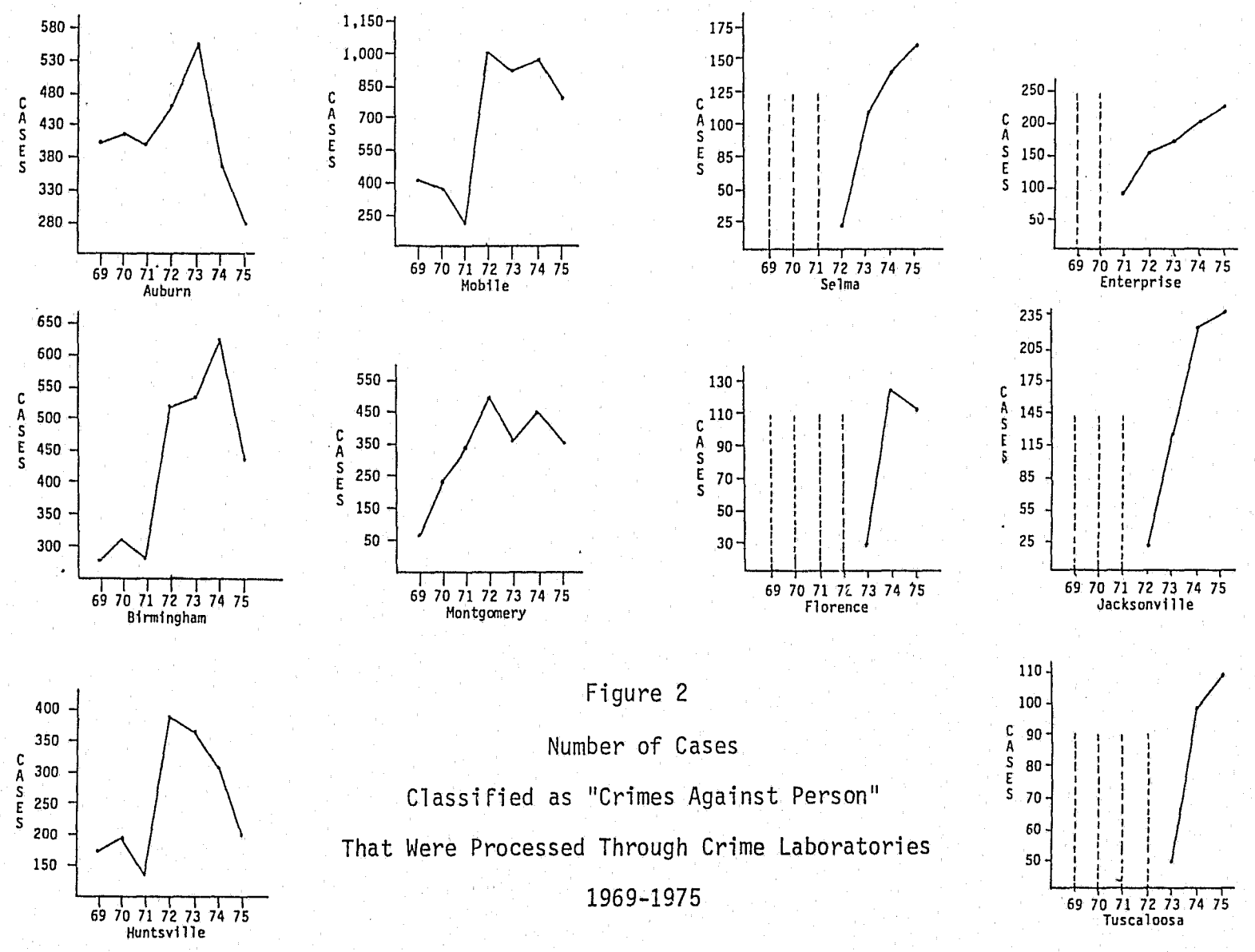


Figure 2

Number of Cases

Classified as "Crimes Against Person"

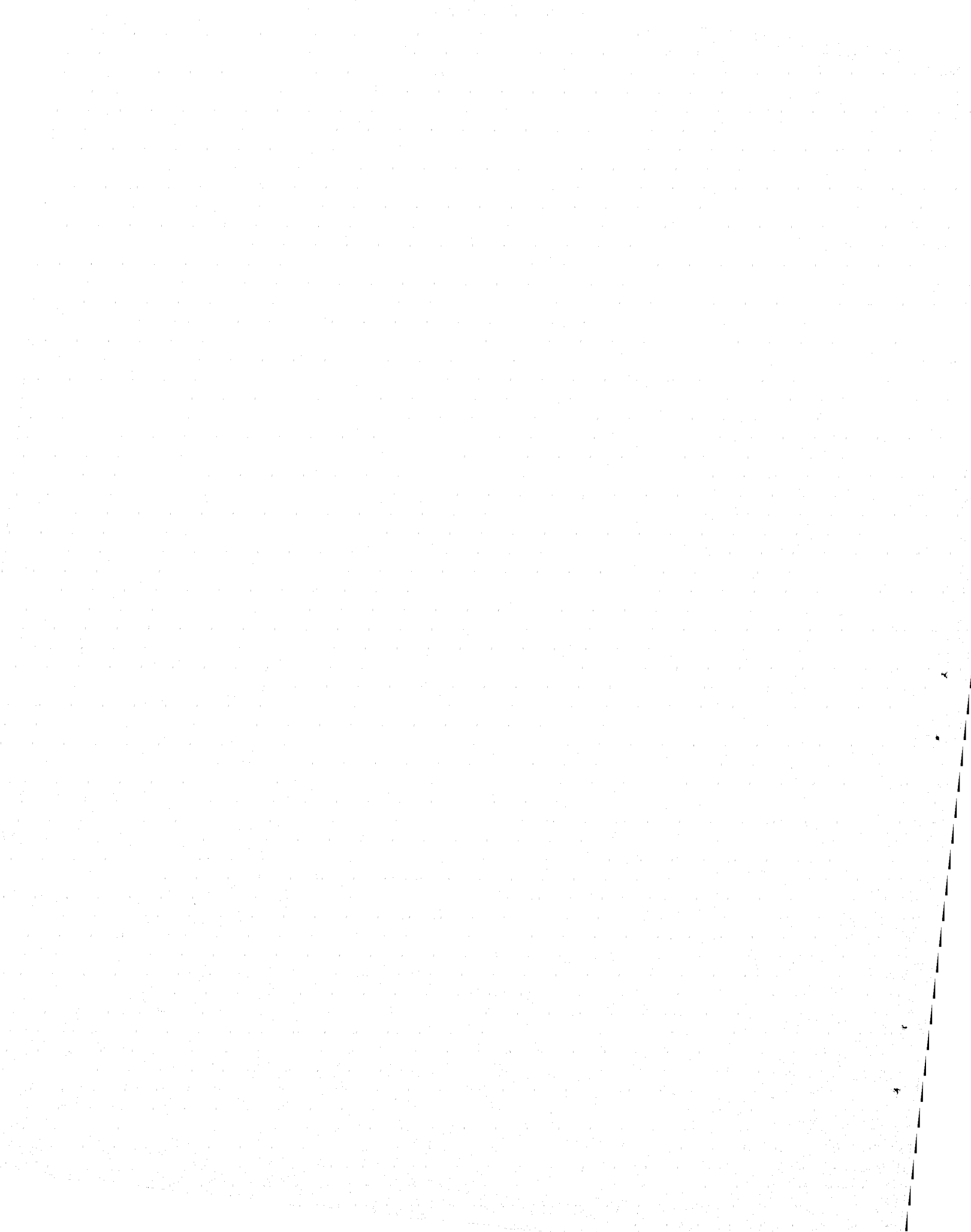
That Were Processed Through Crime Laboratories

1969-1975

The caseload data for the category crimes against property yield less consistent results. The Auburn and Montgomery regional laboratories show a steady increase in this category throughout the observation period; the caseload for the Birmingham laboratory stabilizes; and the Mobile laboratory shows steady increase except for a dramatic decrease in the last year observed (Figure 3, page 30). Only the Huntsville laboratory reflected a trend for property crimes similar to that for crimes against persons, an increase until 1972 and a decrease thereafter. Three of the satellite laboratories had steady increases with regard to cases classified as crimes against property with the Jacksonville and Enterprise laboratories demonstrating slight decreases after experiencing dramatic increases.

The trends for the category drug identifications also reveal an impact by the satellite laboratories on the regional laboratories. The Auburn and Montgomery regional laboratories show steady increases over the entire observation period, but after 1972 the other three regional laboratories either stabilized or decreased their caseload for drug identifications (Figure 4, page 31). Each satellite laboratory shows a constant increase in drug identifications from its opening through 1975. In this instance, too, as in the instance of crimes against persons, the trends clearly indicate that the advent of the satellite laboratories provided relief to the regional laboratories.

With regard to the category "other"--which includes DWI, analysis, and toxicology animal--the trends for the regional laboratories show a marked decrease over the observation period, while in general the trends for the satellite laboratories are toward increase (Figure 5,



REGIONAL LABORATORIES

SATELLITE LABORATORIES

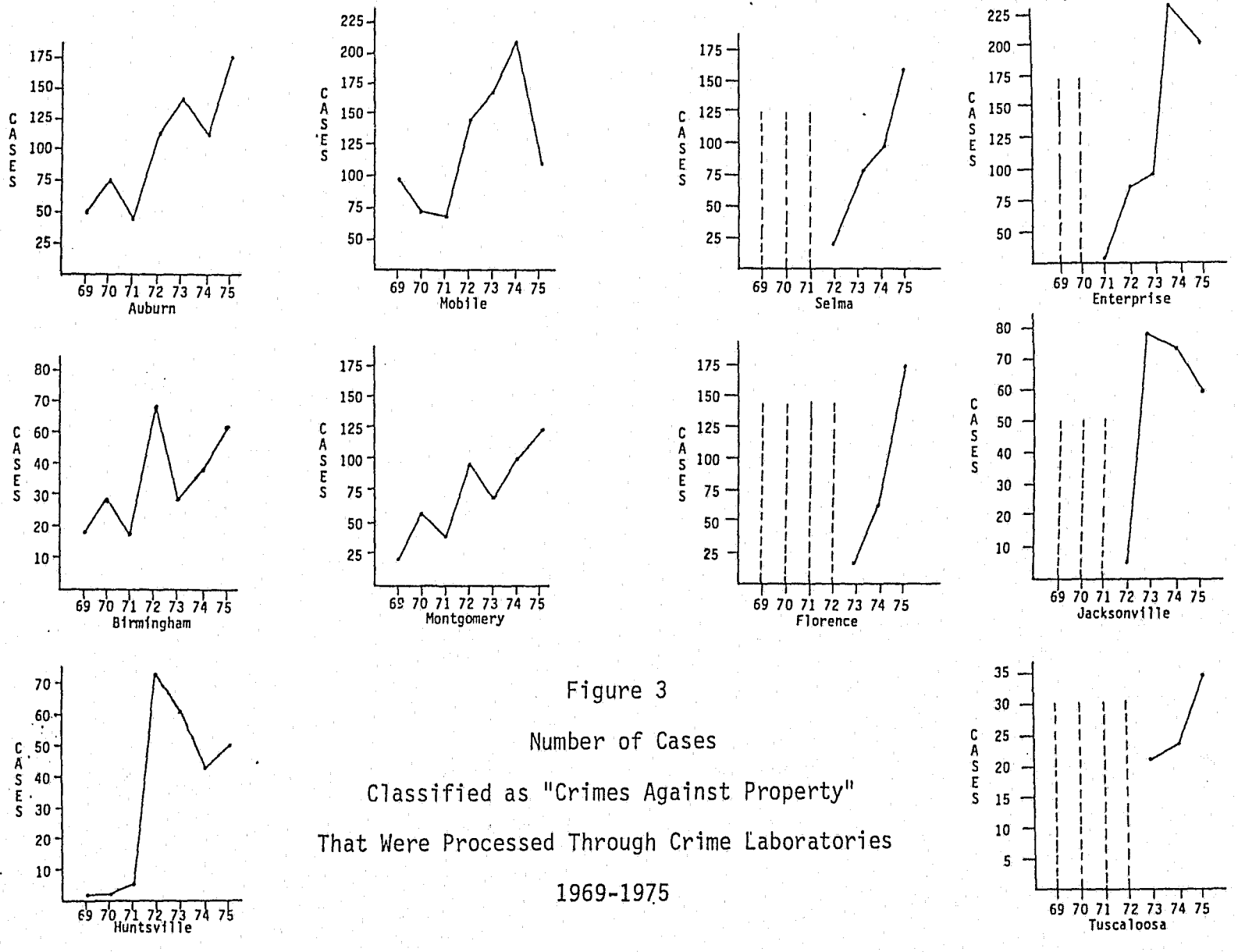


Figure 3

Number of Cases

Classified as "Crimes Against Property"

That Were Processed Through Crime Laboratories

1969-1975

REGIONAL LABORATORIES

SATELLITE LABORATORIES

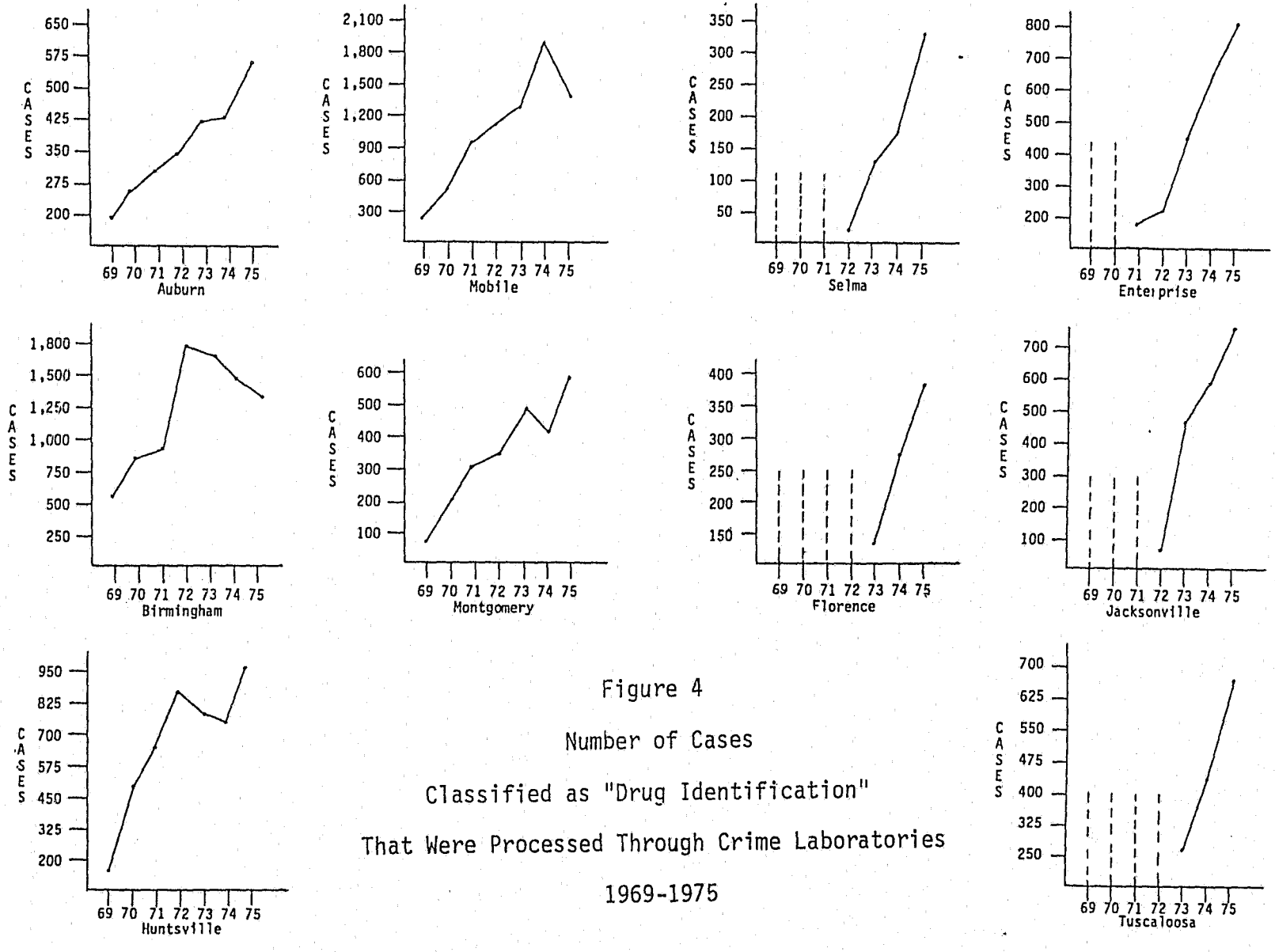


Figure 4

Number of Cases

Classified as "Drug Identification"

That Were Processed Through Crime Laboratories

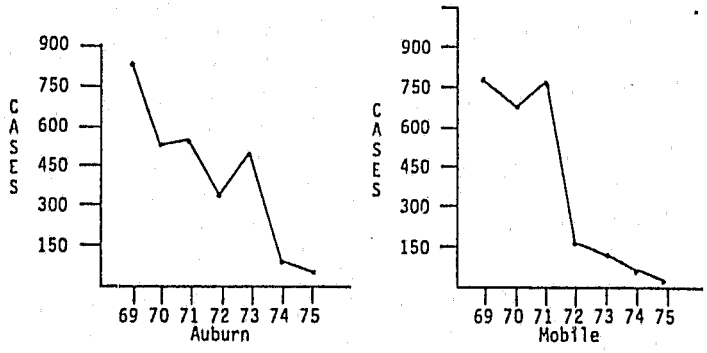
1969-1975

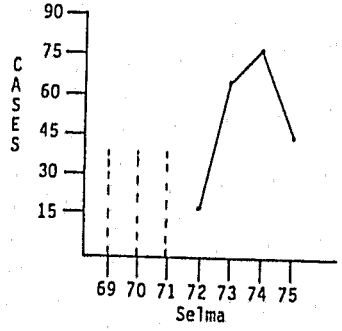
page 33). In this case, however, the decreases at the regional level cannot be attributed wholly to the arrival of satellite laboratories. Prior to 1970 each regional laboratory processed a substantial number of DWI cases, and those cases contributed more than any other caseload item to the category "other." Since that time, law enforcement agents have been using photointoximeters and breath analyzers to determine intoxication levels, and the use of this field equipment has reduced drastically the number of DWI cases submitted to laboratories. Consequently the trends for the regional laboratories begin to decrease around 1970, in the period prior to the establishment of the satellite laboratories. Also, even though the trends for some of the satellite laboratories show an increase, the increases are smaller in real numbers than those in general for the other caseload categories. The Florence satellite laboratory, for example, reported a maximum of 19 cases in the category "other" from 1973 through 1975.

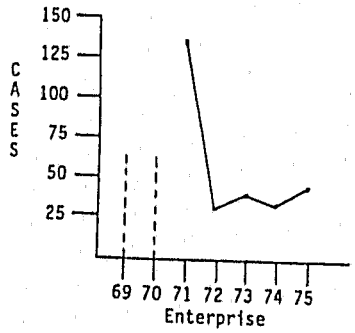
In summary, the trends for the satellite laboratories show clear increases in the caseload categories crimes against persons, crimes against property, and drug identifications for the period 1972-1975. Only the trends for cases in the category "other" are not uniformly on the increase, and the number of cases in this caseload category had begun to decline at the regional level prior to the establishment of satellite laboratories. On the other hand, the caseload categories that were reaching new heights in the regional laboratories in 1972--crimes against persons, crimes against property, and drug identifications--show clear signs of gaining relief during the years the satellite laboratories began to operate. Since the analysis of the UCR

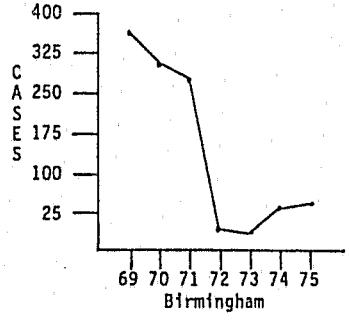
REGIONAL LABORATORIES

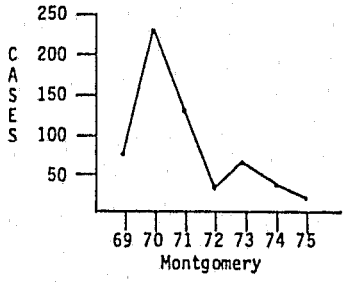
SATELLITE LABORATORIES

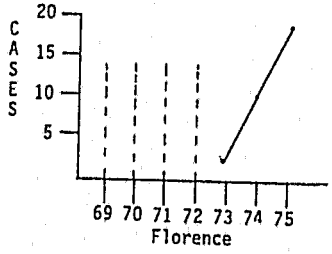


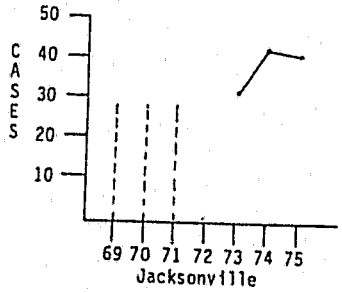












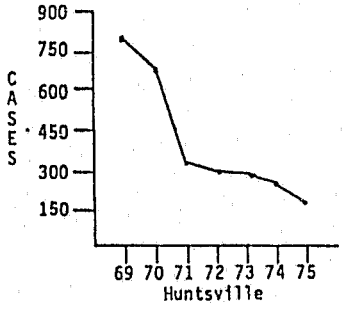
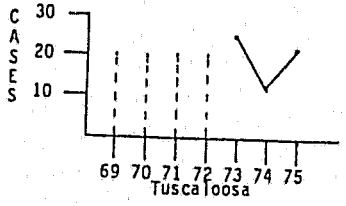


Figure 5

Number of Cases Classified as "Other"

That Were Processed Through Crime Laboratories

1969-1975



statistics does not reveal a decrease in crime rates in the years under observation, the evaluator concludes that any decreases or stabilizations in caseloads that were rising menacingly in 1972 are largely the result of the establishment of satellite laboratories. Both the raw numbers for the caseload totals and trends for caseload categories point to this conclusion.

4. Analysis of Responses to the Law Enforcement Agency Survey

To complement the quantitative analysis of caseload totals and trends, the evaluator surveyed the users of the crime laboratory delivery system. Statistics are useful for determining the numerical increases in caseload submission, but any qualitative improvement in services can best be assessed by asking the opinions of the evidence collection officers at the law enforcement agencies. One reason that crime laboratory delivery services were expanded was to give the evidence collection officers more and better access to crime laboratories, and their opinions about the Department's work provides information necessary to any thorough evaluation of the Crime Laboratory Systems Delivery Program.

The evaluation staff developed a questionnaire that asked the opinions of evidence collection officers with regard to three issues. (See Appendix D, page 90, for a copy of the complete questionnaire.) First, the questionnaire asked about the effect that satellite laboratories have had on an agency's rate of submitting evidence for laboratory work. Secondly, the questionnaire asked about the quality of the crime laboratories' work and invited suggestions on how the quality of work could be improved. Finally, the questionnaire asked about the

quality of the regional laboratories' program for training law enforcement agents as evidence collection officers. Suggestions for improving the regional laboratory training also were invited.

The questionnaire was mailed to a purposive sample of law enforcement agencies in Alabama. The sample included all sheriff's departments and every police department with a jurisdictional population of more than 4,500 persons. A cover letter mailed with the questionnaire requested that the questionnaire be answered by the officer who was responsible for submitting criminal evidence to the laboratories. Of the 141 questionnaires mailed, 102 were completed and returned, an excellent response rate of 72%.

(a) Evidence Submissions

The first question in the survey asked the law enforcement officers whether the establishment of the nearest satellite laboratory had resulted in their sending in a greater number of cases for examination than they had before. A clear majority of the respondents (57%) indicated that the establishment of a satellite laboratory had increased their number of submissions, while the remaining respondents either had not had an increase (23%) or did not know (20%) (Table 15, page 36). To further examine in what way the presence of satellite laboratories has contributed to an increase in case submissions, the evaluator undertook a geographic analysis of those respondents answering "yes." It was discovered that 38 of the 58 "yes" respondents (or 66%) were closer to a satellite laboratory than a regional one. This finding supports the conclusion that the satellite laboratories not only relieved the regional laboratories but also generated caseloads of their own.

Table 15

Responses to Question #5 of the Law Enforcement Agency Survey

Question #5: When the satellite laboratory nearest your agency was established, did you find that you submitted a greater number of cases than before?

Response	Number of Responses	Percentage of Total
Yes	58	57%
No	24	23%
Don't Know	20	20%
Total	102	100%

The law enforcement officers were also asked what percentage of all the cases they could send to a satellite laboratory they actually do send. The responses to this question were divided fairly evenly between 0-40% (a total of 39% of the respondents) and 61-100% (a total of 48% of the respondents) (Table 16). The evaluator believed that the distance from a laboratory strongly affected the percentage of cases sent. An analysis of the locations of the agencies represented by the responses in Table 16, however, did not support that hypothesis. Of the 38 respondents submitting 0-40% of their cases, 19 (50%) were within 40 miles of either a regional or satellite laboratory and 19 (50%) were outside 40 miles of a regional or satellite laboratory. The location pattern of those submitting 61-100% of their cases was almost identical. Of those 46, 22 (48%) were within 40 miles of a laboratory

Table 16

Responses to Question #7 of the Law Enforcement Agency Survey

Question #7: Of all the cases you could send to a satellite laboratory, what percentage do you actually send?

Response	Number of Responses	Percentage of Total
0-20%	29	30%
21-40%	9	9%
41-60%	12	13%
61-80%	19	20%
81-100%	27	28%
Total	96	100%

and 24 (52%) were outside of 40 miles. Therefore the evaluator concludes that, in the instance of this survey question at least, the distance of an agency from a laboratory does not determine the percentage of cases it sends to a satellite laboratory out of that percentage it could send.

A factor that accounts for low submissions from some agencies more clearly than the distance factor is the nature of crime in an area. The evaluator was struck by the fact that five agencies in the Birmingham area reported low submission rates. Upon inquiry the evaluator discovered, however, that these agencies had personnel trained to accommodate

most of their needs or very little criminal activity (Table 17). The low submission rates, therefore, were no reflection on the quality of services available in the Birmingham area.

Table 17

Reasons for Low Submission Rates from Five Birmingham-Area Agencies

Agency	Response
A	"We have very few major crimes. There have only been three armed robberies and two murders in the past four years."
B	"We only send drug cases. Everything else we do on our own--bloodtype, firearms, stains, etc."
C	"We do most of our own work as we have an evidence collection technician."
D	"Most of our submissions are for drug arrests. For marijuana the court will accept a field test, so we don't send this. We do send all felony material. Most of our arrests are misdemeanors though."
E	"Most arrests are misdemeanors."

The final question considered in this section is the way the toxicologists perceive the value of the satellite laboratories. To obtain their viewpoint, a question to that effect was included in the survey of personnel at the regional laboratories. The responses of the toxicologists slightly contradict previous conclusions about the relief the satellite laboratories have provided the regional laboratories. Of the 20 toxicology personnel responding, 10 (50%)

said the satellite laboratories had relieved workloads, 6 (30%) said they had not, and 4 (20%) said they did not know (Table 18). It is clear from other responses in the survey, however, that despite the presence of satellite laboratories work demands have increased, both because of the training regional laboratories provide law enforcement personnel and through individual duties. The evaluator believes that these two factors have probably obscured for some regional personnel the actual impact satellite laboratories have had.

Table 18

Responses to Question #9 of the Toxicology Personnel Survey

Question #9: Do you feel that the satellite laboratory in your region has helped reduce the workload in your own laboratory?

Regional Laboratory	Yes	No	Don't Know
Birmingham	2	0	0
Huntsville	2	0	0
Montgomery	2	1	0
Mobile	0	4*	0
Auburn	4	1	4
Total	10 (50%)	6 (30%)	4 (20%)

*There is actually no satellite laboratory near Mobile, the closest one being Enterprise.

(b) Quality of Services

The next area analyzed is that of services. The services of the Department are often vital to law enforcement agencies in their efforts to process a case and solve a crime. Thus the quality of the services rendered is extremely important.

The survey responses of law enforcement officials voice solid support for the job the department is doing. A full 69% of the respondents rated the Department's services as very good, and another 22% rated them as good (Table 19). The responses to an open-ended question on the general helpfulness of the Department's services were equally favorable (Table 20, page 41).

Table 19

Responses to Question #2 of the Law Enforcement Agency Survey

Question #2: Overall, how would you rate the services provided your agency by the toxicology laboratory in your area?

Response	Number of Responses	Percentage of Total
Very Good	70	69%
Good	22	22%
Fair	9	8%
Poor	1	1%
Very Poor	0	0%
Total	102	100%

Table 20

Sample Responses to Question #9 of the Law Enforcement Agency Survey

Question #9: How helpful do you feel that the toxicology and crime laboratory services have been in aiding scientific investigations within your own agency?

Agency	Response
A	"I can't put enough praise on the cooperation and excellent work that they have always given us."
B	"They are just great. We couldn't operate without them."
C	"They are a great asset to our department."
D	"The crime laboratory located at the Enterprise Junior College has provided our department with outstanding assistance in criminal investigations and expert testimony in court proceedings. The same applies to the laboratory in Auburn, as they handle all of our department's drug cases."
E	"No way could we proceed without their expert scientific investigation."
F	"The fingerprint lab in Montgomery goes well beyond the normal to be helpful."
G	"Mr. Plant and the people working with him could not do any better job so far as we are concerned."
H	"They show professional courtesy when called upon."
I	"Invaluable."
J	"In a small county like ours, it would be . . . impossible to operate without the assistance from the laboratory."

The law enforcement officers surveyed were also asked how the Department could improve its services. The most common suggestions were to hire more personnel and to improve turn-around-time (Table

21). These two responses are related in that additional personnel should result in improved turn-around-time.

Table 21

Key Responses to the Open-ended Portion of Question #2 of the Law Enforcement Agency Survey

Question #2: How could the Department's services be improved?	
Response	Number of Responses
More personnel	25
Better turn-around-time	17
Update equipment	5
Larger facilities	3
More training for patrol officers and advance training for evidence techniques	3
Regional newsletter giving a greater distribution of technical nature on cases which appear to be correlated with each other to various agencies which might be involved in investigations	1

Another response, though voiced only once, warrants attention, that of a regional newsletter. Other respondents indicated elsewhere in the survey that they do not always know about the capabilities of the equipment at the laboratories or about the arrival of new equipment.

An occasional newsletter or increased publicity of some form could easily eliminate such confusion.

(c) Training Provided by Regional Laboratories

The other service area surveyed through the questionnaire was the evidence collection training program offered by the regional laboratories. The respondents gave the training program high marks; 87% of them rated it either good or very good (Table 22).

Table 22

Responses to Question #3 of the Law Enforcement Agency Survey

Question #3: How would you rate the performance of your regional laboratory in training police officers to search for and handle physical evidence?

Response	Number of Responses	Percentage of Total
Very Good	46	49%
Good	35	38%
Fair	4	4%
Poor	4	4%
Very Poor	1	1%
Don't Know	4	4%
Total	94	100%

There were few responses to an open-ended question asking how the training program might be improved. Those given, however, focus on one area: a desire for more exposure to new and more advanced techniques (Table 23). Surprisingly, though, some of the law enforcement officers were unaware that any training was available at all. This response is another indication that the Department may need some additional publicity.

Table 23

Responses to Open-ended Portion of

Question #3 of the Law Enforcement Agency Survey

Question #3: How, if at all, do you think the training could be improved?

Response	Number of Responses
By having more schools, classes, and advanced training	7
Setting up local schools	2
By opening a training facility since the closing of Southeast Police Academy	1
I am unaware that any training occurs	7

In summary, the results of the survey of evidence collection officers show that the establishment of satellite laboratories has enabled many agencies to increase their number of laboratory submissions. The training programs provided at the regional laboratories were rated as quite satisfactory. The primary suggestions for improving services

are to increase the number of employees and to improve turn-around-time, two interrelated suggestions. Overall, however, the results of the survey show that the Department of Toxicology and Criminal Investigation is regarded as exceptional by the law enforcement agencies it serves.

B. TURN-AROUND-TIME

Turn-around-time is defined as the period of time from the delivery of evidence to the laboratory until the time the evidence is returned to the submitting agency. In this section is an examination of the time required to process evidence submitted to a laboratory in relation to the Department's objective of reducing turn-around-time to a minimum of seven days. The evaluator uses a sample of cases from each laboratory during the time period October 1, 1973 (the earliest date data were available) through March 31, 1976 to quantitatively analyze turn-around-time. The evaluator also explores possible ways of decreasing turn-around-time.

1. Trend Analysis of Turn-Around-Times for a Sample of Cases

From October 1, 1973 through March 31, 1976, turn-around-time decreased steadily on a statewide basis and toward the end of the period was approaching the seven-day goal. In 1976 laboratory work for processing evidence and sending a report back to the submitting agency took an average of ten days (Table 24, page 47). Though most laboratories achieved significant decreases in turn-around-time over the period observed, the Huntsville and Mobile laboratories were the only two that reached and surpassed the objective of seven days. Huntsville made extremely dramatic progress, moving from 46 days in the first time frame to 5 in the last.

An examination of case turn-around-time by type of case indicates progress. On a statewide basis the working days involved were substantially reduced for three categories: drug identification, physical evidence, and death investigation. From the first observation

Table 24

Department of Toxicology and Criminal Investigation

Case Turn-Around-Time*

Laboratory	Average Case Turn-Around-Time (Working Days)			
	10/01/73 - 12/31/73	10/01/74 - 12/31/74	06/01/75 - 08/31/75	01/01/76 - 03/31/76
Auburn	21	19	14	13
Birmingham	27	18	14	12
Enterprise	17	13	10	8
Florence	26	13	10	9
Huntsville	46	13	6	5
Jacksonville	17	19	14	15
Mobile	6	4	4	5
Montgomery	28	24	17	12
Selma	16	12	14	10
Tuscaloosa	--	--	13	13
Statewide	21	15	12	10

*Based on random samples of 30 criminalistics cases from each laboratory during the four time frames.

frame in 1973 to the last observation frame in 1976, on a statewide basis, the turn-around-time for drug identifications dropped from 15 days to 7 days; the turn-around time for physical evidence dropped from 21 days to 13; and that for death investigations dropped from 25 to 14 (Table 25, page 48). Cases in the fourth area, toxicology,

Table 25

Department of Toxicology and Criminal Investigation

Case Turn-Around-Time by Type of Case

Laboratory	Average Case Turn-Around-Time (Working Days)							
	Drug Identification		Toxicology		Physical Evidence		Death Investigation	
	1973-1974	1975-1976	1973-1974	1975-1976	1973-1974	1975-1976	1973-1974	1975-1976
Auburn	15	7	8	5	21	20	20	18
Birmingham	21	6	--	--	27	13	28	15
Enterprise	11	4	--	--	17	14	--	14
Florence	20	8	--	--	26	11	--	11
Huntsville	22	6	7	4	46	9	42	--
Jacksonville	11	12	--	--	17	16	--	--
Mobile	4	4	12	8	6	6	7	8
Montgomery	22	11	18	13	28	15	26	20
Selma	10	7	--	--	16	10	--	--
Tuscaloosa	--	11	--	--	--	26	--	--
Statewide	15	7	11	9	21	13	25	14

did not drop as significantly (from 11 days to 9 days); however, these cases were moving the quickest of all in 1973, and thus did not have as much room or need for improvement as did the other types of cases.

It should be noted that the three categories of cases showing the most improvement--drug identification, physical evidence, and death investigation--include the types of cases for which satellite laboratories provided the most relief to regional laboratories. In each

of those categories, turn-around-time was reduced by more than a week. The evaluator believes, therefore, that there is a link between the impact of the satellite laboratories on the regional laboratories and the general reductions in turn-around-time.

2. Issues Related to Turn-Around-Time

Although the laboratories made real strides in improving turn-around-time, in 1976 five of the ten were at least five days above the objective of seven days. Therefore the evaluator investigated problems related to improving turn-around-time. Two issues that surfaced were time spent in court by the Department's personnel and the individual workloads of those personnel.

a. Court Attendance

As with the case-turn-around data, the only quantitative information available concerning court attendance was from 1973 on. The amount of total time devoted to court attendance decreased from 11,079 hours in 1973-1974 to 5,695 hours in 1975-1976, a decrease of 49% (Table 26, page 50). Two of the categories that involve time in court attendance decreased from year to year, with only the third category, actual testimony, increasing. The amount of testimony given increased by 16% in the last year observed. Considering the decrease in turn-around-time during the same period, turn-around-time and court attendance seem to be directly related: as the amount of time spent in court decreases, the turn-around-time also decreases.

Table 26

Department of Toxicology and Criminal Investigation

Court Attendance, All Laboratories, 1973-1974 through 1975-1976

Aspect of Court Attendance	Hours Expended		
	1973-1974	1974-1975	1975-1976
Travel and Waiting When Subpoened and Testimony Is Given	5,148	4,390	4,208
Travel and Waiting When Subpoened and Testimony Is Not Given	5,557	2,882	1,124
Actual Testimony	374	313	363
Total Time Commitment	11,079	7,585	5,695

Since court attendance appears to be a factor that influences turn-around-time, the toxicologists working for the Department were surveyed to see, first of all, whether they feel turn-around-time is too slow, and whether they feel they spend too much time in court. Also, the toxicologists were asked whether relief in the form of video-taped depositions would help reduce turn-around-time. The survey was conducted by mailing a questionnaire to the Department's personnel. (See Appendix E, page 95, for a sample copy of the questionnaire.)

Of the 29 toxicologists responding to the survey, 20 (69%) indicated that turn-around-time in their laboratory was too slow (Table 27). Only three laboratories--Jacksonville, Mobile, and Selma--had agreement that there was no problem with turn-around-time. The general consensus among Department personnel on a laboratory by laboratory basis was that turn-around-time needs to be improved.

Table 27

Responses to Question #3 of the Toxicology Personnel Survey

Question #3: Do you feel that turn-around-time in your laboratory is too slow?

Laboratory	Number of Personnel Responding	
	Yes	No
Auburn	8	1
Birmingham	2	0
Enterprise	1	0
Florence	1	0
Huntsville	2	0
Jacksonville	0	2
Mobile	1	3
Montgomery	2	1
Selma	0	2
Tuscaloosa	3	0
Total	20	9

The toxicologists were also asked whether they thought the time spent in court has a direct effect on turn-around-time. Of the 30 personnel responding to this question, 21 (70%) said it did (Table 28). In a related question, however, the toxicologists were almost evenly divided as to whether too much time is spent in court, with 16 (53%) saying court responsibilities took about the right amount of time and 14 (47%) saying too much time was spent in court (Table 29).

Table 28

Responses to Question #5 of the Toxicology Personnel Survey

Question #5: Do you feel that the amount of time spent in court has a direct effect on turn-around-time?

Response	Number of Responses	Percentage of Total
Yes	21	70%
No	9	30%
Total	30	100%

Table 29

Responses to Question #4 of the Toxicology Personnel Survey

Question #4: Do you think toxicologists generally spend . . .

Response	Number of Responses	Percentage of Total
Too little time in court	0	0%

Table 29 Continued

Response	Number of Responses	Percentage of Total
About the right amount of time in court	16	53%
Too much time in court*	14	47%
Total	30	100%

*Subsequent interviews with toxicology personnel made the evaluator believe that a different wording of question #4 would have resulted in additional persons responding that too much time is spent in court. Apparently some personnel read in court to mean literally the time involved giving testimony exclusive of any traveling time or waiting period, whereas the evaluator meant the phrase to imply the total process of providing court testimony.

Those respondents who said they felt toxicologists spend too much time in court were asked to suggest ways that might reduce that time expenditure. The majority of these (7 of 14) favored some type of schedule or call procedure so that time wasted sitting and waiting for a trial to begin might be eliminated (Table 30, page 54). Other noteworthy suggestions were the use of written reports for misdemeanors and the use of depositions.

The evaluator was interested in the use of depositions--both written and video-taped--as a means of reducing time spent in court and thereby freeing time for the improvement of turn-around-time. Before surveying the toxicologists in this matter, the evaluator checked with the Department of Court Management to see whether video-taped depositions were legal in the state of Alabama. It was found

Table 30

Responses to the Open-ended Portion of Question #4 of the Toxicology Personnel Survey

Question #4: How do you think the amount of time spent in court could be reduced?

Response	Number of Responses
Have the courts set up a schedule to shorten the waiting period of a technical person who is needed to testify.	5
Reduce the amount of time it takes to travel to and from court.	2
Put people on call: send for them after the jury has been selected.*	3
Use of written reports for misdemeanors.	2
Use of depositions.	2
Total	14

*This has been done in Montgomery.

that while there is no prohibition on the use of video-taped depositions, there is no law authorizing it either. The stipulations for the use of video-taped depositions are that the deposition be taken with the consent of the offender and at the discretion of the judge. Currently, most judges do not allow the use of video-taped depositions

in their courtroom. The new rules of criminal court procedures to be voted on in May 1978, however, would authorize the use of video-taped depositions with the offender's consent.

With the possibility of video-taped depositions becoming a legal alternative soon, the evaluator asked the toxicologists whether they felt that the use of video-taped depositions would reduce turn-around-time. The majority of the toxicologists (15 of 29, or 52%) answered that they would, though a substantial number (11 of 29, or 38%) did not believe that this type of testimony would reduce turn-around-time, and some (3 of 29, or 10%) were undecided (Table 31).

Table 31

Responses to Question #8 of the Toxicology Personnel Survey

Question #8: Do you feel that the use of video-taped depositions would reduce turn-around-time?

Laboratory	Yes	No	Don't Know
Auburn	4	3	2
Birmingham	1	1	0
Enterprise	0	1	0
Florence	1	0	0
Huntsville	1	1	0
Jacksonville	2	0	0
Mobile	0	4	0
Montgomery	2	1	0
Selma	1	0	1

Table 31 Continued

Laboratory	Yes	No	Don't Know
Tuscaloosa	3	0	0
Total	15	11	3

The toxicology personnel gave good reasons for both positions. Those who indicated they favor the use of video-taped depositions believe their use would reduce time spent traveling to and in court, and thus release time for laboratory work (Table 32). One of these respondents, however, cited the need for cross examination as a definite problem. Some of those who opposed that method of testimony did not see court attendance as a work hinderance. Others pointed out that the depositions often would not answer all questions and thus testimony would have to be repeated.

Table 32

Responses to the Open-ended Portion of Question #8

of the Toxicology Personnel Survey

Question #8: Do you feel that video-taped depositions would reduce turn-around-time? Why, or why not?

Response	Reason
Yes	"Would reduce time spent in court." "Would cut down on travel time." "More time for lab work." "Reduction in travel time." "Would reduce travel and witness time." "Yes, but what about cross examination?" "Would give you more time in lab." "More time in lab." "Would reduce time spent in the courtroom."

Table 32 Continued

Response	Reason
No	"Not enough time spent in courtroom to hamper turn-around time." "Not enough time spent in court." "Not all questions answered in a deposition: would give testimony twice." "Court appearances are not what is affecting turn-around-time." "Most cases require testimony." "A video-taped deposition is no better than a written one." "Why not spend video-tape money on instruments?"

b. Individual Workloads

Another issue related to turn-around-time is the substantial increase in workload for the Department's personnel in recent years. Despite the relief provided by the satellite laboratories, Department statistics show that individual workloads have been increasing in recent years, and projections are they will continue to increase (Table 33). The Department's problem, then, is how to reduce turn-around-time in the face of rising individual workloads.

Table 33

Department of Toxicology and Criminal Investigation Statistics on Workload Per Technical Employee

Number of Cases Per Technical Employee				
1972-1973	1973-1974	1974-1975	1975-1976	(Projected) 1976-1977
255	281	352	332	386

In the survey of toxicology personnel, the evaluator asked two questions related to rising individual workloads: whether video-taped depositions would allow toxicologists to handle a larger number of cases than they can under the current testimony system and what could be done to increase the number of cases an individual toxicologist can handle. The toxicologists responding to the first question were closer to an even split than they were on the survey question regarding the use of video-taped depositions as a way of improving turn-around-time. In this instance 14 (48%) said this method of testimony would allow toxicologists to handle more cases, 13 (45%) said it would not, and 2 (7%) were undecided (Table 34).

Table 34

Responses to Question #7 of the Toxicology Personnel Survey

Question #7: Do you feel that the use of video-taped depositions would allow toxicologists to handle a larger number of cases?

Laboratory	Personnel Responding		
	Yes	No	Don't Know
Auburn	3	5	1
Birmingham	1	1	0
Enterprise	0	1	0
Florence	1	0	0
Huntsville	1	1	0
Jacksonville	2	0	0
Mobile	0	4	0

Table 34 Continued

Laboratory	Personnel Responding		
	Yes	No	Don't Know
Montgomery	2	1	0
Selma	1	0	0
Tuscaloosa	3	0	0
Total	14	13	2

The toxicologists offered a number of suggestions in response to the open-ended question of what could be done to increase the number of cases an individual toxicologist can handle, including hiring more part-time help, reducing court time, activating technician positions at the regional laboratories, and improving case screening (Table 35). The most common suggestion (11 of 31 or 35%), however, was to improve the instrumentation available to technicians.

Table 35

Responses to Question #6 of the Toxicology Personnel Survey

Question #6: What do you think could be done to increase the number of cases an individual toxicologist can effectively handle?

Response	Number of Responses
Improve instrumentation	11
Hire non-degree, work study, or part-time person to do menial lab jobs such as cleaning, filing, etc.	4

Table 35 Continued

Response	Number of Responses
Activate technician positions in regional labs	4
Improve screening of cases	5
Decrease down time on instruments	3
Reduce court time	4
Total	31

To determine whether the toxicologists had cause for requesting new and better instrumentation, the evaluator checked with each laboratory to see what quantity of major equipment had been purchased in the last eight years. (A list of the equipment is in Appendix F, page 99). It was discovered that the amount of equipment bought or transferred has fluctuated. Both the Jacksonville and Selma laboratories, however, have not received any major equipment since 1974 (Table 36, page 61). The scientific nature of the toxicologist's work would seem to make the latest and best equipment a legitimate need, and meeting this need should be a top priority.

In summary, the examination of turn-around-time and related issues resulted in three principal findings. First, although laboratory turn-around-time has been reduced significantly in recent years, the standard of seven days generally has not been met. Next, if the time the laboratory personnel spend in court could be reduced, then perhaps turn-around-time could be decreased further. Finally, Department

Table 36

Number of Major Equipment Items Purchased for or Transferred to Regional and Satellite Laboratories, 1969-1977

Laboratory	Items of Equipment Per Year								
	1969	1970	1971	1972	1973	1974	1975	1976	1977
Auburn	4	2	7	6	7	9	1	11	2
Birmingham	1	1	6	9	4	6	3	4	2
Enterprise	--	--	30*	8	6	1	2	1	0
Florence	--	--	1	0	9	35	0	2	0
Huntsville	2	2	24	6	3	1	4	2	1
Jacksonville	--	--	--	2	37	1	0	0	1
Mobile	0	4	22	5	0	2	4	2	3
Montgomery	1	3	5	4	3	2	27	4	1
Selma	--	--	3	1	17	3	0	0	0
Tuscaloosa	--	--	--	--	--	19	27	0	1
Total	8**	12**	98	41	86	79	68	26	11

*An initial purchase of cabinets and other basic facilities.
**For the five regional laboratories only.

personnel believe that reducing turn-around-time in the face of increasing workloads can best be achieved by acquiring better and new equipment.

C. OPINIONS OF DISTRICT ATTORNEYS AND CIRCUIT COURT JUDGES

The preceding sections focused on the demand for and use of the Department's services (expansion of services) and the expeditiousness with which the Department provides services (turn-around-time). This section discusses the quality of the Department's services.

One of the important uses of the laboratories' analyses of evidence is the part it plays in the prosecution and conviction of criminals. Without scientific analysis of evidence many criminals would not be prosecuted, and without dependable and competent laboratory services many guilty persons would not be convicted. Therefore, the quality of the laboratories' work is crucial to the entire criminal justice system.

The evaluator used two surveys to address the issue of the quality of services provided by Alabama's Department of Toxicology and Criminal Investigation. The two groups surveyed were the state's district attorneys and the state's circuit court judges. The evaluator selected the individuals in these two groups to assess the quality of the Department's work because these individuals use the Department's results to either prosecute accused persons or judge the appropriateness of evidence. The responses of district attorneys are discussed first, and then responses of the circuit court judges are presented. (See Appendix G and Appendix H, pages 116 and 120, for copies of the two questionnaires.)

1. District Attorneys' Opinions

Questionnaires were mailed to 38 district attorneys, and 33 district attorneys answered them, an 87% response rate. Almost half

(48%) of the district attorneys responding had at least 11 years of experience (Table 37). The evaluator believes the ample experience of the district attorneys as a group gives their opinions of the Department particular weight.

Table 37

Responses to Question #1 of the District Attorney Survey

Question #1: How many years have you been involved with criminal cases?

Response	Number of Responses	Percentage of Total
1-10 years	17	52%
11-20 years	8	24%
21-30 years	7	21%
Over 30 years	1	3%
Total	33	100%

The district attorneys were asked for the percentage of court cases in which they use scientific evidence. The majority (52%) said they used it in 21-40% of their cases (Table 38, page 64). Although 19% of the district attorneys responding reported using scientific evidence in only 0-20% of their cases, 29% reported using it in 41% of their cases or more.

Since the district attorneys are in contact with toxicology personnel during trials, they were asked about the quality of testimony given by the Department's personnel. In response to a question on how well the toxicologists prepare for testimony, the overwhelming

Table 38

Responses to Question #2 of the District Attorney Survey

Question #2: In what percentage of the criminal cases you handle is scientific evidence used?

Response	Number of Responses	Percentage of Total
0-20%	6	19%
21-40%	16	52%
41-60%	3	10%
61-80%	4	13%
81-100%	2	6%
Total	31	100%

majority (30 or 91%) said the preparation was very good (Table 39). Two respondents (6%) said preparation was good, and only one respondent (3%) answered negatively.

Table 39

Responses to Question #4 of the District Attorney Survey

Question #4: Generally speaking, how well prepared are the witnesses from the Department of Toxicology and Criminal Investigation? Would you say their preparation is usually:

Response	Number of Responses	Percentage of Total
Very Good	30	91%
Good	2	6%

Table 39 Continued

Response	Number of Responses	Percentage of Total
Fair	0	0%
Poor	1	3%
Very Poor	0	0%
Total	33	100%

To a related question, the response of the district attorneys was equally favorable. The district attorneys were asked whether they feel that jurors treat scientific evidence as being more credible than other evidence. The district attorneys were almost unanimous (97%) in their belief that jurors do (Table 40). The credibility of scientific evidence further substantiates that Department personnel are generally well prepared when they give testimony.

Table 40

Responses to Question #6 of the District Attorney Survey

Question #6: Do you feel that jurors treat scientific evidence as being more credible than other evidence?

Response	Number of Responses	Percentage of Total
Yes	31	97%
No	1	3%
Total	32	100%

Since district attorneys regard the testimony of toxicologists highly, one would assume they would like to use scientific evidence in more cases than they do. In response to a survey question to this effect, an extremely high percentage of the district attorneys (94%) indicated that they would like to use scientific evidence more frequently than they do now (Table 41).

Table 41

Responses to Question #5-B of the District Attorney Survey

Question #5-B: How do you feel about the following statement: "I would like to use scientific evidence in criminal cases more frequently than I now do"?

Response	Number of Responses	Percentage of Total
Disagree Strongly	1	3%
Disagree Mildly	0	0%
Neither Agree nor Disagree	1	3%
Agree Mildly	9	29%
Agree Strongly	20	65%
Total	31	100%

To a related question, the evaluator sought to discover what percentage of those cases prosecuted without the benefit of scientific evidence would have been strengthened by it. The largest single group of respondents (44%) thought such a percentage would be low, no more than 20% (Table 42, page 67). For the remaining respondents, however, the percentage was over 20%. The evaluator, given the general positive

Table 42

Responses to Question #3 of the District Attorney Survey

Question #3: What percentage of those cases you have prosecuted without the benefit of scientific evidence would have been strengthened by it?

Response	Number of Responses	Percentage of Total
0-20%	14	44%
21-40%	7	22%
41-60%	2	6%
61-80%	5	16%
81-100%	4	12%
Total	32	100%

response of the district attorneys to scientific evidence and the testimony of toxicology personnel, interprets this finding to mean not that the toxicologists have been unable to provide scientific evidence in a notably large number of instances when it was needed, but rather that for some district attorneys almost any case would be strengthened by scientific evidence.

The responses of the district attorneys to a block of questions related to problems that arise in trying to obtain scientific evidence affirm that smooth coordination between the district attorneys and the toxicology personnel is the rule. The great majority of the district attorneys (a range of 78% to 83%) said that four potential problems cited by the evaluator were in fact problems either rarely or never (Table 43, page 68).

Table 43

Responses to Question #5-A of the District Attorney Survey

Question #5-A: How often have the following situations caused you serious problems in terms of preventing you from using scientific evidence (in cases which you would have liked to)?

Situation	Serious Problems Arise					
	Always	Almost Always	Fre-quently	Occa-sionally	Rarely	Never
No regional or satellite laboratory accessible enough.	1	0	3	3	8	17
Laboratory accessible but not equipped to perform.	0	0	1	5	14	12
Experts failed to show up for the courtroom proceedings.	0	0	1	4	7	19
Lack of funds for expert forensic services.	0	0	3	2	12	11

To balance out the toxicology survey, the evaluator asked the district attorneys two questions related to video-taped depositions: whether they approve of this form of testimony for toxicologists and whether they believe video-taped depositions would speed up the courtroom process. More district attorneys were against video-taped depositions than were in favor of them (46% versus 36%) (Table 44, page 69).

Table 44

Responses to Question #7-B of the District Attorney Survey

Question #7-B: Do you approve of using video-taped depositions of forensic toxicologists as courtroom testimony?

Response	Number of Responses	Percentage of Total
Yes	12	36%
No	15	46%
No Response	6	18%
Total	33	100%

The largest proportion of district attorneys (49%) also did not believe that this form of testimony would speed up the courtroom process (Table 45, page 70). Almost an equal proportion (45%), however, indicated that form of testimony either would speed up the courtroom process or at least speed up certain kinds of testimony. Among the types of testimony some district attorneys listed as appropriate for video-taped deposition were drug identifications, cause of death, and blood analysis.

Taken together, the responses of district attorneys indicate a positive regard for the Department of Toxicology and Criminal Investigation. The district attorneys use scientific evidence in a significant proportion of their cases and would like to use it even more frequently. They believe toxicologists are well prepared for the testimony they give and that jurors regard scientific evidence as particularly credible. On the issue of video-taped depositions, the

Table 45

Responses to Question #7-A of the District Attorney Survey

Question #7-A: Do you feel that a video-taped deposition given by a forensic toxicologist would speed up the courtroom process?

Response	Number of Responses	Percentage of Total
Yes	5	15%
No	16	49%
Yes, for certain kinds of testimony	10	30%
No Response	2	6%
Total	33	100%

district attorneys were closely divided with a slight margin going to those who do not approve of video-taped depositions and who do not think that form of testimony would speed up the courtroom process.

2. Circuit Court Judges' Opinions

The evaluator mailed survey questionnaires to 97 circuit court judges. Sixty judges returned the questionnaires, a 62% response rate. As a group, these judges are highly experienced, with 70% having at least 11 years experience with criminal cases and 45% having at least 21 years (Table 46, page 71). Judges have primary contact with the Department when they hear testimony from toxicologists, and they are uniquely qualified to evaluate the toxicologists' performance as witnesses. The survey, therefore, contained questions on the effectiveness of the toxocologists' testimony and the issue of video-taped depositions.

Table 46

Responses to Question #1 of the Circuit Court Judge Survey

Question #1: How many years have you been involved with criminal cases?

Response	Number of Responses	Percentage of Total
1-10 years	18	30%
11-20 years	15	25%
21-30 years	22	37%
Over 30 years	5	8%
Total	60	100%

The judges were asked to give their opinion of how well prepared the toxicologists are when giving testimony. The judges were unanimous in their approval of the toxicologists' preparation, with 17% saying it was good and 83% saying it was very good (Table 47). In this respect the toxicologists have won a high opinion from the judges.

Table 47

Responses to Question #3 of the Circuit Court Judge Survey

Question #3: Generally speaking, how well prepared are the witnesses from the Department of Toxicology and Criminal Investigation? Would you say their preparation is usually:

Response	Number of Responses	Percentage of Total
Very Good	49	83%

Table 47 Continued

Response	Number of Responses	Percentage of Total
Good	10	17%
Fair	0	0%
Poor	0	0%
Very Poor	0	0%
Total	59	100%

The judges were also asked whether jurors treat scientific evidence as being more credible than other types of evidence. They were almost unanimous on this issue, with 95% saying jurors did find it more credible than other types (Table 48). Some judges gave an opinion on why scientific evidence is received in this fashion. The main reasons given were that the toxicologists seem knowledgeable on the subject and that they are experts testifying as neutral witnesses with no stake in the outcome of the case.

Table 48

Responses to Question #2 of the Circuit Court Judge Survey

Question #2: Do you feel that jurors treat scientific evidence as being more credible than other evidence?

Response	Number of Responses	Percentage of Total
Yes	56	95%
No	3	5%
Total	59	100%

The majority of the judges (54%) indicated they approve of the use of video-taped depositions (Table 49). Interestingly enough, however, the majority (66%) also indicated that they did not believe this form of testimony would speed up the courtroom process (Table 50). The evaluator believes that the rationale to these responses is that some judges would approve of video-taped depositions if their use would be efficient for toxicologists even though that form of testimony would not necessarily save time for the court.

Table 49

Responses to Question #6 of the Circuit Court Judge Survey

Question #6: Do you approve of using video-taped depositions of forensic toxicologists as courtroom testimony?

Response	Number of Responses	Percentage of Total
Yes	30	54%
No	26	46%
Total	56	100%

Table 50

Responses to Question #5 of the Circuit Court Judge Survey

Question #5: Do you feel that a video-taped deposition given by forensic toxicologists would speed up the courtroom process?

Response	Number of Responses	Percentage of Total
Yes	18	31%

CONTINUED

1 OF 2

Table 50 Continued

Response	Number of Responses	Percentage of Total
No	38	66%
Yes, for certain kinds of testimony	2	3%
Total	58	100%

In summary, the judges surveyed voiced a highly favorable opinion of toxicologists as witnesses and a belief that their testimony is especially credible to jurors. A majority of the judges indicated that they would approve of video-taped depositions from toxicologists even though they do not believe that their use would speed up the courtroom process in general.

III. FINDINGS AND CONCLUSIONS

A. FINDINGS

1. Expansion of Services

UCR statistics indicate that crime in Alabama, as in the surrounding states, has increased steadily in recent years. Whereas Alabama's crime index was at 1,576.0 in 1969, it reached 3,803.3 in 1976. This increase, insofar as it resulted in additional cases requiring crime laboratory services, supports the position that the Department of Toxicology and Criminal Investigation needed to expand during this period.

From 1969 through 1972, the Department's five regional laboratories--Auburn, Birmingham, Huntsville, Mobile, and Montgomery--were experiencing rapidly increasing caseloads. The Department responded to the rising demand for toxicology services by opening five satellite laboratories in three years: at Enterprise (in 1971), Jacksonville (1972), Selma (1972), Florence (1973), and Tuscaloosa (1973). The satellite laboratories were established primarily to relieve the caseloads of the five regional laboratories and to improve the accessibility of services in specific regions.

Both the caseload totals and caseload trends affirm that each satellite laboratory generated substantial caseloads by the second year of operation and either maintained or increased its caseload through 1975. During the same period that the satellite laboratories began to establish themselves (1972-1975), the caseloads at the regional laboratories, which had increased drastically between 1969

and 1972, for the most part either stabilized or decreased in relation to the 1972 levels. Since analysis of the UCR statistics does not reveal a decrease in crime rates during these years, the evaluator concludes that the decreases or stabilizations in caseloads at the regional level are largely the result of relief provided by the establishment of the satellite laboratories. Moreover, the caseloads at the satellite laboratories were large enough to indicate not only that the laboratories gave relief at the regional level, but also that they met some local law enforcement needs that previously might have gone unattended.

The results of the survey of evidence collection officers show, in fact, that the establishment of satellite laboratories has enabled many agencies to increase the number of laboratory submissions. Fifty-seven percent of the respondents reported increasing the number of submissions since the advent of the satellite laboratories, and 66% of that group were closer to a satellite laboratory than a regional one. The evidence collection officers rated the services provided by the Department highly, with 22% saying they were good and 69% saying they were very good. The training programs at the regional laboratories received almost equally high marks with 38% rating them good and 49% rating them very good. The primary suggestions given by the evidence collection officers for improving services were for the Department to increase its number of employees and reduce turn-around-time, two related suggestions. Overall, however, the survey results show that the Department is regarded as exceptional by the law enforcement agencies it serves.

2. Turn-Around-Time

A sample of cases processed between October 1973 and March 1976 reveals that although the regional and satellite laboratories have reduced turn-around-time significantly in recent years, in general they have not met the seven-day objective. The average for all laboratories decreased from 21 days in 1973 to 10 days in 1976. Only the Huntsville and Mobile laboratories reached or surpassed a turn-around-time of seven days in 1976. Three categories of cases showing the most improvement--drug identifications, physical evidence, and death investigations--however, include the types of cases for which the caseload trends show the satellite laboratories providing the most relief to regional laboratories. In each of those categories turn-around-time was reduced by more than a week. The evaluator believes, therefore, that there is a link between the impact of satellite laboratories on the regional laboratories and the general reductions in turn-around-time.

Two issues related to turn-around-time that surfaced during the evaluation are Department personnel's court time requirements and individual workloads. Although the amount of time spent by Department personnel serving as witnesses decreased by 49% from 1973-1974 through 1975-1976, in 1975-1976 the total time commitment was 5,695 hours. Of this time, 1,124 hours were spent traveling and waiting on occasions when testimony was not given. As for the issue of individual workloads, despite the relief provided by regional laboratories, Department statistics show that individual workloads increased from 255 cases per technical employee in 1972-1973 to 332 cases in 1975-1976, with projections indicating further increases.

The survey of Department personnel primarily addressed these two issues as related to turn-around-time. The high majority of personnel responding to the survey (20 of 29, or 69%) expressed a belief that turn-around-time in their laboratory was too slow. An equal majority (21 of 30, or 70%) said that the amount of time spent in court had a direct effect on turn-around-time. A slight majority (16 of 30, or 53%), however, indicated they did not think the amount of time spent in court was excessive.

The evaluator asked whether the use of video-taped depositions, an alternative that pending judicial reform may make highly acceptable, would reduce turn-around-time. The majority of the crime laboratory technicians (15 of 29, or 52%) answered that it would, though a substantial number (11 of 29, or 38%) did not believe this type of testimony would reduce turn-around-time, and some (3 of 29, or 10%) were undecided. Those favoring video-taped depositions primarily cited time saved traveling and waiting as justification for their use; those who did not believe video-taped depositions would reduce turn-around-time either said that court attendance does not hamper turn-around-time or that video-taped depositions would leave many questions unanswered. The technicians were almost evenly split as to whether the use of video-taped depositions would increase individual productivity. Fourteen (48%) said this method of testimony would allow them to handle more cases, 13 (45%) said it would not, and 2 (7%) were undecided.

The most common suggestion on how to improve individual productivity given by the Department personnel was to improve instrumentation (11 of 31, or 35%). A check by the evaluator revealed that although

the amount of equipment bought or transferred for each laboratory has fluctuated in recent years, neither the Jacksonville nor the Selma laboratory has received any major equipment since 1974. In the face of rising individual workloads, many Department technicians believe new and better equipment could be a key to reducing turn-around-time.

3. Opinions of District Attorneys and Circuit Court Judges

The survey responses of the district attorneys and circuit court judges indicate a positive regard for the Department of Toxicology and Criminal Investigation. A full 91% (30 of 33) of the district attorneys said that the preparation of Department personnel for testimony was very good, and an additional 6% said it was good. The majority (52%) reported using scientific evidence in 21-40% of their cases, and 65% said they would like to use it in more cases than they do. A full 97% expressed a belief that jurors find scientific evidence more credible than other forms of evidence.

The evaluator asked both the district attorneys and the circuit court judges for their opinions on the use of video-taped depositions by toxicologists. The largest group of district attorneys (46%) said they did not approve of this form of testimony, and a higher percentage (49%) said they did not believe it would speed up the courtroom process. The majority of the judges (54%), however, indicated they approved of the use of video-taped depositions by technicians from the Department, even though a higher percentage (66%) said they did not believe their use would speed up the courtroom process.

The judges were unanimous in their approval of the Department technicians' preparation for testimony, with 17% (10) saying it was

good and 83% (49) saying it was very good. They were virtually unanimous in their belief that jurors find scientific evidence more credible than other kinds of evidence, with 95% answering that jurors do.

B. CONCLUSIONS

The rapid increase in reported crime and caseload submissions to crime laboratories between 1969 and 1976 underscore the rising demand in Alabama for forensic science services in recent years. This evaluation examined to what extent ALEPA's Crime Laboratories System Program has met Alabama's increasing forensic science and toxicology needs. By enabling the Department to establish five satellite laboratories, this program provided needed relief to the existing regional laboratories, especially for drug identifications and death investigations. Though only two of ten laboratories have met the program's objective of processing cases within seven days, all laboratories demonstrated substantial decreases in turn-around-time. For three types of cases--drug identification, death investigation, and physical evidence--the average turn-around-time decreased by more than one week during a three-year period. Each of the criminal justice groups familiar with the work of the crime laboratories--evidence collection officers, district attorneys, and judges--expressed an opinion that Alabama's laboratories perform exceptionally well. The evaluator, therefore, concludes that during a period of increasing forensic science and toxicology needs ALEPA's Crime Laboratories Delivery System Program enabled the Department of Toxicology and Criminal Investigation to expand its services, to provide services with increased expeditiousness, and at the same time to maintain a high quality of service.

APPENDIX A

GOALS AND OBJECTIVES FOR CRIME LABORATORIES DELIVERY SYSTEM

GOALS AND OBJECTIVES FOR CRIME LABORATORIES DELIVERY SYSTEM

(Adapted from Recommendations Section,
Alabama Master Plan for Crime Laboratories Delivery System)

1. To develop and continue the needed services of the Department under a Department of Forensic Science which would continue the following services:
   a. adequate Criminalistics, Toxicology, and Death Investigation Divisions
   b. the research and development program
   c. a comprehensive quality control program
   d. training of law enforcement personnel and employees.

2. To establish, with the aid of the state of Alabama and the Alabama Law Enforcement Planning Agency, five regional laboratories in Auburn, Birmingham, Huntsville, Mobile, and Montgomery and five satellite laboratories in Enterprise, Florence, Jacksonville, Selma, and Tuscaloosa.

3. To reduce turn-around-time for cases received from law enforcement officers to seven working days.

4. To assist in the investigation of crime scenes in very serious crimes or in crimes where the nature of the evidence is very complicated.

5. To develop morgue facilities at the Birmingham, Huntsville, Mobile, and Montgomery laboratories.

6. To simplify the record keeping system to reduce the time factor involved by the Department personnel.

APPENDIX B

STANDARDS AND GOALS OF THE NATIONAL ADVISORY COMMISSION ON CRIMINAL JUSTICE

STANDARDS AND GOALS

OF THE NATIONAL ADVISORY COMMISSION ON CRIMINAL JUSTICE

STANDARD 12.2 - THE CRIME LABORATORY*

Every State by 1982 should establish a consolidated criminal laboratory system composed of local, regional, or state facilities capable of providing the most advanced forensic science services to police agencies.

1. Every police agency should immediately insure that it has access to at least one laboratory facility capable of timely and efficient processing of physical evidence and should consider use of each of the following:
   a. A local laboratory that provides analysis for high volume, routine cases involving substances such as narcotics, alcohol, and urine; routine analysis and processing of most evidence within 24 hours of its delivery; immediate analysis of certain types of evidence, such as narcotics, where the detention or release of a subject depends upon the analysis; and qualitative field tests and quantitative followup tests of narcotics or dangerous drugs.
   b. A regional laboratory (serving an area in excess of 500,000 population where at least 5,000 Part I offenses are reported annually) that provides more sophisticated services than the local laboratory, is situated within 50 miles of any agency it routinely serves, can process or analyze evidence within 24 hours of its

*All material in Appendix B has been extracted from Police, National Advisory Commission on Criminal Justice Standards and Goals, Washington, D.C., 1973.

delivery, and is staffed with trained teams of evidence technicians to assist in complex investigations beyond the scope of local agencies.

c. A centralized state laboratory that provides highly technical analyses that are beyond the capabilities of local or regional facilities.

2. . . .

3. . . .

f. The working staff be sufficient to meet the demands of the laboratory caseload.

4-7 . . .

8. Every crime laboratory should establish close liaison immediately with:

a. All other elements of the criminal justice system to insure that laboratory findings are consistent with law enforcement needs and are being effectively used as investigative tools.

b. The scientific and academic establishments, to insure use of the latest techniques and devices available to the criminalist and the investigator.

APPENDIX C

CRIME CLASSIFICATION CHANGES

CRIME CLASSIFICATION CHANGES

BY THE STATE DEPARTMENT OF TOXICOLOGY AND CRIME LABORATORY SERVICES

Until 1973, crimes were classified by the Toxicology Department and Crime Laboratory Services into 33 different types of cases. In 1973, the classifications were consolidated and regrouped into four major categories with 13 sub-classifications. These changes can be seen in the following outline:

I. DEATH INVESTIGATION*

- A. DEATH INVESTIGATION
  - 1. Death
  - 2. Exhumation
- B. DEATH (POSTMORTEM)

II. DRUG IDENTIFICATION

- A. DRUG IDENTIFICATION
  - 1. Drug identification

III. TOXICOLOGY

- A. DWI
  - 1. Violating prohibition law
  - 2. Alcohol in blood and body fluids
  - 3. Intoximeter analysis
  - 4. Driving while intoxicated

---

*Roman numerals indicate new major categories (4 total). Upper case outline letters indicate new sub-categories (13 total). Outline numbers indicate old categories consolidated into the new (33 total).

B. TOXICOLOGY - HUMAN

1. Clinical toxicology
2. Postmortem toxicology
3. Emergency toxicology
4. General toxicology

C. TOXICOLOGY - ANIMAL

1. Animal poison

IV. CRIMINALISTICS OR PHYSICAL EVIDENCE

A. RAPE

1. Rape

B. ROBBERY

1. Robbery

C. BURGLARY

1. Burglary

D. GRAND LARCENY AND LARCENY

1. Grand larceny and larceny

E. OCA PERSONS

1. Abortion
2. Assault to rape
3. Assault to murder
4. Hit and run

F. OCA PROPERTY

1. Arson
2. Forgery
3. Bombing

G. ANALYSIS

1. Identifications
2. ID of firearms
3. ID of blood
4. ID of fingerprints
5. ID of substance
6. ID of marks
7. Document examination
8. Photography
9. Bone identification
10. Miscellaneous

APPENDIX D

SURVEY OF EVIDENCE COLLECTION OFFICERS

SURVEY OF EVIDENCE COLLECTION OFFICERS

The Alabama Law Enforcement Planning Agency (ALEPA) has asked the Evaluation Project Staff at Auburn University to evaluate the state's regional and satellite toxicology laboratories. To carry out this assignment, we need input from persons who use the laboratories. Please check the most appropriate answer to each question, or write your own views in the spaces provided. If you have any questions please call us at 826-5370. We greatly appreciate your taking the time and effort to respond to this questionnaire. Thank you.

Please indicate your job title and the county in which you work.

Job Title: _____

County: _____

1. When the morgue facilities were built at Auburn in 1973, did they reduce the time required for autopsies to be completed?

   ( ) 1. reduced the time substantially
   ( ) 2. reduced the time moderately
   ( ) 3. no reduction in time
   ( ) 4. do not know

2. Overall, how would you rate the services provided your agency by the regional toxicology laboratory in your area?

   ( ) 1. very good
   ( ) 2. good
   ( ) 3. fair
   ( ) 4. poor
   ( ) 5. very poor

   How, if at all, do you think the services provided could be improved?

   _____

   _____

   _____

3. How would you rate the performance of your regional laboratory in training police officers to search for and handle physical evidence?

( ) 1. very good
( ) 2. good
( ) 3. fair
( ) 4. poor
( ) 5. very poor

How, if at all, do you think the training could be improved?

_____

_____

4. Has the distance from your place of work to the nearest laboratory ever made a difference in your decision whether to submit evidence for analysis?

( ) 1. yes
( ) 2. no

If yes, please explain: _____

_____

_____

5. When the satellite laboratory nearest your agency was established, did you find that you submitted a greater number of cases than before?

( ) 1. yes
( ) 2. no
( ) 3. do not know

6. What percentage of all your cases do you send to the regional laboratory?

( ) 1. 0-20%
( ) 2. 21-40%
( ) 3. 41-60%
( ) 4. 61-80%
( ) 5. 81-100%

7. Of all the cases you could send to a satellite laboratory, what percentage do you actually send?

( ) 1. 0-20%
( ) 2. 21-40%
( ) 3. 41-60%
( ) 4. 61-80%
( ) 5. 81-100%

8. In your criminal cases in which no scientific evidence was used, in what percentage could it have been used?

( ) 1. 0-20%
( ) 2. 21-40%
( ) 3. 41-60%
( ) 4. 61-80%
( ) 5. 81-100%

9. Overall, how helpful do you feel that the toxicology and crime laboratory services have been in aiding scientific investigations within your own agency?

_____

_____

_____

10. How, if at all, do you think the services provided by the Department and crime laboratories could be improved?

_____

_____

_____

(FOR OFFICERS IN LEE, COFFEE, BALDWIN, CONECUH, TUSCALOOSA, AND LAUDERDALE COUNTIES ONLY)

11. In 1973 LEAA implemented in your county a program designed to increase officer expertise at the crime scene and to improve and accelerate delivery of evidence to crime laboratories. Overall, do you think this program was effective?

( ) 1. very successful
( ) 2. moderately successful
( ) 3. not successful
( ) 4. do not know

What, if anything, do you think could have been done to make the program more effective?

_____

_____

APPENDIX E

SURVEY OF STATE OF ALABAMA TOXICOLOGISTS

SURVEY OF STATE OF ALABAMA TOXICOLOGISTS

The Alabama Law Enforcement Planning Agency (ALEPA) has asked the Evaluation Project Staff at Auburn University to evaluate the state's regional and satellite toxicology laboratories. To carry out this assignment, we need input from persons who work within the laboratories. Please check the most appropriate answer to each question, or write your own views in the spaces provided. If you have any questions, please call us at 826-5370. We greatly appreciate your taking the time and effort to respond to this questionnaire. Thank you.

1. Please check your job classification.

   ( ) 1. technical
   ( ) 2. non-technical

2. Please check the place at which you work.

   ( ) 1. Auburn
   ( ) 2. Birmingham
   ( ) 3. Enterprise
   ( ) 4. Florence
   ( ) 5. Huntsville
   ( ) 6. Jacksonville
   ( ) 7. Mobile
   ( ) 8. Montgomery
   ( ) 9. Selma
   ( ) 10. Tuscaloosa

3. Do you feel that turn-around-time in your laboratory is too slow?

   ( ) 1. yes
   ( ) 2. no

   If yes, what do you think could be done to speed it up?

   _____

   _____

   _____

4. Do you think toxicologists generally spend:

( ) 1. too little time in court
( ) 2. about the right amount of time in court
( ) 3. too much time in court

If you checked "3," how do you think the amount of time spent in court could be reduced?

_____

_____

5. Do you feel that the amount of time spent in court has a direct effect on turn-around-time?

( ) 1. yes
( ) 2. no

6. What do you think could be done to increase the number of cases an individual toxicologist could effectively handle?

_____

_____

_____

7. Do you feel that the use of video-taped depositions would allow toxicologists to handle a larger number of cases? Why, or why not?

_____

_____

_____

8. Do you feel that the use of video-taped depositions would reduce turn-around-time? Why, or why not?

_____

_____

_____

9. REGIONAL LABORATORIES ONLY:

Do you feel that the satellite laboratory in your region has helped reduce the workload of your own laboratory?

_____

_____

10. FOR SELMA LABORATORY ONLY:

What effect will the closing of Craig Air Force Base have on the number of cases processed in your laboratory?

_____

_____

APPENDIX F

MAJOR EQUIPMENT PURCHASED BY

DEPARTMENT OF TOXICOLOGY AND CRIMINAL INVESTIGATION

1969-1977

MAJOR EQUIPMENT PURCHASED BY

DEPARTMENT OF TOXICOLOGY AND CRIMINAL INVESTIGATION

1969-1977

Auburn Regional Laboratory

1977

Monochromoter, Bausch and Lomb, high intensity
Radio, mobile, two-way transmitter (4), non-mobile (1)

1976

Background correctional system for atomic absorption spectrometer
Microscope, medical, Leitz Dialux, infrared (1)
Gas chromatograph
Spectrophotometer - radio immuno assay system
Solids pyrolyzer
Gamma counting system
Centrifuge, Damon IEC
Electrode discharge lamp
Paraffin dispenser
Air compressor
Atomic absorption spectrophotomer - including burner head and carbon Rod atomizer

1975

Microscope with drawing attachment

1974

Carbon rod atomizer - received Huntsville October 1974; moved to Auburn August 1975
Atomic absorption spectrophometer - received Huntsville October 1974; moved to Auburn August 1975
Two-way radio (2)
Microscope
Digital integrator - Auburn laboratory
Phosphoroscope, Aminco
X-Y Recorder, Aminco
Spectrophotofluorometer

1973

Surgical light
Gas chromatograph
Forensic comparison microscope
Two-way radio
Infrared spectrophotomer
Electrophoresis - apparatus
Pressure pulsator

1972

Refrigerator, mortuary
Videotape recorder
Autopsy table, L-shaped
Conference microphone with foot pedal
Scale, autopsy, 15 kilo
Cadaver lift - 43 x 35 x 96

1971

Control unit
Two-way radio (3)
Spectrophotomer, ultraviolet
Chromotograph
Spectrophotomer, infrared

1970

Pyrolysis unit for use with Perkin Elmer GC
Photomicrographic unit

1969

Electrophoresis chamber
Freezer
Multi-dosigraph
Impulsomat

Birmingham Regional Laboratory

1977

Monochrometer, high intensity
Mobile, two-way radio

1976

Gas chromatograph
Bullet recovery tank
Microscope and illuminator
Refrigerator-freezer

1975

Thin-layer chromatography spraying screen
Rotator-variable speed
Centrifuge, Adams Dynac with horizontal head

1974

Pyrolyzer, solids
Gas chromatograph
Microscope with polarizing attachment and auto microflex
Digital integrator
Microscope melting point apparatus
Vapor phase GC-IR analyzer

1973

X-Y ratio recording
Spectrophotoflurometer, Amico-Ratio Recording
X-ray developing system - moved from Huntsville March 11, 1976
X-ray machine, portable - moved to Birmingham March 11, 1976

1972

Video camera and recorder
Cabinet, lab 24 x 72, Kewaunee (year unknown) (7)
Freezer, 16 cubic feet (year unknown)
Oven

1971

Two-way radio
CRC labwasher - moved from Auburn to Birmingham May 5, 1977
Spectrophotometer - Perkin Elmer, IR
Basic outfit for thin layer chromatography
Gas chromatograph
Spectrophotometer, ultraviolet visible

1970

Turner electrophoresis system - moved from Auburn to Selma June 8, 1973 and then moved to Birmingham September 30, 1975

1969

Spectrophotometer, Beckman model transferred from Auburn to Montgomery June 25, 1970 and moved to Birmingham December 22, 1975

Enterprise Satellite Laboratory

1976

Solids pyrolyzer, pyroprobe 100, Cehmical Data Systems

1975

Monochromator - Bausch Lomb
Gaseous burst valve

1974

Fiber optic illuminator for comparison microscope

1973

Microscope, A and O stereostar zoom
Two-way radio
Roll-in stretcher, 75 x 22 - transferred to Jacksonville December 10, 1973
Desiccator, precision
Fingerprint comparator
Microtome knife

1972

Oven
Video camera
Videotape recorder
Metal detector
Spectorgraph, Jarrel Ash, wide-angle
Gas Control carrier for Perkin Elmer 990
Gas chromatograph - moved from Montgomery March 27, 1977
Detector gas control fro gas chromatograph - transferred to Enterprise March 27, 1977

1971

Dishwasher CRC
Cabinet lab - U-shaped double corner unit - Kewaunee
Leg A B C
Storage
Cabinet lab with sink (12)
Photomicrographic unit for polarizing microscope
Microscope, polarizing
Microscope, forensic comparison

Microcopse, wild modified
Microscope L-KE
Refrigerator
Spectrophotometer, UV Beckman, ACTA III
Outfit thin layer chromatography
Micro-furnace
Recorder, Varian Aerograph
Gas chromatograph, Varian Aerograph
Spectrophotometer, infrared - Perkin Elmer
Ultrasonic cleaner
Gas chromatograph with splitter assembly - moved from Montgomery to Enterprise March 27, 1977

Florence Satellite Laboratory

1976

Phase turret condensor, extra long, working
Distance 40 MM

1974

Cabinet Kewaunee 11" length (21) - some with sinks and hoods
Monochromator
Microscope stereozoom
Rotator
Centrifuge
Solids pyrolyzer
Gas chromatograph
Infrared spectrophotometer
Microscope, compound, medical LKE with polarizing
Attachment
Stir-plate
Furnace Ultraviolet spectrophotometer
Balance semi-micro

1973

Two-way radio, mobile
Digital integrator, autolab
Microscope, widefield, stereo
Microscope melting point apparatus
Fiber microtome
Metal detector
Refrigerator 3.9 cubic feet; freezer, 17.1 cubic feet (2)
Dispersion staining objective

1971

Microscope, forensic comparison

Jacksonville Satellite Laboratory

1977

Monochromator, high intensity, grating

1974

Stretcher roll-in

1973

Two-way, mobile radio (2)
Pyrolyzer, solids, chemical data systems
Gas chromatograph
Shelving unit - open 36 x 87 x 24 (22)
Lab table with drawers
Lab cabinet with apron, double apron, L-shaped
Hood, leg A, sink (13)
Refrigerator, 17.1 cubic feet (2)
Fiber microtome
Forensic comparison microscope
Infrared spectrophotometer
Gas chromatograph
Microscope, widefield stereo
Auto-microflex, AFM-8 for compound medical microscope
Polarizing set, SPO, for compound medical microscope
Microscope, compound, medical
Ultraviolet Spectrophotometer ACTA III
Furnace
PH meter
Balance, analytical mettler
Oven, analytical 200, 288 OC
Digital integrator, autolab
Microscope melting point apparatus

1972

Metal detector
Thin layer chromatography outfit

Huntsville Regional Laboratory

1977

Monochrometer

1976

Solids pyrolyzer, pyroprobe 100
Refrigerator freezer 19.0 cubic feet

1975

Fiber optic illuminator
Two-way radio mobile
Recorder X-Y aminco
Spectrophotofluorometer

1974

Rotator variable speed

1973

Fiber microtome, microscope
Evidence vaccuum sweeper
Strip chart recorder

1972

Metal detector
Balance, mettler
Electrophoresis chamber and power supply
Video camera and tape recorder
Gas chromatograph
Digital integrator, auto lab

1971

Microscope, polarizing
Micro furnace, thermal
Control unit, mettler
Cabinets or shelving 12 x 36 x 84 (15)
Kewaunee cabinets 31 x 36 x 26
Outfit, thin layer chromatography

Oven
Microscope, Nikon, forensic comparison
Two-way radio
Spectrophotometer, ultraviolet

1970

Pyrolysis unit
Balance, analytical

1969

Recorder for gas chromatograph
Gas chromatograph

Tuscaloosa Satellite Laboratory

1977

Monochromater

1975

Infrared spectrophotometer
Shelving cabinet, lab cabinet, distillation
Rack (17)
Microscope, widefield, stereo
Two-way radio, mobile
Microscope, wild M-21
Oven (2)
Sartorius, Balance
PH meter
Balance, semi-micro-analytical

1974

Microscope, forensic comparison
File cabinet, lateral two drawer (7)
Microscope melting point apparatus mettler
Ultraviolet spectrophotometer
Recorder, strip chart, 10-inch
Recorder, strip chart, 10-inch
Gas chromatograph (2)
Refrigerator (2)
Pyrolyzer, solids
Digital integrator
Metal detector

Selma Satellite Laboratory

1974

Source, Jarrell Ash, constant DC transferred from August 14, 1975
Microscope - fiber
Monochromator - grating

1973

Solids pyrolyzer
Oven
Microscope, wild M-21
Refrigerator, 14.1 cubic feet
Digital integrator
Gas chromatograph (2)
Refrigerator with ice-maker
Two lab cabinets with shelves, sinks, hoods, work tables (2)
Infrared - spectrophotometer
Forensic comparison microscope
Ultraviolet spectrophotometer
PH meter
Microscope, widefield stereo
Balance, analytical
Microscope melting point apparatus

1972

Metal detector

1971

Two-way radio
Beam condensor for spectophotometer - transferred from Enterprise to Selma in 1973
Spectorograph - transferred from Birmingham to Selma August 14, 1975

Montgomery Regional Laboratory

1977

Monochromator

1976

Solids pyrolyzer, pyroprobe 100
PH meter
Recorder, strip chart
Gas chromatograph

1975

Lab cabinets utility tables, sinks cabinets (17)
Autopsy scales - transferred from Auburn to Montgomery August 4, 1977
Autopsy table - transferred from Auburn to Montgomery August 4, 1977
Recorder X-Y
Spectrophotoflurometer
Freezer 19.5 cubic feet
Micro fiber microtome
Refrigerator (2) for bodies - transferred from Auburn to Montgomery August 4, 1977
Embalming machine - transferred from Huntsville to Auburn to Montgomery August 4, 1977
Metal detector

1974

Two-way radio, mobile
Microscope, forensic comparison - transferred from Florence to Montgomery July 7, 1975

1973

X-ray developing system
Microscope melting point apparatus
Ultraviolet spectrophotometer

1972

Microscope, basic
Pyrolysis unit
Microsampling kit for Perkin Elmer, infrared
Spectorphotometer
Dishwasher CRC

1971

Gas chromatograph
Microscope - polarizing
Photomicrographic unit

1970

Spectrograph with stand and source units
Thin layer chromatography applicator
Balance - analytical, semi-micro

1969

Spectrophotometer

Mobile Regional Laboratory

1977

Sterilizer, steam pressure
Monochromator
Two-way radio

1976

Solids pyrolyzer
Fiber optic illuminator

1975

Rotator
Spectrophoto flurometer
Source, Jarrell Ash
Microscope

1974

Two-way radio
Microscope melting point apparatus

1972

Refrigerator, 8.6 cubic feet
Gas chromatograph
Oven
Spectrophotomer ultraviolet
Infrared spectrophotometer

1971

Lab cabinet with sinks, hoods, distillation units
PH meter
Gas chromatograph - transferred from Enterprise to Mobile September 28, 1976
Microscope, wild modified
Balance
Photomicrographic unit for polarizing microscope
Microscope, polarizing
Thin layer chromatography
Viewer comparator

1970

Microscope, forensic comparison
Strip charter recorder
Gas chromatograph
Spectrophotometer - transferred from Huntsville to Mobile October 15, 1969

APPENDIX G

SURVEY OF DISTRICT ATTORNEYS

SURVEY OF DISTRICT ATTORNEYS

Please check the most appropriate answer to each question and where appropriate write your own views in the spaces provided. If you have any questions please call us at 826-5370. We greatly appreciate your taking the time and effort to respond to this questionnaire. Thank you.

1. How many years have you been involved with criminal cases?

   ( ) 1. 1-10 years
   ( ) 2. 11-20 years
   ( ) 3. 21-30 years
   ( ) 4. over 30 years

2. In what percentage of the criminal cases you handle in court is scientific evidence used?

   ( ) 1. 0-20%
   ( ) 2. 21-40%
   ( ) 3. 41-60%
   ( ) 4. 61-80%
   ( ) 5. 81-100%

3. What percentage of those cases you have prosecuted without the benefit of scientific evidence would have been strengthened by it?

   ( ) 1. 0-20%
   ( ) 2. 21-40%
   ( ) 3. 41-60%
   ( ) 4. 61-80%
   ( ) 5. 81-100%

4. Generally speaking, how well prepared are the witnesses from the Department of Toxicology and Crime Laboratory Services. Would you say their preparation is usually:

   ( ) 1. very good
   ( ) 2. good
   ( ) 3. fair
   ( ) 4. poor
   ( ) 5. very poor

5-A. How often have the following situations caused you serious problems in terms of preventing you from using scientific evidence (in cases in which you would like to)?

Situation	How Often Serious Problems Arose Due To Each Situation					
	Always	Almost Always	Fre-quently	Occa-sionally	Rarely	Never
a. no regional or satellite laboratory accessible enough						
b. laboratory accessible but not equipped to perform required tests						
c. experts failed to show up for the courtroom proceedings						
d. lack of funds for expert forensic services						

5-B. How do you feel about the following statement: "I would like to use scientific evidence in criminal cases more frequently than I now do."?

( ) 1. disagree strongly
( ) 2. disagree mildly
( ) 3. neither agree or disagree
( ) 4. agree mildly
( ) 5. agree strongly

6. Do you feel that jurors treat scientific evidence as being more credible than other evidence?

( ) 1. yes
( ) 2. no

7-A. Do you feel that a video-taped deposition given by forensic toxicologists would speed up the courtroom processes?

( ) 1. yes
( ) 2. no
( ) 3. yes, but only for certain kinds of testimony

If you checked number 3, what kinds of testimony?

_____

_____

_____

7-B. Do you approve of using video-taped depositions of forensic toxicologists as courtroom testimony?

( ) 1. yes
( ) 2. no

APPENDIX H

SURVEY OF CIRCUIT COURT JUDGES

SURVEY OF CIRCUIT COURT JUDGES

Please check the most appropriate answer to each question and where appropriate write your own views in the spaces provided. If you have any questions please call us at 826-5370. We greatly appreciate your taking the time and effort to respond to this questionnaire. Thank you.

1. How many years have you been involved with criminal cases?

   ( ) 1. 1-10 years
   ( ) 2. 11-20 years
   ( ) 3. 21-30 years
   ( ) 4. over 30 years

2. Do you feel that jurors treat scientific evidence as being more credible than other evidence?

   ( ) 1. yes
   ( ) 2. no

   Why do you think this is so?

   _____

   _____

   _____

3. Generally speaking, how well prepared are the witnesses from the Department of Toxicology and Criminal Investigation? Would you say their preparation is usually:

   ( ) 1. very good
   ( ) 2. good
   ( ) 3. fair
   ( ) 4. poor
   ( ) 5. very poor

4. Overall, how does the testimony of persons who have been certified or licensed as a forensic scientist by a public or private organization compare with the testimony of persons not so certified or licensed?

( ) 1. no difference in quality
( ) 2. testimony of uncertified witness tends to be better
( ) 3. testimony of certified witness tends to be better

5. Do you feel that a video-taped deposition given by forensic toxicologists would speed up the courtroom process?

( ) 1. yes
( ) 2. no
( ) 3. yes, but only for certain kinds of testimony

If you checked number 3, what kinds of testimony?

_____

_____

_____

6. Do you approve of using video-taped depositions of forensic toxicologists as courtroom testimony?

( ) 1. yes
( ) 2. no

END