Report Highlights

Why DLA Performed This Audit

The audit of the Crime Lab was requested, in part, to determine if the new crime lab facility had an impact on available forensic services and the extent services were outsourced. The audit evaluates whether evidence control procedures at the new facility are suitably designed to ensure the integrity of evidence, identifies the number of untested Sexual Assault Response Team kits stored at the Crime Lab, and documents backlogs for all services. The audit determines staff turnover and evaluates personnel practices. Lastly, the audit evaluates and verifies the accuracy of the Crime Lab's performance measures.

What DLA Recommends

1. DPS' commissioner should ensure building security and evidence control procedures minimize the potential for evidence loss and theft.

2. The Crime Lab manager should develop policies and procedures to ensure access to the Laboratory Information Management System (LIMS) is granted based on users' business needs.

3. The Crime Lab manager should develop and follow detailed written procedures to ensure all employees complete security clearance verification prior to accessing LIMS.

4. The Crime Lab manager should comply with policies and procedures over drug standards.

5. DPS' commissioner should develop policies and procedures to ensure performance measures are accurate, relevant, complete, and based on an appropriate methodology.

A Performance Audit of the Department of Public Safety (DPS), Alaska Scientific Crime Detection Laboratory (Crime Lab), Select Issues

November 7, 2016
Audit Control Number 12-30084-17

REPORT CONCLUSIONS

The audit concludes that the new Crime Lab facility has not expanded the forensic services provided or reduced the process time for service requests. Despite the completion of the new Crime Lab facility, no additional forensic services have been added.

Toxicology related to traffic offenses is the only forensic service consistently outsourced. The cost of outsourcing traffic-related offenses is partially covered by a federal grant.

The audit was unable to evaluate the costs versus benefits of expanding the Crime Lab to provide additional forensic services due to a lack of cost data. A survey of law enforcement agencies identified a demand for additional forensic services, especially toxicology.

The audit found that from July 2007 through April 2016, backlogs existed in most services; however, backlogs have been reduced in 2016. According to a survey of Crime Lab forensic scientists and technicians, the primary reason for backlogs has been a lack of forensic scientists. The audit identified that 20 forensic scientist and technician positions were vacant in excess of six months during the audit period.

There were 122 Sexual Assault Response Team (SART) kits stored at the Crime Lab as of July 20, 2016. Of the 68 SART kits awaiting analysis by the Crime Lab, 74 percent were in backlog status (older than 30 days). The total number of untested kits maintained by law enforcement agencies statewide is unknown, as Crime Lab management lacks a method for tracking the number of kits distributed or used.

Report Highlights (Continued)

REPORT CONCLUSIONS (Continued)

The audit concludes that Crime Lab evidence control procedures do not adequately protect against evidence theft or loss. Furthermore, improvements are needed in building security and access controls to adequately protect sensitive areas of the Crime Lab.

A comparison to national benchmarks was not possible; however, the audit provides processing information to help gauge productivity between fiscal years. Fifty-five percent of the forensic analysis service requests received between July 2015 and April 2016 were completed within 30 days.

The audit concludes that performance measures were not accurately reported by Crime Lab management. Additionally, turnaround time from the date evidence was received by the Crime Lab to the date results were provided to the requesting agency was not tracked or reported. The audit also found unreliable information was used to calculate performance measures related to the DNA database.

The Crime Lab experienced consistent staff turnover from July 2007 through April 2016. The turnover rate does not appear excessive except for the FY 10 rate showing that 44 percent of physical discipline forensic staff left the lab. Review of personnel practices found improvements were needed over staff supervision and hiring.

ALASKA STATE LEGISLATURE

LEGISLATIVE BUDGET AND AUDIT COMMITTEE

Division of Legislative Audit

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December 2, 2016

Members of the Legislative Budget
and Audit Committee:

In accordance with the provisions of Title 24 of the Alaska Statutes, the attached report is submitted for your review.

DEPARTMENT OF PUBLIC SAFETY
ALASKA SCIENTIFIC CRIME DETECTION LABORATORY,
SELECT ISSUES

November 7, 2016

Audit Control Number
12-30084-17

The audit examines the Alaska Scientific Crime Detection Laboratory operations related to evidence control procedures, processing of requests for laboratory services, service request backlogs, types of services provided, and turnover and personnel practices. The audit also determines whether the new lab facility impacted available forensic services or processing time.

The audit was conducted in accordance with generally accepted government auditing standards. Those standards require that we plan and perform the audit to obtain sufficient, appropriate evidence to provide a reasonable basis for our findings and conclusions based on our audit objectives. We believe that the evidence obtained provides a reasonable basis for our findings and conclusions based on our audit objectives. Fieldwork procedures utilized in the course of developing the findings and recommendations presented in this report are discussed in the Objectives, Scope, and Methodology.

Kris Curtis, CPA, CISA
Legislative Auditor

ABBREVIATIONS

AAC	Alaska Administrative Code
ACN	Audit Control Number
ASCLD/LAB	American Society of Crime Laboratory Directors/ Laboratory Accreditation Board
AS	Alaska Statute
AST	Alaska State Trooper
CISA	Certified Information Systems Auditor
CJI	Criminal Justice Information
CJIS	Criminal Justice Information System
CODIS	Combined DNA Index System
CPA	Certified Public Accountant
Crime Lab	Alaska Scientific Crime Detection Laboratory
CSU	Crime Scene Unit
DLA	Division of Legislative Audit
DNA	Deoxyribonucleic Acid
DOL	Department of Law
DOP	Division of Personnel
DPS	Department of Public Safety
FBI	Federal Bureau of Investigation
FY	Fiscal Year
HB	House Bill
HSO	Highway Safety Office
IEC	International Electrotechnical Commission
ISO	International Organization for Standardization
LIMS	Laboratory Information Management System
MOA	Municipality of Anchorage
OMB	Office of Management and Budget
RLS	Request for Laboratory Services
SART	Sexual Assault Response Team
SB	Senate Bill
SLA	Session Laws of Alaska

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Exhibits

ORGANIZATION AND FUNCTION

The Alaska Scientific Crime Detection Laboratory (Crime Lab)

The Crime Lab is operated by the Department of Public Safety and organizationally located within the Commissioner's Office.

The Crime Lab's mission is to "provide forensic services to the Alaskan community." Core services, as published in the FY 17 operating budget, included:

1. *Providing analysis and entry into the national database of DNA samples from convicted felons and qualifying arrestees.*

2. *Providing training in evidence handling of law enforcement agencies.*

Exhibit 1 below outlines the Crime Lab's targets for measuring performance in meeting its mission and providing core services.

Exhibit 1

Crime Lab's FY 17 Performance Measures

Mission Result: *Timely scientific results available to the criminal justice system.*

Target No. 1: *90% of requests for laboratory service with a turnaround time less than 30 days.*

Target No. 2: *Less than 5% of unworked requests for laboratory service are over 120 days old.*

Core Service No. 1: *Analysis and entry into the national database of DNA samples from convicted felons and qualifying arrestees.*

Target: *100% of samples processed in less than 91 days.*

Core Service No. 2: *Training in evidence handling of law enforcement agencies.*

Target: *Less than 10% of requests for laboratory service from law enforcement agencies require additional information prior to analysis.*

Source: Governor's Office of Management and Budget website.

The Crime Lab provides four primary services:

1. Forensics for the law enforcement agencies in Alaska;

2. Expert court testimony on the laboratory results of tested evidence;

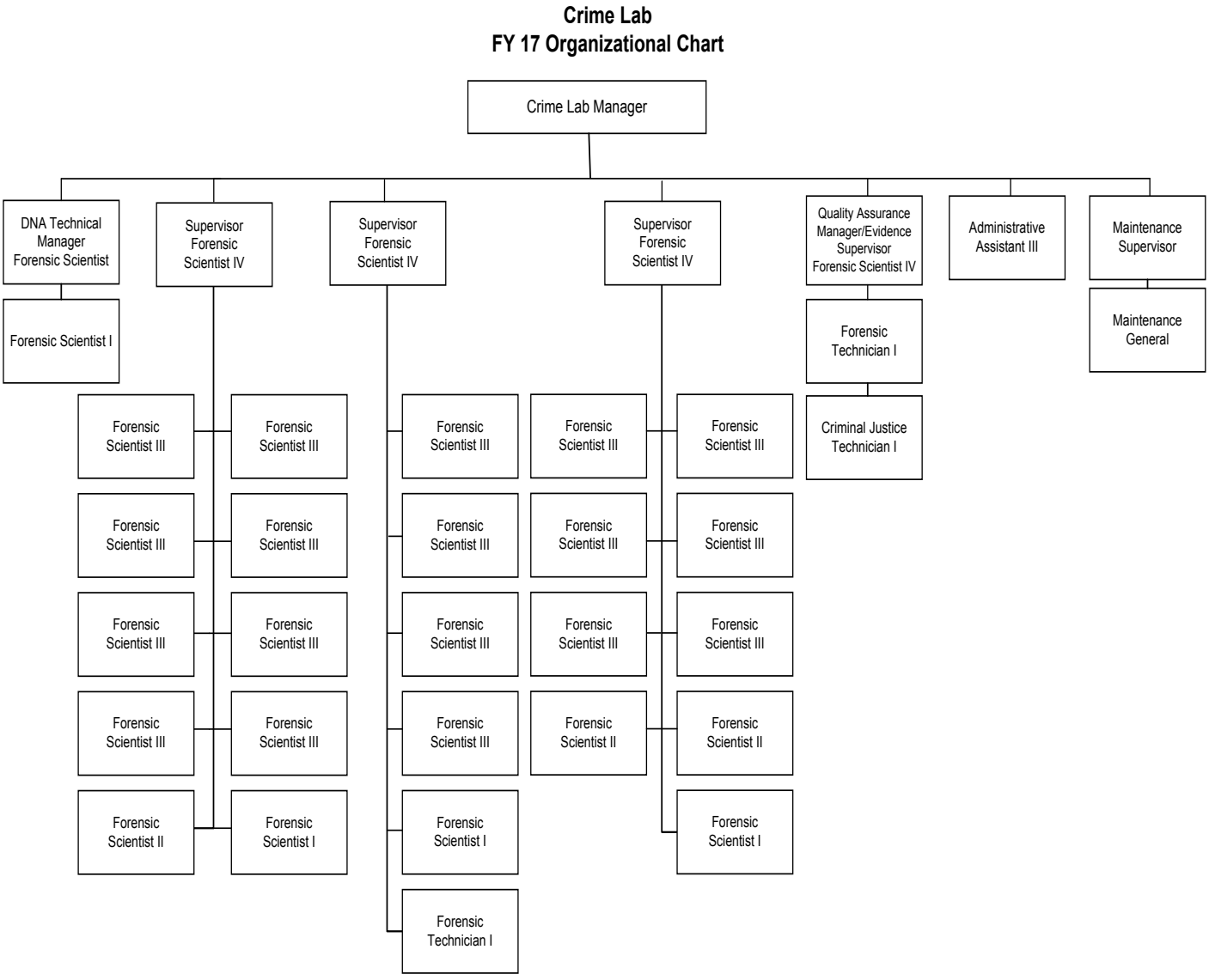
3. Law enforcement officer training in proper evidence collection and preservation techniques; and

4. Administration of the statewide breath alcohol testing program.

These services are performed free of charge at the request of law enforcement agencies in Alaska.

The Crime Lab has 37 budgeted positions as illustrated in the Crime Lab's FY 17 organization chart in Exhibit 2. Under the supervision of the Crime Lab manager, operations are carried out by forensic scientists and technicians, an administrative assistant, and two maintenance staff. The Crime Lab's FY 17 operating budget is approximately $6 million, of which approximately $4 million is for personal services.

Exhibit 2


Crime Lab
FY 17 Organizational Chart
Crime Lab Manager
DNA Technical Manager Forensic Scientist
Forensic Scientist I
Supervisor Forensic Scientist IV
Forensic Scientist III
Forensic Scientist III
Forensic Scientist III
Forensic Scientist III
Forensic Scientist III
Forensic Scientist II
Forensic Scientist III
Forensic Scientist III
Forensic Scientist III
Forensic Scientist III
Forensic Scientist I
Supervisor Forensic Scientist IV
Forensic Scientist III
Forensic Scientist III
Forensic Scientist III
Forensic Scientist III
Forensic Scientist I
Forensic Technician I
Supervisor Forensic Scientist IV
Forensic Scientist III
Forensic Scientist III
Forensic Scientist III
Forensic Scientist II
Forensic Scientist III
Forensic Scientist III
Forensic Scientist III
Forensic Scientist II
Forensic Scientist I
Quality Assurance Manager/Evidence Supervisor Forensic Scientist IV
Forensic Technician I
Criminal Justice Technician I
Administrative Assistant III
Maintenance Supervisor
Maintenance General

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BACKGROUND INFORMATION

The Alaska Scientific Crime Detection Laboratory (Crime Lab) provides forensic analysis services[1] as categorized within one of three disciplines.

1. Biology Discipline

Biological screening is the initial visual and alternative light source examination of evidence to identify the possible presence of biological material such as blood, semen, saliva, hair, or tissue. Biological evidence determined to have probative value is analyzed further using DNA[2] technology.

DNA screening is the initial analysis of DNA extracted from biological evidence to determine if the DNA sample is from a human and to identify gender.

DNA testing is the analysis of evidence samples retained from biological and DNA screening to determine if the biological material originated from a specific individual. The DNA profile obtained from the evidence is compared to the DNA profile from evidentiary known samples (victim, suspect, or elimination buccal[3] samples) to determine if an individual is included or excluded as a possible source of the biological substance. If no suspect is identified, the DNA sample is searched against the DNA profiles of the DNA database described below.

The *Combined DNA Index System* (CODIS) is a database that houses a collection of DNA profiles primarily from persons arrested or convicted of certain misdemeanors and felonies as specified in AS 44.41.035. The CODIS database also contains DNA profiles obtained from crime scene samples, unidentified human remains, missing persons, and relatives of missing persons. Crime Lab staff notifies law enforcement when there is a DNA match between samples

[1]Forensic analysis services descriptions and definitions are from the Crime Lab's *Laboratory User's Guide May 2016*, unless otherwise referenced.

[2]DNA is the genetic material found in various body tissues (muscle, skin) and body fluids (semen, blood, saliva). Because an individual's DNA is the same from cell-to-cell within the body and is different from individual-to-individual, DNA can be used to determine whether a biological substance may have been deposited by a specific individual.

[3]A *buccal sample* is DNA collected from the inside of a person's cheek using a swab.

in the CODIS database. Crime Lab staff refers to the CODIS database as the *DNA database*.

2. Chemistry Discipline

Alcohol analysis is the analysis of blood and suspected alcoholic beverages to quantify the amount of ethanol present. The Crime Lab provides blood alcohol and alcoholic beverage evidence collection kits to law enforcement agencies.

Controlled substance examination involves the analysis of evidence for the presence or absence of substances controlled under Alaska Statutes.

Drug toxicology is the analysis of evidentiary blood samples to identify and quantify the amount of drugs present. The Crime Lab is not equipped to test for drugs in blood samples. Furthermore, the Crime Lab does not accept any blood or urine samples collected in non-driving related offenses such as shootings, homicides, and sexual assaults. Blood evidence from traffic related offenses is accepted by the Crime Lab and sent out of state for toxicology analysis. This is referred to as *outsourcing* by Crime Lab staff.

Alaska's Department of Transportation and Public Facilities, Highway Safety Office (HSO) annually receives a federal grant for highway safety. The HSO grant provides $137,500 for the processing of up to 550 toxicology service requests specific to traffic related offenses.

3. Physical Discipline

Firearms examination is the analysis of firearms and ammunition in an attempt to associate a particular firearm as having fired particular ammunition components to the exclusion of all other firearms. Other types of analysis include distance and trajectory determination.

Footwear examination is the analysis of footwear impressions left at a crime scene to identify or exclude a suspect's shoes as having made the impression.

Latent print identification is the examination of physical evidence for the presence of friction ridge detail and the preservation of the ridge detail for additional analysis. Friction ridge skin is a unique and persistent arrangement of ridges and furrows found on the gripping surfaces of the hands and feet of each person. These impressions or latent prints are identified to an individual that left the impression through comparison to a set of known prints.

Toolmark identification is the examination of toolmarks to determine if the mark was produced by a particular tool to the exclusion of all others.

The Crime Lab is also responsible for the Breath Alcohol Program as outlined in Title 13 of the Alaska Administrative Code, Chapter 63, which requires:

- Certification, calibration, and maintenance of the evidential breath testing instruments;
- Training and certification of breath test supervisors;
- Development of the breath test operator training program;
- Certification of breath test operators; and
- Instrument and training records.

Crime Lab staff, upon request by law enforcement agencies, provide crime scene assistance in collecting and processing evidence at certain crime scenes. Crime scene assistance is only available for death investigations (except traffic fatalities), sexual assaults, assaults involving law enforcement officers, and other crimes as warranted by circumstance and as resources allow. Technical support provided by the Crime Lab's Crime Scene Unit (CSU) includes:

- Assisting with processing a crime scene by recognizing, collecting, and preserving pertinent physical evidence; and
- Recording the crime scene in an appropriate manner using

photography, sketching, and note-taking, as well as assisting agencies with diagrams.

Crime Lab staff, including CSU staff, are available to provide expert court testimony. The Department of Law (DOL) pays air travel expenses for court testimony. The Crime Lab pays any lodging, ground transportation, and per diem costs.

Request for Laboratory Services

To request forensic analysis of evidence, law enforcement agencies submit a Request for Laboratory Services form (RLS). (See Appendix A.) The RLS identifies: the law enforcement agency requesting the service; victims and/or suspect names related to the case; the offense; the date the offense was committed; evidence descriptions; the agency evidence number; and the requested service(s) to be performed on the evidence. Upon receipt of the RLS, evidence technicians input RLS information into the Crime Lab's Laboratory Information Management System (LIMS), and a unique case number is automatically assigned. The RLS form is scanned into LIMS, which date stamps the electronic RLS image. This date is considered the *open date* for the case. Evidence submitted with the RLS is bar-coded with the case number and tracked in LIMS' chain of custody function. One or multiple forensic analysis services can be requested on submitted evidence. Therefore, depending on the number of forensic analysis service requests, evidence submitted with an RLS may be analyzed by multiple forensic staff.

For an RLS that includes multiple forensic analysis requests, each individual forensic analysis service is considered a *LIMS request*. To begin working on a forensic analysis request, a forensic scientist assigns the RLS case to him or herself and enters a request in LIMS that records the forensic analysis service the scientist will perform. This action automatically creates a LIMS request number and records the request date. The scientist retrieves the evidence from the evidence vault and scans the evidence barcode to record the evidence chain of custody in LIMS.

After forensic analysis is performed on evidence, a report summarizing the results is generated. Results are peer reviewed for technical accuracy, and the report is administratively reviewed for spelling and grammar. LIMS is updated to reflect the completion of the review, and a report release date is recorded in LIMS. The report is sent, usually via email, to the law enforcement personnel who submitted the evidence and RLS. If multiple forensic analysis services are requested on the RLS, this process is repeated until all forensic analysis service requests are performed on a piece of evidence. After all services are completed, the evidence is returned to the submitting law enforcement agency.

DNA Case Management

According to the Crime Lab procedures manual, Crime Lab staff prioritize cases submitted for biological screening and/or DNA testing. Crimes against a person are given priority over property crimes; the most severe offenses are placed ahead of other cases.

DNA analysis cannot proceed without the required known samples being submitted into evidence by law enforcement agencies. When required known samples are not received within 30 days of the original RLS, the case may be inactivated, and evidence associated with the case returned to the submitting agency. The case is reactivated upon receipt of the required known samples along with a new RLS form.

The Crime Lab also collaborates with DOL to ensure that DNA analysis is completed in a timely manner for cases with pending court dates or where there is an immediate threat to public safety. Referred to as *RUSH* analysis, these requests must be made, in writing, by the assigned prosecutor to a member of the Crime Lab's DOL DNA backlog committee for approval. The procedures manual states that RUSH analysis will not be approved if the laboratory has not received the required known samples.

Sexual Assault Response Team (SART) Kits

SART kits are used for the recovery of physical evidence from the body of the potential victim or suspect of an alleged sexual assault. The kit contains supplies to recover foreign secretions and trace

evidence (e.g. hairs) from the body. Additionally, the kit contains supplies for the collection of a known sample from a potential victim for comparison with the foreign secretions and hairs. Kits are available to law enforcement agencies and hospitals.

The Crime Lab maintains an unused supply of SART kits. Law enforcement agencies and hospitals periodically submit requests for a specific quantity of SART kits to the Crime Lab. The email exchange identifies the quantity sent to the law enforcement agency and the kit lot number. These emails are retained for one year. However, the kits are not numbered or inventoried, and they are not tracked once outside the custody of the Crime Lab. See Exhibit 3 for a description of the SART kit initiative planned for 2017.

Exhibit 3

SART Kit Federal Grant

During 2016, the Governor's Office, with the cooperation of the Alaska State Troopers, requested local law enforcement agencies report the number of SART kits currently in their possession. Agencies reported over 3,000 unsubmitted SART kits, of which approximately 1,000 were under the jurisdictional control of the Alaska State Troopers.

As part of the National Sexual Assault Kit Initiative, Alaska received a three-year $1 million federal grant from the U.S. Department of Justice to address the un-submitted kits. Part of the initiative will evaluate why investigators did not submit the kits to the Crime Lab for processing. Governor's office staff expects that the kits will be submitted to the Crime Lab beginning in January 2017. Crime Lab staff will conduct an initial analysis of the kits. Kits deemed to have probative value will be outsourced for forensic analysis.

New Crime Lab Facility

According to Department of Public Safety (DPS) management, until mid-2012, Crime Lab operations were housed in a 14,000 square foot facility built in 1986 to accommodate 14 employees. Lab operations were moved to a new facility in June 2012. Planning and design for the new facility began in 2004 and cost approximately $16.8 million.[4] Between 2008 and 2010, various bills were introduced requesting funding for construction of a new laboratory.

[4]Chapter 82 SLA 2006 provided $4.8 million in capital appropriation for Crime Lab expansion and Chapter 29 SLA 2008 appropriated an additional $12 million for design and site preparation.

During the 2008 legislative session, a $100 million funding request[5] for a new 84,000 square foot crime laboratory was presented to the legislature. During committee hearings, DPS management stated that, although the Crime Lab needed a 50,000-square-foot facility, the proposed new laboratory was designed with a larger square footage to allow for future expansion to include additional services such as toxicology, new technologies, and additional analysts. According to the public testimony, DPS management wanted a laboratory with a 40-year lifespan capable of housing future forensic science needs. DPS management believed that within 20 years, Crime Lab staff would increase to 62 employees. The bill did not pass the legislature.

During the 2010 legislative session, a legislative session brief[6] supported constructing a new crime laboratory, claiming a new laboratory would:

- Help prevent crime and protect Alaskans;
- Alleviate the existing "traffic jam" in the criminal justice system caused by the case backlog, in particular the DNA backlog;
- Solve more cases with new techniques and faster output (during public testimony, DPS management estimated an immediate 20 percent increase in productivity);
- Accommodate new crime laboratory services such as toxicology and computer forensics; and
- Increase the amount of evidence submitted to the laboratory by law enforcement agencies.

To address concerns regarding the $100 million funding request for a new crime laboratory, DPS management provided four alternatives in the 2010 legislative brief:

1. *On-site Expansion* – This option expanded and renovated

[5]January 2008 SB 223/HB 313 (25th Legislative Session).
[6]*Alaska Scientific Crime Laboratory Replacement Project February 18, 2010*, in support of SB 226/HB 299 (26th Legislative Session).

the existing laboratory. DPS management presented this option as possible but less practical and more costly in the long term than building a new laboratory on a different site.

2. *Split Facility* – This option built a smaller new laboratory elsewhere in addition to the existing laboratory. DPS management presented this option as unfeasible because evidence would have to be transferred between the forensic disciplines. Management reasoned that having different locations would compromise the forensic results, slow down laboratory operations, and, consequently, create chain-of-custody and evidence handling issues that could compromise evidence and the possibility of securing criminal convictions.

3. *Smaller Replacement Laboratory* – This option built a smaller new laboratory and stopped using the existing laboratory. DPS management presented this option as not being cost effective because it would cost approximately the same as the initially proposed laboratory and delay the project several more years.

4. *Full Size New Laboratory* – This option built the full laboratory structure, left some space unfinished, and sought a smaller capital appropriation. DPS management presented this option as the most cost effective alternative, offering the greatest benefit to the State. This option did not include the addition of any new services such as toxicology.

DPS management determined the best option was a smaller capital appropriation for a full size laboratory with unfinished space. In April 2010, SB 230[7] provided $75.75 million to construct the Crime Lab.

The Crime Lab opened June 2012. The new facility, totaling 84,000

[7]Chapter 43 SLA 2010 signed into law June 3, 2010.

square feet was built on 12 acres[8] and cost approximately $90 million. To reduce construction costs, the final design left 19 percent of the total square footage of the new facility as unfinished *shelled out* space. This additional space was shelled to allow future expansion and the flexibility to add new services and technology. Anticipated uses for the shelled areas include services for questioned documents, tire track impressions, toxicology, and trace evidence. The additional space also allows for expanding DNA analysis services as new technologies are developed. According to the Crime Lab manager, finishing these areas would require significant additional funding.

As of 2016, the additional funding necessary to finish constructing the Crime Lab's interior has not been requested by DPS management. The shelled out areas remain unfinished, and no additional services have been added. Instead, DPS' Office of the Commissioner and the Office of Professional Standards are housed in offices taking up the lower floor of one wing of the new facility. Also, empty rooms of the new facility are being used for DPS record and supplies storage.

Forensic Services Not Provided

The Crime Lab is not equipped for and will not accept requests to perform the following forensic analysis services:

- *Drug Toxicology*[9] – tests for drugs in evidentiary blood samples.
- *Urine Analysis* – tests urine for the presence of controlled or impairing substances.
- *Trace Evidence* – visual and microscopic analysis of trace materials such as abrasives, adhesives, audio, explosives, fibers, and glass to reconstruct crimes or link suspect and victim to a common location.
- *Questioned Documents* – visual and microscopic analysis of

[8]The State leased the 12 acres of land from the Municipality of Anchorage (MOA) for one dollar per year for 50 years with the agreement that the Crime Lab provide to MOA all services directly provided by the existing crime detection laboratory at no charge. The lease can be extended for another 25 years.
[9]Except for drug toxicology testing for traffic related offenses, which are outsourced by the Crime Lab.

suspicious or questionable documents using scientific processes and methods for alterations, the chain of possession, damage to the document, forgery, origin, or authenticity.

- *Fire Debris* – analysis of fire-related evidence for the presence or absence of chemical accelerants.

- *Tire Tread* – examination of tire tread impressions left at a crime scene to identify or exclude a suspect's tire as having made the impression.

Forensic Laboratory Accreditation and Oversight

The Crime Lab performs forensic services in accordance with the requirements of the American Society of Crime Laboratory Directors/ Laboratory Accreditation Board (ASCLD/LAB). Additionally, DNA analysis services are subject to additional standards such as the Federal Bureau of Investigation's DNA Quality Assurance Standards, the International Organization for Standardization (ISO), and the International Electrotechnical Commission (IEC), referred to by forensic staff as the *ISO/IEC 17025 standards*.

Forensic service providers seeking ASCLD/LAB International accreditation must demonstrate conformance to the applicable requirements in *ISO/IEC 17025:2005 – General Requirements for the Competence of Testing and Calibration Laboratories*, the applicable ASCLD/LAB-International supplemental requirements, and the forensic service provider's written policies and procedures.

Reassessment for continued accreditation occurs every four years. Exhibit 4 illustrates the Crime Lab's ASCLD/LAB accredited services. The Crime Lab's current accreditation expires on October 3, 2017.

Exhibit 4

The Crime Lab's ASCLD/LAB Accredited Services

- Controlled Substances
- Crime Scene Investigation
- DNA
- Firearms/Toolmarks
- Latent Prints
- Toxicology (Blood Alcohol)

Source: ASCLD/LAB website.

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REPORT CONCLUSIONS

The audit of the Alaska Scientific Crime Detection Laboratory (Crime Lab) was requested, in part, to determine if the new Crime Lab facility had an impact on available forensic services and the extent services were outsourced. The audit evaluates whether evidence control procedures at the new facility are suitably designed to ensure the integrity of evidence, identifies the number of untested Sexual Assault Response Team (SART) kits stored at the Crime Lab, and documents backlogs for all services. The audit determines staff turnover and evaluates personnel practices. Lastly, the audit evaluates and verifies the accuracy of the Crime Lab's performance measures.

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Toxicology related to traffic offenses is the only forensic service consistently outsourced. The cost of outsourcing traffic-related offenses is partially covered by a federal grant.

The audit was unable to evaluate the costs versus benefits of expanding the Crime Lab to provide additional forensic services due to a lack of cost data. A survey of law enforcement agencies identified a demand for additional forensic services, especially toxicology.

The audit found that from July 2007 through April 2016, backlogs existed in most services; however, backlogs have been reduced in 2016. According to a survey of Crime Lab forensic scientists and technicians, the primary reason for backlogs has been a lack of forensic scientists. The audit identified that 20 forensic scientist and technician positions were vacant in excess of six months during the audit period.

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The Crime Lab experienced consistent staff turnover from July 2007 through April 2016. The turnover rate does not appear excessive, except for the FY 10 rate showing that 44 percent of physical discipline forensic staff left the lab. Review of personnel practices found improvements were needed over staff supervision and hiring.

Detailed report conclusions are presented below.

The new Crime Lab has not expanded forensic analysis services or decreased processing time.

The Crime Lab does not serve all the forensic analysis needs of Alaska law enforcement agencies. Toxicology services for non-traffic related offenses, trace evidence, and questioned document analysis are not provided by the Crime Lab. Except for trace evidence,[10] these

[10]Trace evidence analysis at the prior Crime Lab facility was mainly limited to hair samples. Trace evidence analysis was discontinued in 2009 when the trained employees left the prior Crime Lab.

services were not provided in the previous lab. According to Crime Lab management, law enforcement agencies that need these types of services can submit the evidence to a private laboratory at their own expense or requests can be submitted to the Federal Bureau of Investigation.

There are fewer services provided after construction of the Crime Lab than were available prior to construction. Forensic services no longer provided include: fire debris analysis, tire track analysis, Fairbanks crime scene response, and National Integrated Ballistic Information network gun data entry. According to Crime Lab management, these services are no longer available due to lack of trained staff and/or lack of demand.

Overall, the new Crime Lab experienced a small increase in the number of service requests received. The most notable increase is reflected in the requests for controlled substance forensic services, which increased between 10 to 15 percent. Appendix C of this report provides the number of service requests received by the Crime Lab from FY 08 through April 2016.

The new Crime Lab has not increased productivity as expected. During public testimony in 2010,[11] DPS management stated that the new Crime Lab facility would significantly increase the forensic evidence processing rate. According to management:

> *[At the new crime lab] there would be an immediate increase in efficiency of twenty percent, directly related to adequate use of space and equipment for all types of work processes and analysis in the lab.*[12]

Exhibit 5 does not show a significant decrease in turnaround time once the Crime Lab moved to its new facility in FY 12. The audit calculated turnaround time for forensic services based on the number of days from the date an RLS was submitted to the Crime

[11] In support of SB 226/HB 299 (26th Legislative Session).
[12] *Alaska Scientific Crime Laboratory Replacement Project February 18, 2010.*

Lab to the date the analysis results were provided to the requesting law enforcement agency. From FY 09 through FY 11, the average percentage of requests processed within 30 days at the old laboratory was 46 percent. From FY 13 through FY 15, the average percentage of requests processed within 30 days at the new laboratory increased only slightly to 47 percent.

Exhibit 5

Number and Percentage of Forensic Analyses Processed within 30 days of Receipt FY 09 through FY 15

	FY 09	FY 10	FY 11	FY 12	FY 13	FY 14	FY 15
Requests Opened	3,617	3,430	3,388	3,486	3,550	3,804	3,651
Forensic analysis processed in 30 days or less	1,544	1,605	1,656	1,240	1,415	1,980	1,754
Percent processed in 30 days or less	43%	47%	49%	36%	40%	52%	48%

Source: LIMS Crime Lab data. Excludes outsourced services, canceled requests, and DNA database requests. DNA database requests are not included as the open and report release dates are not supported or reported accurately in LIMS.

Toxicology for traffic related offenses is the only service that was consistently outsourced.

During the audit period of July 2007 through April 2016, toxicology for traffic related offenses was outsourced to the Toxicology Division of the Washington State Forensic Laboratory Services Bureau. Funding for toxicology was provided through a grant administered by the State's Department of Transportation and Public Facilities, Alaska Highway Safety Office. The grant provides annual funding of $137,500 for a maximum of 550 service requests specific to traffic related offenses.

As illustrated in Exhibit 6, Crime Lab management periodically outsourced the biological screening and DNA analysis of evidence samples in an effort to reduce backlogs.

Exhibit 6

Crime Lab Outsourced Services FY 08 through April 30, 2016			
	DNA Analysis	Biological Screening	Drug Toxicology (Traffic Related)
FY 08	0	0	332
FY 09	0	0	510
FY 10	5	0	532
FY 11	0	7	533
FY 12	0	93	536
FY 13	1	54	502
FY 14	15	0	493
FY 15	15	0	547
July 2015 – April 30, 2016	2	0	522

Source: LIMS Crime Lab data. Excludes canceled requests.

DPS management believes outsourcing is cost effective.

In a survey of twenty-one agencies[13] that frequently use Crime Lab services, user agencies identified trace evidence, toxicology, and questioned document analysis as the top three forensic services they would request from the Crime Lab if available. These services could be provided if the shelled spaces were developed to provide the additional services. Annually, user requests for toxicology services may increase by 846 requests if these services were available to law enforcement agencies. (See Exhibit 7 on page 22.) User agency survey results are included in Appendices D and E of this report.

The audit could not evaluate the costs of providing additional forensic services due to a lack of cost data. In 2016, Department of Transportation and Public Facilities management estimated that an additional $1.9 million would be required to finish the necessary shelled out space, including built-in equipment, to provide additional

[13]Agencies included Alaska State Troopers, Department of Corrections, State Medical Examiner's office, and 18 local law enforcement agencies.

toxicology services. The estimate does not include costs for movable equipment, service contracts, supplies, and the cost of hiring and training the additional forensic staff needed to provide services. Estimates of these additional costs were not available.

Exhibit 7

User Agencies Survey Responses to the Question:
What additional services would your agency use if the Crime Lab provided the service?

Types of Service	Percent Responding	Annual Estimate of Requests
Trace evidence analysis	71%	61
Toxicology (Non-Traffic Related Offenses) analysis	67%	846
Questioned document analysis	48%	56
Fire debris analysis	33%	19
Hand writing analysis	5%	10
DNA analysis specific to Y-STR*	5%	2
Total		994

* Y-STR is a short tandem repeat of the Y-chromosome.

A 2010 DPS legislative brief supporting construction of a new crime laboratory claimed that a new laboratory would allow outsourced services to be performed in-house for less cost. Crime Lab management now believes it is cost effective to continue to outsource toxicology for traffic related offenses rather than complete the shelled space reserved for toxicology.

According to a forensic consultant that reviewed Crime Lab operations, serving the need for toxicology services within the State by expanding Crime Lab services would allow the laboratory more control over the evidence and provide stakeholders faster turnaround time for analysis results. DPS and Crime Lab management have not sought the additional funding necessary to develop the shelled space in order to provide full service toxicology analysis services, discontinued services, and other services not currently provided.

Forensic analysis backlogs were primarily due to a lack of forensic staff.

Most service types experienced backlogs between July 2007 and April 2016. The backlogs in DNA analysis for major crimes and latent prints analysis are the most notable.

Exhibit 8 details the number of open requests and length of time open requests were awaiting analysis as of April 30, 2016. Appendix B of this report details the processing timelines for all service types by discipline.

Exhibit 8

Age of Open Forensic Analysis Requests By Discipline as of April 30, 2016

	Biology	Chemistry	Physical
30 days or less	37	0	37
31 to 60 days	39	1	24
61 to 90 days	16	0	34
91 to 120 days	12	1	23
121 to 365 days	47	0	46
366 to 730 days	36	0	8
More than 730 days	30	1	5
Total	217	3	177

Source: LIMS Crime Lab data. Excludes cancelled requests.

Survey comments[14] from current employees identified the lack of forensic staff as the primary reason for the current backlogs. These comments were supported by the audit's review of turnover and vacancies, which found forensic technician and scientist positions were vacant in excess of six months on 20 different occasions from July 2007 through April 2016. According to Crime Lab management, extended vacancies were mainly caused by the reclassification of position titles or location; unsuccessful recruitments; and two

[14]Appendix F of this report includes current Crime Lab employee survey questions and responses.

positions held vacant as the positions were planned for deletion due to budget reductions.

Other survey comments regarding the potential reason for backlogs include an extensive process for reviewing the forensic analysis results; the time to validate equipment; staff family leave; and the time to train forensic staff to ensure proficiency.

Approximately 74 percent of the 68 sexual assault response team kits awaiting analysis were over 30 days old.

Based on an inventory performed of the SART kits as of July 20, 2016, there were 122 untested SART kits stored at the Crime Lab. There were 75 kits held in the evidence vault, of which 68 were awaiting DNA analysis. According to Crime Lab management, the remaining seven were on hold awaiting additional information from the submitting law enforcement officer. There were 47 kits stored at the Crime Lab at the request of law enforcement agencies.

Exhibit 9 provides the time in days that the 122 SART kits were in the Crime Lab's possession. One of the Crime Lab's performance measure targets is 90 percent completion of service requests within 30 days of starting the analysis. The Crime Lab is not meeting this measure, as approximately 74 percent of the kits awaiting analysis were over 30 days old. According to Crime Lab management, the number of kits over 30 days old was reasonable considering the Crime Lab's overall backlog in the biology discipline. Thirty-six of the SART kits (66 percent) on hold or being stored were over 120 days old.

Exhibit 9

Age for SART Kits In Crime Lab's Possession as of June 20, 2016

Awaiting Analysis		On Hold		In Storage	
Less than 30 days	18	Less than 30 days	1	30 days or less	9
31 to 60 days	24	121 to 365 days	5	31 to 60 days	2
61 to 90 days	16	366 to 730 days	1	61 to 90 days	4
91 to 120 days	10	Total on hold	7	91 to 120 days	2
Total awaiting analysis	68			121 to 365 days	22
				366 to 730 days	5
				More than 730 days	3
				Total in storage	47

Source: LIMS Crime Lab data.

There is no method for tracking the number of uncollected SART kits distributed or used statewide.

As discussed in the background information section, the Crime Lab furnishes SART kits to local law enforcement agencies upon request. Crime Lab staff does not have a tracking mechanism to inventory SART kits, and does not know how many are in possession of local law enforcement agencies. See Exhibit 3 on page 10 for a description of the SART kit initiative planned for 2017.

Evidence control weaknesses could impact the integrity of evidence.

One of the audit's objectives was to evaluate evidence control procedures and determine if the procedures are suitably designed to ensure the integrity of evidence. The consultant hired to evaluate the Crime Lab's evidence control procedures concluded the procedures were inadequate to prevent potential evidence theft, or loss, especially drug evidence, drug reference standards[15] (drug standards), and firearms. Weaknesses in evidence control procedures include the following.

[15]*Drug reference standards* are used for comparison with drug evidence to determine the relative purity of controlled substance related evidence.

Excessive access to the evidence room and storage vault

Access to the evidence room and vault is managed by electronic key cards. The Crime Lab manager is responsible for assigning electronic key cards and levels of access. All employees, including an administrative assistant and two maintenance staff, have full access to the evidence rooms and vault. Furthermore, two DPS Alaska State Trooper (AST) employees have access to enter the vault, as AST's evidence is also stored in the evidence vault. Excessive access increases the risk of evidence theft or loss. This risk is exacerbated by the new evidence removal procedures.

According to Crime Lab management, an evidence technician position was eliminated in 2015 due to budget restrictions. As a result, instead of having a full-service[16] evidence vault where evidence is retrieved and logged out by an evidence technician, forensic scientists and AST employees independently retrieve and return the evidence. The consultant concluded the self-service evidence vault increases the potential for evidence loss or theft and reduces accountability in the event evidence is lost or stolen.

Lack of video surveillance in the evidence vault

There is no video camera recording activities within the evidence vault. As a result, it would be difficult to determine the person responsible in the event of theft or loss.

Drug evidence left unattended in the latent prints laboratory

During a walkthrough of the latent prints laboratory, the consultant and an auditor observed evidence consisting of controlled substances (what appeared to be numerous small bags of cocaine) left unattended while the forensic scientist was outside the laboratory. Although each discipline has its own designated laboratory with restricted access, unattended evidence is subject to theft, as other Crime Lab staff, in addition to discipline-specific forensic scientists, have access to the laboratories.

[16]Under a full-service vault, evidence is requested by the forensic scientists and technicians, and an evidence custodian retrieves the evidence from the vault, checks it out to the requesting individual, and physically transfers the evidence.

Non-electronic keys not tracked and monitored

The Crime Lab utilizes non-electronic keys to control access to the drug standards cabinet and temporary evidence storage lockers for oversized evidence. Use of non-electronic keys is not tracked in LIMS or monitored to ensure appropriate accounting as required by the American Society of Crime Laboratory Directors/Laboratory Accreditation Board accreditation standards. There is no formal tracking required for forensic scientists using the temporary evidence storage lockers. Drug standards cabinet keys are assigned to the Crime Lab manager and the chemistry discipline supervisor. However, forensic chemistry staff obtain and use the keys to access the drug standards cabinet. The use of drug standards keys is not recorded in LIMS.

Recommendations for improving evidence control procedures are discussed in Recommendation 1.

Security and monitoring of the Crime Lab facility needs improvement.

In addition to weaknesses identified in the evidence control procedures, the consultant identified various weaknesses in the security and monitoring of the Crime Lab facility.

Four exterior exit doors and three exit bay doors were not monitored by surveillance cameras. These doors are located in areas of the Crime Lab where evidence is received, analyzed, and stored. Additionally, video surveillance recordings were only retained for 30 days. Lack of adequate monitoring through the use of video surveillance and limited retention of the surveillance recordings makes the evidence more susceptible to theft or misuse.

Visitors to the Crime Lab were not required to show identification, sign in or out, or obtain a visitor badge. Procedures for controlling visitor access should be improved to ensure the identity of everyone in the building is known to prevent unauthorized access by fraudulent claims of identity.

Needed improvements to Crime Lab security and monitoring are discussed in Recommendation 1.

Access to the criminal justice data was not limited to users based on valid business needs.

The Crime Lab lacks a formal process to document the request for user access to LIMS, justification of business need, and approval. The Crime Lab manager creates and assigns staff user roles to LIMS, granting specific permissions for access to read, write, or delete information. Auditor review of LIMS roles and users during May 2016 identified three roles that had excessive privileges and were assigned to 10 current employees allowing them rights to change and delete data. It was not clear why certain individuals, such as the administrative assistant, needed rights to change and delete data.

Furthermore, six of 40 employees were assigned a temporary administrator security role, which allowed these employees the ability to perform functions beyond the business needs related to their job duties, such as adding and deleting users, adjusting data, and deleting cases.

In 2014, a temporary office assistant was hired and made responsible for cataloging the firearms standards. The temporary employee was assigned multiple user roles with the ability to change and delete data. The temporary employee did not have a security clearance verification performed in order to access the confidential criminal justice information (CJI) stored in LIMS, as required by federal criminal justice information system (CJIS) security policies and state regulations. Furthermore, this temporary employee left Crime Lab employment in 2014, but was still identified as an active user in May 2016.

Limiting access to CJI based on a valid business need is further discussed in Recommendation 2.

Scope limitation prevented a comparison of Crime Lab productivity to national benchmarks.

Comparing productivity measures to national benchmarks was an objective of the audit. However, no comparable national benchmarks were available due to differences between states' demographics, crime rates, and laboratories. Differences include variables such as staffing levels, equipment, demand, and the nature and extent of forensic services provided.

To help measure Crime Lab productivity, Exhibit 10 identifies the number of service requests opened. Appendix C provides additional detail by the forensic analysis service types under each of the three disciplines.

Exhibit 10

Forensic Analysis Service Requests by Discipline
Requests Opened and Requests Completed Each Fiscal Year
FY 08 through April 30, 2016

	Biology		Chemistry		Physical	
	Opened	*Completed*	*Opened*	*Completed*	*Opened*	*Completed*
FY 16 (as of April 30, 2016)	532	781	1,231	1,264	674	914
FY 15	693	647	1,928	2,038	1,028	929
FY 14	596	681	2,089	2,098	1,119	1,093
FY 13	545	506	2,085	2,422	920	915
FY 12	524	525	1,938	1,583	1,024	1,010
FY 11	582	604	1,860	1,950	946	1,007
FY 10	720	720	1,763	1,650	947	841
FY 09	803	479	1,854	1,867	960	880
FY 08	458	293	1,641	1,516	827	694

Source: LIMS Crime Lab data. Excludes canceled, outsourced, and DNA Database service requests.

As another measure of productivity, Exhibit 11 on page 30 identifies the number of days to complete the forensic analysis service requests opened in each fiscal year. During FY 16, as of April 30, 2016, 55 percent of the forensic analysis service requests were completed within 30 days.

Exhibit 11

Time to Complete Forensic Analysis Service Requests
Case Open to Report Release Date
FY 08 through April 30, 2016

	FY 08	FY 09	FY 10	FY 11	FY 12	FY 13	FY 14	FY 15	FY 16 (as of April 30, 2016)
Less than 30 days	1,726	1,544	1,605	1,656	1,240	1,415	1,980	1,752	1,350
31 to 60 days	469	826	692	658	694	639	610	609	251
61 to 90 days	193	417	337	278	446	431	342	313	199
91 to 120 days	136	161	145	175	273	294	294	209	132
121 to 365 days	365	345	414	402	581	574	395	668	198
366 to 730 days	37	179	146	159	150	73	97	49	0
More than 730 days	0	145	91	59	97	119	56	0	0
Open Case	0	0	0	1	5	5	30	49	307
Total by Fiscal Year	2,926	3,617	3,430	3,388	3,486	3,550	3,804	3,649	2,437

Source: LIMS Crime Lab data. Excludes canceled, outsourced services, and DNA database requests.

Performance measures were not accurate and complete.

Crime Lab management measures lab activities, which are reported to DPS management for internal use. DPS management submits overall performance measures of Crime Lab activities to the Governor's Office of Management and Budget (OMB), which is published on OMB's website. Performance measures are illustrated in Exhibit 1 on page 1.

Evaluating whether Crime Lab performance measures were accurately reported was an audit objective. The audit concluded that measures were not accurately reported. Crime Lab management reported not meeting the goal of 90 percent of requests processed within 30 days of starting the forensic analysis, as it was only able to complete 70 percent of the requests. Auditors recalculated this measure using data provided by Crime Lab management and management's methodology. The recalculation found only 63 percent of requests were completed within 30 days. Auditors also noted that the total

number of requests included internal proficiency and competency tests, which were not true requests.

The audit also found the request processing measure did not reflect the overall performance of the Crime Lab, as it does not capture the backlog time. To better measure performance from the users' perspectives, the audit calculated turnaround time based on the number of days from the date an RLS was submitted to the Crime Lab to the date the analysis results were provided to the requesting law enforcement agency. Using this method, the audit determined only 48 percent of the requests were completed in less than 30 days.

Auditor review of the DNA database performance measures found that the data that supported the performance measure was unreliable. Report release dates for DNA database cases were not supported by the hard copy administrative review checklist completion dates.

Review of the measure reported for training law enforcement in evidence handling found the Crime Lab's methodology for calculating this performance measure was labor intensive and subjective. It could not be objectively evaluated by auditors.

Improvements needed in Crime Lab performance measures are discussed in Recommendation 5.

Crime Lab experienced consistent but not excessive turnover.

Overall, Crime Lab staff turnover has been consistent between FY 08 through April 2016. As illustrated in Exhibit 12 on page 32, overall turnover ranged from 12 percent in FY 10, FY 13, and FY 15 to a low of five percent in FY 12. Administrative staff had a 50 percent turnover in fiscal year 2008 and 2014.

Forensic staff for all disciplines had a 14 percent turnover in FY 10 and FY 15. The most significant turnover of the forensic staff occurred in the physical discipline in FY 10, as 44 percent of staff left Crime Lab employment.

Exhibit 12

Crime Lab Turnover Rates
FY 08 through April 30, 2016

	FY 08	FY 09	FY 10	FY 11	FY 12	FY 13	FY 14	FY 15	FY 16 (as of April 30, 2016)
All Crime Lab Staff	10%	7%	12%	10%	5%	12%	7%	12%	7%
Administrative Staff	50%	0%	0%	25%	0%	25%	50%	0%	67%
Forensic Staff*	6%	8%	14%	8%	6%	11%	3%	14%	3%
Biology Discipline	9%	0%	0%	8%	9%	10%	9%	0%	0%
Chemistry Discipline	0%	0%	11%	0%	10%	10%	0%	20%	11%
Physical Discipline	0%	10%	44%	0%	0%	0%	0%	17%	0%
Budgeted Positions	42	42	42	41	41	42	42	42	42
Positions Vacant during Year	4	3	5	4	2	5	3	5	3

Source: State payroll records.
*Forensic staff includes forensic scientist and technician positions.

To gain an understanding of the factors that impacted turnover, surveys were conducted of 37 past employees – 23 (62 percent) responded. Of the past employees who responded, nine (39 percent) cited management style and practices as the primary reason for leaving Crime Lab employment. Appendix G of this report includes the prior employee survey questions and responses.

Based on review of vacancies, 20 positions were vacant in excess of six months during the audit period. According to Crime Lab management, reasons for the extended vacancies include: (1) unsuccessful recruitment; (2) reclassification of positions to different job title or location; (3) one position held vacant until an employee completed the education requirement; and (4) positions held vacant due to eventual elimination of position.

The consultant's review of Crime Lab performance and personnel

practices identified position vacancies impacted the productivity of the Crime Lab's operations, which contributed to the backlogs. The consultant recommended that Crime Lab management work with the Department of Administration's Division of Personnel (DOP) to revise the class specifications of forensic scientists to create greater flexibility in hiring.

Restrictive job class specifications limit the Crime Lab's ability to address position vacancies.

One of the objectives of the audit was to evaluate personnel practices to ensure they are adequately designed to promote effective operations. The forensic consultant performed an evaluation of personnel practices including training, continuing education, staffing levels, and supervision at the Crime Lab. According to the consultant, training and continuing education were sufficient and in accordance with accreditation standards.

The consultant determined that staffing levels were inadequate in the physical discipline unit based on turnover, current backlog, and the inability to meet performance measure targets. In FY 16, two positions in the physical discipline unit became vacant. Instead of hiring for the vacant positions, Crime Lab management recommended deletion of one position and transfer of another position to the Alaska State Troopers, as the decision was made to no longer provide crime scene response in Fairbanks.

The Crime Lab manager's current plan to address the lack of adequate staff in the physical discipline unit is to transfer a position from the chemistry discipline unit. However, due to the restrictive class specifications a transfer was not possible and a request was submitted to DOP for a revision to reclassify the position. The timeframe for DOP to process the reclassification has a negative impact on operations. To minimize the impact reclassification of positions has on operations, the consultant recommends the Crime Lab manager revise the forensic scientist positions to eliminate the overall restrictive nature of the discipline specific requirements in the class specifications.

Supervision was another concern identified by the consultant,

who noted it was inconsistent between disciplines. The most notable difference was the lack of monitoring of staff activities and performance metrics.

Supervision was also a concern of 60 percent of the prior employees who responded to the survey, noting at least one of the following concerns: recruitment, uneven distribution of staff under supervisors, and lack of knowledgeable supervisors. See Appendix G for the prior employee survey responses.

The audit identified additional supervision concerns as discussed below.

The Crime Lab manager's juvenile daughter inappropriately assisted with Crime Lab operations.

In 2012, the Crime Lab manager's juvenile daughter assisted in performing the annual inventory of the drug standards which included controlled substances. The daughter was not an employee of the Crime Lab.

The Crime Lab manager stated his daughter recorded information on an inventory sheet during the drug standard annual inventory and did not handle any controlled substances. However, Crime Lab procedures require that access to the drug standards locations be restricted to the controlled substances supervisor and analysts, the quality assurance manager, and the laboratory manager.

It is unknown if the juvenile was granted access to the LIMS, which contains sensitive and confidential CJI. She was, however, assigned an electronic access key card. The fact that a minor assisted in performing the inventory of the drug standards and was provided a building and laboratory key card is highly inappropriate and reduces confidence in Crime Lab management's ability to properly control access to sensitive areas of the lab.

FINDINGS AND RECOMMENDATIONS

Recommendation 1: DPS' commissioner should ensure building security and evidence control procedures minimize the potential for evidence loss and theft.

The following weaknesses were identified over Crime Lab security, including storage and evidence processing.

- Excessive access to the evidence vault

Evidence access procedures, including vault access, were revised in 2015 due to the elimination of an evidence custodian position. As a result, access to the evidence area, including the vault, was expanded to all Crime Lab employees, including administrative and maintenance staff. In addition to Crime Lab employees, two Alaska State Troopers (AST) staff have been granted access because the AST stores evidence in the Crime Lab's vault. The Crime Lab also implemented a policy allowing forensic staff to retrieve, check out, and return evidence to the vault rather than physically transferring evidence between vault custodians and forensic staff. Excessive access to the vault increases the risk for evidence loss or theft.

ASCLD/LAB accreditation standards[17] require that *"evidence storage areas are secured to prevent theft or interference and there is* **limited**, [emphasis added] *controlled access."*

- Lack of surveillance cameras, including video retention

The interior of the evidence vault and exit bay doors are not monitored by surveillance cameras. Also, camera feeds are only required to be retained for 30 days per Crime Lab policy. The Crime Lab manager stated that, due to the tall, large-capacity rolling shelves in the vault, a surveillance camera would not effectively monitor vault activities. Lack of video cameras at the exit bay doors was a flaw in the design of camera placements during facility construction.

Additionally, alarms on four exit-only doors are not activated during business hours and are not monitored by video surveillance cameras. The doors' alarms are disengaged during work hours for

[17]ASCLD/LAB-International, Supplemental Requirements for the Accreditation of Forensic Science Testing Laboratories 2011 Edition Section 5.3.4.1.

staff convenience. Disengaging door alarms increases the risk for unauthorized entry and exit to the Crime Lab.

Lack of security is inconsistent with Section 5.3.4.1 of ASCLD/LAB accreditation standards, which state that a crime laboratory should ensure "all entrance/exit points and the entire outer perimeter of the laboratory has security control at all times." Without adequate video surveillance, the Crime Lab lacks the ability to identify the person(s) responsible for theft.

- Drug evidence left unattended

During a walkthrough of the Crime Lab facility, a consultant hired to evaluate evidence control procedures and an auditor observed drug evidence (what appeared to be numerous small bags of cocaine) left unattended in the physical discipline laboratory. Unattended evidence violates Crime Lab procedures,[18] which state:

> *Unattended evidence while in process of examination will be properly secured to prevent loss or contamination. This can be accomplished by securing evidence in a temporary storage location or a locked room.*

Although the physical discipline laboratory is locked, Crime Lab staff beyond physical discipline scientists have access to the room. Unsecured drug evidence provides opportunities for theft or contamination.

- Lack of adequate tracking of non-electronic keys

Although Crime Lab policies[19] require all non-electronic keys be tracked in the laboratory information management system (LIMS) chain of custody, drug standards cabinet keys are provided to forensic scientists needing to access a cabinet and the assignment is not

[18]Crime Lab Quality Assurance Manual Section 5.8.4.2.
[19]Crime Lab Quality Assurance Manual Appendix A.

tracked. Also, large capacity storage locker keys are not tracked in LIMS when forensic scientists use the lockers for evidence storage.

ASCLD/LAB accreditation standards[20] require accountability for all keys, documentation of magnetic cards, etc., and their distribution for access be limited to individuals designated by the laboratory director.

Lack of adequate tracking of the drug standards cabinet keys, including large capacity storage locker keys used by scientists, increases the risk of loss or theft of the drug standards, drug evidence, and firearms. Furthermore, the Crime Lab lacks the ability to determine the person responsible for theft.

We recommend DPS' commissioner ensure building security and evidence control procedures minimize the potential for evidence loss and theft. Improvements should include limiting access to the vault; installing surveillance cameras in the evidence vault and at the exit bay doors; retaining surveillance videos for a minimum of 120 days; activating security alarms on exit-only doors; requiring all evidence be locked when not in the immediate proximity of the forensic scientists; and formal tracking of all non-electronic keys. Implementation of these controls will improve the evidence security, thereby minimizing the potential for evidence loss and theft.

Recommendation 2: The Crime Lab manager should develop policies and procedures to ensure access to LIMS is granted based on users' business needs.

Ten of 40 Crime Lab employees and one temporary past employee were assigned excessive LIMS user privileges. Six of the 10 employees were assigned a temporary administrator security role, which allowed these employees the ability to perform functions beyond the business needs related to their job duties such as adding users, adjusting data, and deleting cases.

State of Alaska Information Security Policies[21] detail certain requirements of individuals responsible for managing user identities

[20]ASCLD/LAB-International, Supplemental Requirements for the Accreditation of Forensic Science Testing Laboratories 2011 Edition Section 5.3.4.1 d).
[21]Section 171 5.4.

and access rights. Requirements include: (1) adhering to the formal request process for all access requests; (2) basing user access on a business need related to the user's duties; (3) assigning administrative access rights only when such access is required for business requirements; and (4) regularly reviewing access rights.

Information stored in LIMS includes sensitive and confidential information related to victims, suspects, offenses, and evidence. DPS management considers LIMS data confidential criminal justice information (CJI) subject to federal criminal justice information system (CJIS) security policies. CJIS Security Policy 5.5.2.1 states that the most restrictive set of rights/privileges or access by users shall be enforced to include implementation of least privilege based on specific duties to mitigate risk to CJI. Ensuring least privilege restricts CJI access to only authorized personnel with the need and the right to know.

According to the Crime Lab's Quality Assurance Manual, the Crime Lab manager is responsible for creating and assigning user accounts and user security. However, the Crime Lab lacks detailed written policies and procedures specific to the assignment and review of user roles in the LIMS system to ensure access is granted based on the users' business needs and access is suspended timely based on changes in employment status. Granting users unnecessary privileges increases the risk of unauthorized system use and risk of data manipulation including date changes or deletion of evidence, requests, and cases.

We recommend the Crime Lab manager develop policies and procedures to ensure access to LIMS is based on users' business needs.

Recommendation 3: The Crime Lab manager should develop and follow detailed written procedures to ensure all employees complete security clearance verification prior to accessing LIMS.

No security clearance verification was performed for a temporary employee who had access to LIMS during four months of employment at the Crime Lab in 2014. According to Crime Lab management, DPS procedures did not require security clearance verifications for temporary employees.

Security clearances are required for direct access to CJI maintained by the repository per 13 AAC 68.215. Additionally, security clearance verification of all personnel is a requirement outlined in CJIS Security Policy, Section 5.12.

DPS management stated security clearances were originally only required of individuals who access the Alaska Public Safety Information Network. However, over the years, the definition of CJI has expanded to include the Crime Lab's LIMS, thereby requiring individuals who access LIMS to have a security clearance verification performed. Due to oversight, these requirements were not made part of procedures. Without security clearance verification, employees who pose an increased security risk may inappropriately be granted access to sensitive and confidential CJI increasing the risk that confidential information is misused.

We recommend the Crime Lab manager develop detailed written policies and procedures specific to ensure all employees complete security clearance verification prior to accessing LIMS.

Recommendation 4: The Crime Lab manager should comply with policies and procedures over drug standards.

In 2012, the Crime Lab manager exhibited poor judgment when he allowed his juvenile daughter to assist in the annual inventory of the controlled substances used by the Crime Lab as drug reference standards. Additionally, the daughter was assigned an electronic access card to the Crime Lab facility.

The Crime Lab's drug chemistry procedure manual, version DC 2012 R0, states that access to the drug reference standard locations shall be restricted to the controlled substances discipline supervisor and

analysts, the quality assurance manager, and the laboratory manager.

This decision was highly inappropriate and may diminish the public's confidence in Crime Lab management's ability to ensure appropriate oversight over the drug standards and other sensitive laboratory materials.

We recommend the Crime Lab manager comply with policies and procedures related to drug standards.

Recommendation 5: DPS' commissioner should develop policies and procedures to ensure performance measures are accurate, relevant, complete, and based on an appropriate methodology.

Auditor evaluation of the Crime Lab's performance measures identified errors in the accuracy of measures reported to the Commissioner's Office, which are published on the Office of Management and Budget's (OMB) website. Additionally, it was noted that laboratory turnaround time did not adequately evaluate the Crime Lab's performance from the users' perspective. Findings are discussed for each performance measure below.

Forensic analysis turnaround time – Target No. 1: 90 percent of requests for laboratory service with a turnaround time less than 30 days.

For FY 15, the Crime Lab reported 70 percent of service requests were completed within 30 days. Auditor recalculation using the Crime Lab manager's methodology determined only 63 percent were completed within 30 days. The difference between the auditor and Crime Lab manager calculations could not be explained by Crime Lab management. Auditors also noted that the Crime Lab manager's calculation included internal case numbers created for proficiency and competency testing of forensic staff (98 cases in FY 15). These cases are not related to actual service requests and are generally completed within seven days, thereby potentially inflating the percentage of cases completed within 30 days.

Furthermore, auditors found the measure did not adequately evaluate

the Crime Lab performance from the users' perspective, as it does not capture the overall turnaround time for forensic analysis services provided to local law enforcement agencies and other Crime Lab users. A more informative measure is turnaround time based on the dates the service requests and evidence are received by the Crime Lab rather than the dates a scientist begins work on a request, which may be days or months after receiving the requests and evidence from the requesting agencies.

Crime Lab management stated that the current measure is important for measuring discipline-specific productivity for internal management purposes. Auditors do not dispute the usefulness of the measure from management's perspective. However, Crime Lab management should also report the timeliness of meeting the needs of Crime Lab users as a measure of its overall performance.

Forensic analysis turnaround time – Target No. 2: Less than 5 percent of unworked requests for laboratory service are over 120 days old.

Auditors noted that, due to the timing of Crime Lab management generating the data for calculating this performance measure (40 days after the end of fiscal year), the data were incomplete for performance measures that identify the number of requests that are processed within 90 or 120 days.

Target: 100 percent of national database of DNA samples from convicted felons and qualifying arrestees processed in less than 91 days.

Auditors noted that dates used for calculation of the DNA database performance measure were unreliable. Testing of 36 DNA database case release dates found all 36 release dates did not agree with hard copy administrative review checklist completion dates. Eleven of 36 assign dates did not agree with dates the evidence was removed from the vault for analysis. The errors were caused by Crime Lab procedures. Per Crime Lab procedure, DNA database work is assigned

and released the same day to avoid having to update the information for the case twice (once to assign and once to release).

Alaska Statute 44.41.035(p) requires DPS to make every reasonable effort to process each sample collected from a person under this section of statute and include the identification data resulting from the testing of the sample in the DNA identification registration system within 90 days after receiving the sample.

Target: Less than 10 percent of requests for laboratory service from law enforcement agencies require additional information prior to analysis.

This performance measure addresses the adequacy of training provided to law enforcement agencies by the Crime Lab. Auditor review found the performance measure was calculated by the Crime Lab manager using a highly subjective process based on reviewing case notes. The calculation could not be re-performed to verify accuracy.

Alaska Statutes require State departments to report performance measures targets and results of operations to OMB, which are available to the legislature and the public. To be useful, performance measures should be accurate, relevant, complete, and based on sound methodology. Inaccurate or misleading reporting of performance measures decreases transparency and may impact decision-making.

We recommend the Crime Lab manager develop procedures to ensure performance measures are accurate, relevant, complete, and based on an appropriate methodology.

OBJECTIVES, SCOPE, AND METHODOLOGY

In accordance with Title 24 of the Alaska Statutes and a special request by the Legislative Budget and Audit Committee, we have conducted a performance audit of the Department of Public Safety (DPS), Alaska Scientific Crime Detection Laboratory (Crime Lab).

Objectives

The audit objectives were to:

- Document the Crime Lab's services and evaluate how the new facility has impacted available services.
- Identify the nature and extent of services outsourced by the Crime Lab. Evaluate the costs versus benefits of outsourcing.
- Document the extent of service request backlogs by service type and length of time in backlog. Determine and evaluate the causes of service request backlogs.
- Identify the number of untested Sexual Assault Response Team kits currently stored.
- Evaluate evidence control procedures and determine if they are suitably designed to ensure the integrity of evidence.
- Compare productivity measures to national benchmarks and determine whether the Crime Lab is operating efficiently.
- Evaluate the Crime Lab's performance measures and verify the accuracy of agency reported statistics. Determine whether the agency's results-based measures demonstrate the effectiveness and efficiency of the agency's core services and objectives, and recommend changes if necessary.
- Evaluate personnel practices to ensure practices are adequately designed to promote effective operations.
- Determine statistics regarding staff retention and turnover, including but not limited to highly-skilled technicians and analysts that serve essential functions of the Crime Lab.

Scope

The audit reviewed Crime Lab operations for the period July 1, 2007, through April 30, 2016. Operations included the receipt and processing of requests for laboratory services; backlog of requests; services provided; evidence control; turnover, and personnel practices. An inventory of the sexual assault response team kits was performed on July 20, 2016.

Scope Limitation

The audit was unable to evaluate the costs versus the benefits of expanding the Crime Lab to provide additional forensic services due to a lack of cost data. The audit was also unable to compare productivity measures to national benchmarks due to the difference between states' demographics, crime rates, and laboratories.

Methodology

To address the objectives, we:

- Reviewed Department of Public Safety statutes, regulations, policies and procedures, and Crime Lab procedures manuals and website to gain an understanding of Crime Lab operations, including: mission, core services, and types of services provided.

- Evaluated the request for laboratory service data from the Crime Lab's laboratory information management systems (LIMS) from FY 08 through April 2016. The data was sorted by various data fields for analysis and reporting purposes. With the assistance of an information system audit specialist, database testing was performed on the system's application and general controls. Additionally, database reliability testing was performed on a random sample of 80 requests from a population of 60,835 based on a confidence level of 90 percent with a precision of +/-10 percent. Supporting documents for each request was traced to the source documents to ascertain data reliability, effectiveness of internal controls, and, as applicable, compliance with statutory requirements. The data was also used to evaluate and verify the accuracy of the FY 15 performance measures.

- Evaluated performance measures reported to the Office of Management and Budget (OMB), including Crime Lab management's methodology for generating and calculating

performance measures and recalculated performance measures reported for FY 15 operations to determine reporting accuracy.

- Reviewed American Society of Crime Laboratory Directors/ Laboratory Accreditation Board audit reports and Laboratory User Guides to identify the Crime Lab's accredited services and changes in services provided from FY 08 through April 2016.

- Reviewed personal service reports from the State's payroll system to calculate Crime Lab staff turnover rates and identify position vacancies.

- Evaluated position descriptions on Division of Personnel's (DOP) website to identify job titles and reclassification of positions.

- Reviewed proposed and enacted budgets, Legislative Finance documents, fiscal notes, and financial records from the State accounting system to identify the capital budget amounts related to the new Crime Lab facility and operating and personal service budget amounts, including budgeted positions.

- Reviewed legislative committee hearing minutes and documentation to identify DPS management's statements related to the need, cost, and benefits of the new Crime Lab facility.

- Reviewed grant documents, expenditure and revenue reports from the state accounting system, and build-out cost documentation to evaluate the costs and benefits of the outsourcing of toxicology.

- Researched the internet to identify national benchmarks related to forensic laboratory productivity metrics.

A forensic specialist (consultant) was hired to review evidence control procedures, including the facility security controls, to determine if they were reasonably designed to ensure the integrity of the evidence. The consultant, accompanied by audit staff, performed walk-throughs of the facility and interviewed Crime Lab staff. The consultant also reviewed the personnel practices to ensure they are adequately designed to promote effective operations. Lastly, the consultant

evaluated Crime Lab's performance measures for recommended changes to meet industry best practices.

A survey was conducted in July 2016 of the following groups:

- Crime Lab users (law enforcement agencies, medical examiner, and Department of Law (DOL) regional prosecutors) to gain an understanding of the services currently used and what other services would be used if available from the Crime Lab; concerns with evidence controls procedures or integrity of the evidence; and how the new crime lab facility has impacted Crime Lab operations. A survey was provided to 20 law enforcement agencies,[22] one medical examiner, and 12 DOL prosecutors. One hundred percent of the law enforcement agencies and the medical examiner responded. Ten of the 12 regional prosecutors responded to the survey (83 percent response rate).

- Current employees to gain an understanding of the services provided by the Crime Lab, including the impact the new Crime Lab had on services and operations; reasons for the backlog of services; and concerns with personnel practices or management. The survey was provided to 32 current employees with a 100 percent response rate.

- Prior employees to gain an understanding of the reason(s) they left Crime Lab employment; services provided by the Crime Lab, including the impact the new Crime Lab had on services and operations; and concerns with personnel practices or management. The survey was provided to 37 prior employees and 23 responded, resulting in a 62 percent response rate.

Inquiries were made with the Alaska State Commission of Human for Human Rights; DOP; United States Equal Employment Opportunity commission; Office of the Ombudsman; and DPS Commissioner's Office regarding any Crime Lab related personnel complaints.

[22]We selected the 20 agencies that use the most services provided by the Crime Lab.

During the course of the audit, interviews were conducted with:

- Crime Lab management and forensic staff to gain an understanding of the services provided, outsourced, or not provided; reasons for backlogs of service requests; evidence control procedures; personnel practices, and performance measure methodology.
- Representatives from similar out-of-state crime labs to gain an understanding of performance measures used for potential recommendations for the Crime Lab, and to determine if the out-of-state crime labs provide toxicology services and the associated costs for the services.
- Department of Transportation and Public Facility staff for estimated costs to complete unfinished areas of the Crime Lab.

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APPENDICES SUMMARY

Appendix A provides an example of the Request for Laboratory Services form that is completed by law enforcement agencies when submitting evidence to the Alaska Scientific Crime Detection Laboratory (Crime Lab) for forensic analysis.

Appendix B provides a schedule of the time to complete requests opened each fiscal year by all disciplines.

Appendix C provides a schedule of forensic analysis services received each fiscal year by discipline.

Appendix D provides the results of the law enforcement and medical examiner survey along with the questions. The survey was provided to 20 law enforcement agencies and one medical examiner in July 2016 and 21 responded resulting in a 100 percent response rate. The survey was conducted to gain an understanding of the types of services used; what additional services would be used if the Crime Lab provided such services; level of confidence of the Crime Lab's evidence control procedures to ensure the integrity of the evidence; and how the new Crime Lab facility has impacted services.

Appendix E provides the results of the Department of Law regional district attorney survey along with the questions. The survey was provided to 12 regional district attorneys in July 2016 and 10 responded, resulting in an 83 percent response rate. The survey was conducted to gain an understanding of the level of confidence in the Crime Lab's evidence control procedures, and how the new Crime Lab facility has impacted services.

Appendix F provides the results of the employee survey along with the questions. The survey was provided to 32 current employees in July 2016 and all responded, resulting in a 100 percent response rate. The survey was conducted to gain an understanding of the reason(s) for the backlog, concerns with personnel practices, and the impact the new Crime Lab had on services.

APPENDICES SUMMARY (Continued)

Appendix G provides the results of the prior employee survey along with the questions. The survey was issued to 37 prior employees in July 2016 and 23 responded resulting in a 62 percent response rate. The survey was conducted to gain an understanding of the reason why an employee left Crime Lab employment. Prior employees who worked at the old and new crime lab facilities were asked what impact the new Crime Lab had on services.

APPENDIX A

Request for Laboratory Services Form

Reset Form | Print Form

Alaska Scientific Crime Detection Laboratory
4805 Dr. Martin Luther King Jr. Ave. | Anchorage, AK 99507

REQUEST FOR LABORATORY SERVICES

	Agency Case Number		
	Agency Name		
	Address		
	City	State: AK	Zip Code

Case Agent Contact & Scientific Examination Report Distribution Information

Full Name (First M. Last)	Telephone	Email
Additional Report Email		Additional Report Email

Case Related Individuals: Victim (V), Suspect (S), Elimination (E), Other (O) — Add Individual

Individual (First M. Last)	DOB (mm/dd/yyyy)	Sex	APSIN #	Type	Related Evidence Items (list items #'s)

Case Information Relevant to Scientific Analysis and Sample Selection

Offense(s) and Date of Offense(s) — Add Offense(s)

Offense	Date (mm/dd/yyyy)	Offense	Date (mm/dd/yyyy)

Is this case an alleged Sexual Assault? (Check if Yes, leave unchecked if No) ☐

Evidence (Select an analysis category for each evidence item)

Evidence Item #	Description

☐ Alcohol	☐ Latent Prints	☐ Forensic Biology (DNA)
☐ Toxicology (Drugs in blood, driving offenses only)	☐ Footwear Impressions	☐ Sexual Assault Kit Storage - No analysis
☐ Controlled Substances	☐ Firearm/Toolmark	
	☐ Serial Number Restoration	

Add Evidence

Is additional evidence of investigative value available for analysis? ☐ Yes ☐ No

Chain of Custody for Listed Evidence

Received From	Date	To

Page 1 of 1 — Rev. Date - Aug/04/2015

Source: Scientific Crime Detection Lab website (http://dps.alaska.gov/CrimeLab/docs/RLS.pdf)

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APPENDIX B

Alaska Scientific Crime Detection Laboratory
Time to Complete Requests Opened Each Fiscal Year
FY 08 through April 30, 2016

Biology Discipline	FY 08	FY 09	FY 10	FY 11	FY 12	FY 13	FY 14	FY 15	July 2015 – April 2016
30 days or less	93	100	192	99	27	14	109	71	47
31 to 60 days	67	103	131	102	42	27	77	173	97
61 to 90 days	55	85	56	73	40	36	62	152	116
91 to 120 days	51	67	41	52	26	39	57	74	61
121 to 365 days	173	199	135	100	194	283	135	163	67
366 to 730 days	19	136	99	127	117	46	77	22	0
More than 730 days	0	113	66	29	75	97	50	0	0
Open Case	0	0	0	0	3	3	29	38	144
Total Requests Open in FY	458	803	720	582	524	545	596	693	532

Chemistry Discipline	FY 08	FY 09	FY 10	FY 11	FY 12	FY 13	FY 14	FY 15	July 2015 – April 2016
30 days or less	1,310	1,074	1,090	1,388	1,012	1,216	1,618	1,531	1,151
31 to 60 days	236	495	410	348	439	454	305	286	57
61 to 90 days	42	199	155	48	191	243	58	35	10
91 to 120 days	17	24	30	12	114	86	33	41	7
121 to 365 days	33	40	66	38	159	68	70	33	4
366 to 730 days	3	16	10	17	12	16	4	2	0
More than 730 days	0	6	2	8	11	2	1	0	0
Open Case	0	0	0	1	0	0	0	0	2
Total Requests Open in FY	1,641	1,854	1,763	1,860	1,938	2,085	2,089	1,928	1,231

Source: Alaska Scientific Crime Detection Laboratory database. Excludes outsourced services, canceled requests, and DNA database requests.

APPENDIX B (Continued)

Alaska Scientific Crime Detection Laboratory
Time to Complete Requests Opened Each Fiscal Year
FY 08 through April 30, 2016
(*Continued*)

Physical Discipline	FY 08	FY 09	FY 10	FY 11	FY 12	FY 13	FY 14	FY 15	July 2015 – April 2016
30 days or less	323	370	323	169	201	185	253	150	152
31 to 60 days	166	228	151	208	213	158	228	150	97
61 to 90 days	96	133	126	157	215	152	222	126	73
91 to 120 days	68	70	74	111	133	169	204	94	64
121 to 365 days	159	106	213	264	228	223	190	472	127
366 to 730 days	15	27	37	15	21	11	16	25	0
More than 730 days	0	26	23	22	11	20	5	0	0
Open Case	0	0	0	0	2	2	1	11	161
Total Requests Open in FY	827	960	947	946	1,024	920	1,119	1,028	674

All Disciplines	FY 08	FY 09	FY 10	FY 11	FY 12	FY 13	FY 14	FY 15	July 2015 – April 2016
30 days or less	1,726	1,544	1,605	1,656	1,240	1,415	1,980	1,752	1,350
31 to 60 days	469	826	692	658	694	639	610	609	251
61 to 90 days	193	417	337	278	446	431	342	313	199
91 to 120 days	136	161	145	175	273	294	294	209	132
121 to 365 days	365	345	414	402	581	574	395	668	198
366 to 730 days	37	179	146	159	150	73	97	49	0
More than 730 days	0	145	91	59	97	119	56	0	0
Open Case	0	0	0	1	5	5	30	49	307
Total Requests Open in FY	2,926	3,617	3,430	3,388	3,486	3,550	3,804	3,649	2,437

Source: Alaska Scientific Crime Detection Laboratory database. Excludes outsourced services, canceled requests, and DNA database requests.

APPENDIX C

Alaska Scientific Crime Detection Laboratory
Forensic Analysis Service Requests by Discipline by Type
FY 08 through April 30, 2016

Biology Discipline Forensic Analysis Services	FY 08	FY 09	FY 10	FY 11	FY 12	FY 13	FY 14	FY 15	July 2015 – April 2016
Biological Screening	319	387	361	296	218	257	317	167	86
DNA Major Crimes	139*	320	288	240	251	245	222	248	162
DNA Property Crime	0	96	71	46	54	35	48	40	38
DNA Screening	0	0	0	0	1	8	9	238	246
Total	458	803	720	582	524	545	596	693	532

Chemistry Discipline Forensic Analysis Services	FY 08	FY 09	FY 10	FY 11	FY 12	FY 13	FY 14	FY 15	July 2015 – April 2016
Beverage Alcohol	0	22	49	92	59	51	66	37	13
Blood Alcohol	491	589	511	520	552	553	520	514	366
Controlled Substance	1,139	1,228	1,190	1,231	1,298	1,460	1,481	1,368	852
Fire Debris	11	15	13	17	29	21	22	11	0
Total	1,641	1,854	1,763	1,860	1,938	2,085	2,089	1,930	1,231

Physical Discipline Forensic Analysis Services	FY 08	FY 09	FY 10	FY 11	FY 12	FY 13	FY 14	FY 15	July 2015 – April 2016
Crime Scene Processing	0	29	53	29	58	65	37	83	20
Footwear Impressions	55	33	9	0	0	0	0	14	21
Firearm/Toolmark	73	92	98	82	65	87	92	93	104
Latent Print	674	782	754	809	883	740	960	831	529
Tire Examination	0	6	1	0	0	0	0	0	0
Trace Evidence	25	10	1	0	0	0	0	0	0
Vehicle Processing	0	8	31	26	18	28	30	7	0
Total	827	960	947	946	1,024	920	1,119	1,028	674

Source: Alaska Scientific Crime Detection Laboratory. Excludes outsourced services, canceled requests, and DNA database requests.
*Includes DNA property crimes.

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APPENDIX D

Crime Lab User Agency Survey
Law Enforcement and Medical Examiner Responses

1. Between July 1, 2013 and June 30, 2016, which of the following forensic analysis services did the Crime Lab provide your agency? (Check all that apply.)

	Number of Responses	Percent of Responses
Blood Alcohol Analysis	19	90%
Controlled Substance Analysis	18	86%
Latent Print Analysis	18	86%
DNA Analysis for Sexual Assault Response Team (SART) Kits	15	71%
DNA Analysis - Other	14	67%
Toxicology Analysis (Traffic Offense Only)	14	67%
DNA Analysis for CODIS (Combined DNA Index System) Database	12	57%
Firearm/Toolmark Analysis	7	33%
Footwear Impression Analysis	5	24%
Tire Track Analysis	3	14%
Other (Please specify)	0	0%
None/Did Not Provide Forensic Analysis Services	0	0%
Unsure	2	10%

2. Other than the forensic analysis services listed on the prior survey question, between July 1, 2013 and June 30, 2016, what other services did the Crime Lab provide your agency? (Check all that apply.)

	Number of Responses	Percent of Responses
Training	9	43%
None/Does Not Provide Additional Services	7	33%
Crime Scene Response	2	10%
Testify in Court	1	5%
Unsure	5	24%

APPENDIX D
(Continued)

Crime Lab User Agency Survey
Law Enforcement and Medical Examiner Responses
(*Continued*)

3. What additional services would your agency use if the Crime Lab provided the services? (Check all that apply.)

	Number of Responses	Percent of Responses
Trace Evidence Analysis	15	71%
Toxicology (Non-Traffic Related Offenses) Analysis	14	67%
Questioned Documents Analysis	10	48%
Fire Debris Analysis	7	33%
Other (YSTR DNA and Hand Writing Analysis)	2	10%
None/Would Not Use Additional Services	1	5%
Unsure	2	10%

4. In your opinion, does the Crime Lab provide adequate crime scene response support for your agency?

	Number of Responses	Percent of Responses
Yes	9	43%
No	7	33%
Unsure	4	19%
No Response	1	5%
Total Respondents	21	100%

5. In your opinion, does the Crime Lab provide adequate training in proper evidence collection and preservation techniques?

	Number of Responses	Percent of Responses
Yes	10	48%
No	4	19%
Unsure	6	28%
No Response	1	5%
Total Respondents	21	100%

APPENDIX D
(Continued)

Crime Lab User Agency Survey
Law Enforcement and Medical Examiner Responses
(*Continued*)

6. How confident are you with the Crime Lab's ability to maintain the proper chain of custody regarding evidence within the lab?

	Number of Responses	Percent of Responses
Very Confident	10	48%
Confident	6	28%
Somewhat Confident	5	24%
Not at All Confident	0	0%
Total Respondents	21	100%

7. How confident are you with the Crime Lab's ability to maintain the integrity of evidence within the lab?

	Number of Responses	Percent of Responses
Very Confident	8	38%
Confident	8	38%
Somewhat Confident	5	24%
Not at All Confident	0	0%
Total Respondents	21	100%

8. Please rate how the new Crime Lab facility built in 2012 has impacted the following:

	Much Improved	Somewhat Improved	About the Same	Somewhat Worse	Much Worse	Unsure	Not Answered	Total
Types of services provided	2	6	4	1	0	8	0	21
Availability of services provided	2	5	6	0	0	8	0	21
Quality of services provided	2	7	4	1	0	6	1	21
Timely (within 30 days) processing of requests for services	3	5	7	1	0	5	0	21
Case backlogs	2	6	6	1	0	5	1	21
Evidence control procedures	2	2	6	1	0	10	0	21
Integrity of the evidence	3	1	7	1	0	9	0	21

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APPENDIX E

Crime Lab User Agency Survey
State of Alaska – Department of Law
Regional District Attorney

1. Please rate how the new Crime Lab facility built in 2012 has impacted the following:

	Much Improved	Somewhat Improved	About the Same	Somewhat Worse	Much Worse	Unsure	Total
Types of services provided	0	1	5	2	1	1	10
Availability of services provided	0	1	6	2	0	1	10
Quality of services provided	0	1	7	1	0	1	10
Timely (within 30 days) processing of requests for services	0	4	4	0	0	2	10
Case backlogs	1	5	3	0	0	1	10
Evidence control procedures	0	4	4	0	0	2	10
Integrity of the evidence	0	3	5	0	0	2	10

2. How confident are you with the Crime Lab's ability to maintain the proper chain of custody regarding evidence within the lab?

	Number of Responses	Percent of Responses
Very Confident	8	80%
Confident	2	20%
Somewhat Confident	0	0%
Not at All Confident	0	0%
Total Respondents	10	100%

3. How confident are you with the Crime Lab's ability to maintain the integrity of evidence within the lab?

	Number of Responses	Percent of Responses
Very Confident	6	60%
Confident	4	40%
Somewhat Confident	0	0%
Not at All Confident	0	0%
Total Respondents	10	100%

APPENDIX E (Continued)

Crime Lab User Agency Survey
State of Alaska – Department of Law
Regional District Attorney
(*Continued*)

4. In your opinion, does the Crime Lab provide adequate courtroom support?

	Number of Responses	Percent of Responses
Yes	10	100%
No	0	0%
Unsure	0	0%
Total Respondents	10	100%

APPENDIX F

Crime Lab Employee Survey
Current Employee Responses

1. As an employee of the Crime Lab, to your knowledge, which of the following services currently have backlogs (service requests older than 30 days)? (Check all that apply.)

   Note: Only Forensic Scientists and Technicians answered this question.

	Number of Responses	Percent of Responses
Latent Print Analysis	25	30%
DNA Analysis for Sexual Assault Response Team (SART) Kits	19	23%
DNA Analysis - Other	19	23%
Firearm/Tool-Mark Analysis	7	9%
Footwear Impression Analysis	5	6%
DNA Analysis for CODIS (Combined DNA Index System) Database	2	2%
Tire Track Analysis	1	1%
Other	1	1%
Controlled Substance Analysis	0	0%
Blood Alcohol Analysis	0	0%
Toxicology Analysis (Traffic Offense Only)	0	0%
Unsure	3	4%

1a. In your opinion, what is the reason(s) for the backlog(s) identified in the previous question?

   Note: Only Forensic Scientists and Technicians answered this question.

	Number of Responses
Staffing issues to include overall lack of staff, turnover, vacant positions due to low pay and attempts to hire more experienced staff; and lengthy in-house training	20
Increase in case volume	6
Prioritization of work	4
Technical review and validation of equipment	4
Management and supervisor practices	3
Total Respondents	37

APPENDIX F
(Continued)

Crime Lab Employee Survey
Current Employee Responses
(*Continued*)

2. As an employee of the Crime Lab, have you ever been asked to do something unethical or inappropriate with respect to your professional duties?

	Number of Responses	Percent of Responses
Yes	0	0%
No	28	88%
Unsure	4	12%
Total Respondents	32	100%

3. As an employee of the Crime Lab, have you observed unethical or inappropriate conduct with respect to your professional duties?

	Number of Responses	Percent of Responses
Yes	5	16%
No	26	81%
Unsure	1	3%
Total Respondents	32	100%

4. As an employee of the Crime Lab, are you aware of any of the following personnel practices being inappropriately applied or administered?

	Yes	Percent of Responses	No	Percent of Responses	Unsure	Percent of Responses	Total Responses
Hiring	5	16%	23	74%	3	10%	31
Promotions	4	13%	25	81%	2	6%	31
Supervision	4	13%	24	80%	2	7%	30
Training	4	13%	26	84%	1	3%	31
Disciplinary Action	2	6%	28	91%	1	3%	31
Termination	1	3%	28	91%	2	6%	31

APPENDIX F (Continued)

Crime Lab Employee Survey
Current Employee Responses
(*Continued*)

5. In your opinion, are Crime Lab resources managed effectively?

	Number of Responses	Percent of Responses
Yes	22	71%
No	3	10%
Unsure	6	19%
Total Respondents	31	100%

6. As an employee who worked at both the prior and current Crime Lab, in your opinion, please rate how the new Crime Lab facility built in 2012 has impacted the following:

   Note: Only Forensic Scientists and Technicians answered this question.

	Much Improved	Somewhat Improved	About the Same	Somewhat Worse	Much Worse	Unsure	Total Responses
Types of Services Provided	3	1	13	2	1	0	20
Availability of Services Provided	3	5	10	1	1	0	20
Timeliness (within 30 days) in Processing of Requests for Services	10	6	2	1	0	1	20
Case Backlogs	9	8	1	1	0	1	20
Evidence Control Procedures	10	6	1	1	2	0	20
Integrity of the Evidence	4	7	7	0	1	1	20
Training Provided to Law Enforcement Agencies	1	9	6	2	2	0	20
Overall Crime Scene Response	0	3	8	1	2	6	20

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APPENDIX G

Crime Lab Employee Survey
Prior Employee Responses

1. What was the primary reason you left the State of Alaska, Department of Public Safety, Scientific Crime Detection Laboratory (Crime Lab) employment?

   Survey Respondents: All Prior Employees

	Number of Responses	Percent of Responses
Management	9	39%
Other	9	39%
Job/Career Opportunity	4	17%
Salary	1	4%
Long Hours	0	0%
Total Respondents	23	100%

1a. What are the "Other" reasons you left the State of Alaska, Department of Public Safety, Scientific Crime Detection Laboratory (Crime Lab) employment:

   Survey Respondents: All Prior Employees

	Number of Responses	Percent of Responses
Personal	5	56%
Laid Off	3	33%
Combination of Management and Other Issues	1	11%
Total Respondents	9	100%

APPENDIX G
(Continued)

Crime Lab Employee Survey
Prior Employee Responses
(*Continued*)

2. Using the scale provided below, please rate the Crime Labs work environment at the time you left employment for the following categories:

   Survey Respondents: All Prior Employees

	Excellent	Percent of Total Responses	Good	Percent of Total Responses	Fair	Percent of Total Responses	Poor	Percent of Total Responses	Total Responses
Resources Necessary to Perform Duties	8	38%	6	29%	2	10%	5	24%	21
Training and Professional Development	6	29%	11	52%	1	5%	3	14%	21
Supervision	6	27%	4	18%	2	9%	10	46%	22
Cooperation and Teamwork	7	32%	4	18%	5	23%	6	27%	22
Management Practices	4	18%	2	9%	3	14%	13	59%	22

3. While employed with the Crime Lab, were you aware of any of the following personnel practices being inappropriately applied or administered?

   Survey Respondents: All Prior Employees

	Yes	Percent of Responses	No	Percent of Responses	Total Responses
Supervision	12	60%	8	40%	20
Disciplinary Action	10	53%	9	47%	19
Promotions	7	35%	13	65%	20
Training	7	35%	13	65%	20
Hiring	7	37%	12	63%	19
Termination	5	26%	14	74%	19

APPENDIX G
(Continued)

Crime Lab Employee Survey
Prior Employee Responses
(*Continued*)

4. While employed with the Crime Lab, were you ever asked to do something unethical or inappropriate with respect to your professional duties?

   Survey Respondents: All Prior Employees

	Number of Responses	Percent of Responses
Yes	4	19%
No	15	71%
Unsure	2	10%
Total Respondents	21	100%

5. While employed with the Crime Lab, did you observe any unethical or inappropriate conduct with respect to your professional duties?

   Survey Respondents: All Prior Employees

	Number of Responses	Percent of Responses
Yes	6	29%
No	11	52%
Unsure	4	19%
Total Respondents	21	100%

6. In your opinion, were Crime Lab resources managed effectively?

   Survey Respondents: All Prior Employees

	Number of Responses	Percent of Responses
Yes	7	33%
No	10	48%
Unsure	4	19%
Total Respondents	21	100%

APPENDIX G (Continued)

Crime Lab Employee Survey
Prior Employee Responses
(*Continued*)

6a. In your opinion, how were Crime Lab resources mismanaged? (Select all that apply.)

Survey Respondents: All Prior Employees

	Number of Responses
Inefficient Use of Equipment/Supplies	6
Personnel Issues/Inefficiencies	5
Eliminated Service Types	4

7. As a past employee who worked at both the prior and current Crime Lab, in your opinion, please rate how the new Crime Lab facility built in 2012 has impacted the following:

Survey Respondents: Forensic staff who worked at both Crime Lab facilities.

	Much Improved	Somewhat Improved	About the Same	Somewhat Worse	Much Worse	Unsure	Total Responses
Types of Services Provided	0	1	1	0	1	0	3
Availability of Services Provided	0	1	1	0	1	0	3
Timeliness (within 30 days) in Processing of Requests for Services	0	0	1	0	1	1	3
Case Backlogs	0	1	0	0	1	1	3
Evidence Control Procedures	0	1	1	0	1	0	3
Integrity of the Evidence	0	1	1	0	1	0	3
Training Provided to Law Enforcement Agencies	0	0	1	1	1	0	3
Overall Crime Scene Response	0	0	0	1	1	1	3

Agency Response from the Department of Public Safety

THE STATE of ALASKA
GOVERNOR BILL WALKER

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January 3, 2017

Ms. Kris Curtis
Division of Legislative Audit
PO Box 113300
Juneau, AK 99811-3300

RE: Confidential Preliminary Audit Report (12-30084-17), Department of Public Safety, Alaska Scientific Crime Detection Laboratory, Select Issues, November 7, 2016

Dear Ms. Curtis:

Thank you for the opportunity to provide this written response to your Confidential Preliminary Report (12-30084-17) received on December 13, 2016. You have asked us to clearly state our agreement or disagreement with the report conclusions and recommendations. If we concur with a conclusion or recommendation, our methods used or anticipated to be used for implementing the recommendation are noted. If we disagree with a conclusion or recommendation, an explanation of the reason for our disagreement is provided.

Following are the report conclusion statements and our response to each:

The new Crime Lab has not expanded forensic analysis services or decreased processing time. We agree with this conclusion as it relates to not expanding forensic analysis services. We disagree with the conclusion as it relates to not decreasing processing time.

A report published by the U.S. Department of Justice, Office of Justice Programs, Bureau of Justice Statistics (BJS) which focuses on the forensic services performed by crime labs across the nation and the resources devoted to completing the work[1] provides the following data in Table 2 on the type of

[1] Andrea M. Burch, *Bureau of Justice Statistics*, Matthew R. Durose, *Bureau of Justice Statistics*, Kelly A. Walsh, Emily Tiry, *Urban Institute* (November 2016). *Publicly Funded Forensic Crime Laboratories: Resources and Services, 2014* (NCJ 250151), 2. Retrieved from Agency website: https://www.bjs.gov/index.cfm?ty=pbdetail&iid=5827

services performed by State-operated crime labs (those services offered at the Alaska Scientific Crime Detection Laboratory (Crime Lab) are highlighted):

TABLE 2
Functions performed by publicly funded forensic crime labs, by type of jurisdiction, 2014

Forensic function	Federal	State	County	Municipal
Controlled substances	55%	87%	86%	71%
Crime scene	42	48	51	75
Digital evidence	54	10	20	36
Firearms/toolmarks	27	58	60	58
Forensic biology casework	27	71	68	42
Forensic biology from convicted offender/arrestee samples	12	25	9	4
Impressions	26	43	46	35
Latent prints	67	53	62	88
Questioned documents	34	12	12	14
Toxicology	9	48	52	36
Trace evidence	57	53	50	29
Number of labs	39	193	98	79

Source: BJS Census of Publicly Funded Forensic Crime Laboratories, 2014.

Based on the data reflected in this table, it can be concluded that the Alaska Crime Lab is providing an appropriate number of forensic functions.[2]

While the audit cites several services that were offered in the old facility but not the new facility, it is important to point out that tire track analysis and National Integrated Ballistic Information Network (NIBIN) gun data entry were discontinued before construction of the new facility was funded.

The audit also incorrectly identifies Fairbanks crime scene response as a discontinued service. The Department of Public Safety (DPS) determined that transferring the regional Forensic Technician I/II positions from the Crime Lab to the Division of Alaska State Troopers (AST) would provide a more efficient and improved level of service to the intended customers (i.e., local law enforcement). The service is still being provided and the Crime Lab still provides training and equipment to support the Forensic Technician I/II positions. In FY2017 the Crime Lab transferred a positon to AST to provide service to the Mat-Su region, and is looking at transferring a position to provide service in the Kenai area.

When looking at changes in processing time, there are a number of factors that must be taken into account. Based on the calculation of time from when a request for service is created until a scientific examination report is issued as the turnaround time (in days), the following productivity data is obtained:

FY2010	194
FY2011	184
FY2012	211
FY2013	231 (First year in new facility)
FY2014	240
FY2015	205

[2] The study does not separate blood alcohol analysis from analysis of drugs in blood (both are considered toxicology). Trace evidence includes fire debris, hair examination, and gunshot residue.

FY2016 146

The Crime Lab moved into its new facility June 1, 2012. As part of this move, new instruments and methods had to be validated which negatively impacted turnaround times. Turnaround times are also impacted by vacancies. As noted in the preliminary audit report, 20 positions were vacant in excess of six months. Regardless of the facility, processing time cannot be decreased if there is no staff to perform analyses. Also since moving into the new facility, the Crime Lab has absorbed significant increases in work in the form of "overhead" (i.e., increased demands due to accreditation or other factors which increase the amount of work per request). Specifically, the Crime Lab has taken on additional workload associated with measurement of uncertainty in controlled substances, blood alcohol, firearm/toolmarks, increases in identifiable prints (from 15 percent to 30 percent) and an increase in the number of DNA loci analyzed (16 to 24). In addition, the Crime Lab has eliminated four positions since FY2015 as a result of budget reductions. We feel the conclusion reached by the audit fails to account for these factors and is therefore inaccurate.

Toxicology for traffic related offenses is the only service that was consistently outsourced. We agree with this conclusion.

DPS management believes outsourcing is cost effective. We agree with this conclusion as it relates to toxicology.

Table 8 from the earlier cited BJS report[3] provides the following data on the percent of labs outsourcing some or all requests associated with a forensic service (those services outsourced at the Alaska Crime Lab are highlighted):

The data reflected in this table clearly indicates that outsourcing toxicology analysis is a common practice among publicly funded crime labs.

In addition, changes since the construction of the new Crime Lab facility have greatly raised the potential costs associated with toxicology analysis of drugs in blood.

Examples of such changes include:

- New synthetic cannabinoid class drugs (e.g., Spice);
- New synthetic substituted cathinones (e.g., Bath Salts); and

TABLE 8
Percent of publicly funded crime labs that outsourced requests for services, by type of service, 2014

Type of request	Percent
Controlled substances	19%
Digital evidence	15
Firearms/toolmarks	25
Forensic biology casework	55
Forensic biology from convicted offender/arrestee samples	37
Impressions	16
Latent prints	10
Questioned documents	24
Toxicology	68
Trace evidence	37
Number of labs that outsourced requests	155

Source: BJS Census of Publicly Funded Forensic Crime Laboratories, 2014.

[3] Ibid., 4.

- The requirement by the accrediting body for determination and reporting of measurement of uncertainty.

Forensic analysis backlogs were primarily due to a lack of forensic staff. We agree with this conclusion, but disagree with the data contained in Exhibit 8 on page 23 of the report.

The Crime Lab acknowledges there are occasional Laboratory Information Management System (LIMS) database errors that cause requests for service to appear backlogged when in fact they are completed. Several instances of this were corrected with the audit team, and the Crime Lab would gladly assist the team with verifying data related specifically to requests identified as backlogged 365 or more days. For April 30, 2016, the Crime Lab has the following backlogs identified:

Biology: 190
Physical 161

As of November 30, 2016:

Biology: 72
Physical: 170

Date of oldest uncompleted request:

Biology: June 23, 2016
Physical: September 14, 2015

It should also be noted that total backlog as a percentage of requests received is extraordinarily low at approximately five percent as compared to fifteen percent nationally.[4]

Approximately 74 percent of the 68 sexual assault kits awaiting analysis were over 30 days old. We agree with this conclusion.

There is no method for tracking the number of uncollected SART kits distributed or used statewide. We agree with this conclusion and offer the following additional information for clarification.

Tracking of uncollected and/or unsubmitted SART kits is not a function of the Crime Lab. The Crime Lab provides the following at no charge to law enforcement agencies:

- Sexual assault evidence collection kits;
- Blood alcohol evidence collection kits;
- Home brew evidence collection kits; and
- DNA database sample collection kits.

The Crime Lab is an investigative resource available to law enforcement agencies free of charge. If law enforcement agencies determine scientific analysis is needed as part of their investigation, then it is incumbent upon each law enforcement agency to ensure any evidence requiring scientific analysis

[4] Ibid., 3 – 4.

is submitted in a timely manner. Only once evidence is received at the Crime Lab does the tracking and timely analyses of that evidence become the responsibility of the Crime Lab.

Evidence control weaknesses could impact the integrity of evidence. We disagree with this conclusion.

The Alaska Scientific Crime Detection Laboratory is accredited by the American Society of Crime Laboratory Directors/Laboratory Accreditation Board (ASCLD/LAB)[5] to ISO/IEC 17025:2005 Standards[6] and is assessed by this external entity on a yearly basis to ensure that it is in continued compliance with the documented standards. Assessments look at the Crime Lab's policies in relation to the standards in addition to the Crime Lab staff performing the tasks to comply with the policies in place. While the Crime Lab did shift to a different system of retrieving evidence from the evidence vault in 2015, it is still in compliance with the standard set forth by ASCLD/LAB and has had no corrective actions due to loss or theft of items since the new system has been implemented.

In addition to the above assessments by ASCLD/LAB, the evidence vault is inventoried at least once each calendar year and both the 2015 and 2016 inventory audits of the evidence vault accounted for all evidence items. Furthermore, evidence items are in a sealed state with a required "proper seal" while stored in the evidence vault. Evidence is properly sealed when its container is secured to prevent access to the contents and initials are applied to the seal according to the Crime Lab policies. The practice employed at the Crime Lab is not uncommon in the forensic laboratory community depending on the size of the laboratory and the staffing in place. While two Alaska State Troopers (AST) staff have access to the evidence vault that is shared between the two agencies (AST and the Crime Lab), the evidence storage locations are separated and clearly defined for each entity. Employees of the Crime Lab and AST undergo state and national background checks prior to being hired and have been trained on how to properly access the evidence vault as well as how to use the organization system within it. Other personnel that are housed in the Crime Lab building but are not associated with the Crime Lab directly (i.e., Supply staff, Commissioner's Office staff, Office of Professional Standards staff) do not have access to the evidence vault, thus demonstrating limited access as is required by the ISO 17025:2005 standard. The Crime Lab manager determines the access to the evidence vault in accordance with the Crime Lab policies and procedures and controls the access with individual electronic key cards, thus demonstrating controlled access as is required by the ISO 17025:2005 standard.

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[5] http://www.ascld-lab.org/

[6] ISO/IEC 17025:2005 specifies the general requirements for the competence to carry out tests and/or calibrations, including sampling. It covers testing and calibration performed using standard methods, non-standard methods, and laboratory-developed methods. http://www.iso.org/iso/catalogue_detail?csnumber=39883

Security and monitoring of the Crime Lab facility needs improvement. We disagree with this conclusion.

Three doors identified are not in areas where Crime Lab evidence is received, analyzed, or stored (we are unaware of a fourth door). The doors in question are exit-only doors located in each stairwell. There is no handle on these doors from the outside. The remaining are garage doors; two located in the vehicle examination garage and one in the evidence receiving garage. While there are no cameras on the exterior of these doors, they are exit-only doors and require a "badge swipe" (access via electronic key card with permissions to the device) to activate which leaves a record of use of the door. These doors can only be activated from inside the facility. There are no door handles or access card readers located on the exterior position of these doors.

Visitors to the Crime Lab cannot gain unescorted access to non-public spaces. The public entrance is open weekdays from 7:30AM to 4:30PM. The public space is separated from the private space by secured doors that require electronic key card access. As such, visitors may not enter the private space unless escorted. Additionally, Crime Lab spaces (labs, evidence, offices) within the private space are further restricted by electronic locks that require an electronic key card programmed with permission to access the space. As such, unauthorized access by fraudulent claims of identity cannot occur.

Access to the criminal justice data was not limited to users based on valid business needs. We agree with this conclusion. Permissions within the LIMS have been evaluated to ensure only those permissions necessary for individuals to perform their duties are granted.

Scope limitation prevented a comparison of Crime Lab productivity to national benchmarks. We agree with this conclusion.

Performance measures were not accurate and complete. We disagree with this conclusion.

The audit assessed nine years' worth of data and found one metric in one year that was off by 7 percent (63 percent versus 70 percent). This is a single error, not a systemic issue of inaccurate reporting.

We disagree with the auditor's conclusions that proficiency tests and competency test are not true requests. By policy, these examinations are performed exactly as routine casework and consume chemicals, reagents, analyst time, technical reviewer's time, and as such, are work performed equal to any other request for analysis. Therefore, these examinations must be accounted for as a request for analysis.

We disagree with the auditor's conclusion that database performance metrics are unreliable in that the metric accurately counts any database sample unassigned for analysis over 90 days. We acknowledge that a limitation in the Crime Lab's information management system creates an

uncertainty from the time a sample is assigned for analysis until a profile is uploaded into the database.

Crime Lab experienced consistent but not excessive turnover. We agree with this conclusion.

Restrictive job class specifications limit the Crime Lab's ability to address position vacancies. We agree with this conclusion.

The Crime Lab manager's juvenile daughter inappropriately assisted with Crime Lab operations. We disagree with this conclusion.

With respect to the incident in question, a review of events indicates that procedures were followed. As part of the annual inventory, the Controlled Substance Supervisor requested of the Crime Lab manager that a volunteer who was assisting at the Crime Lab provide clerical assistance by writing down the weights given to the volunteer verbally by the forensic scientist performing the inventory. This request was made to facilitate an efficient process. The Crime Lab manger specified that the volunteer may not handle any drugs and may not be left unattended. Access to the drug standards was by an authorized individual.

In regards to an access card being issued, appropriate permissions were assigned to the access card that was used by the volunteer. This access card would not allow entrance to any area of the Crime Lab other than common areas (i.e., hallways, break area) and is the same base level permission provided to all occupants of the facility. It should be noted that due to the numerous secure points within the facility even the most basic functions cannot be performed without an access card, such as emptying trash from the facility to the dumpster.

Following are the report recommendations and our response to each:

Recommendation 1: DPS' commissioner should ensure building security and evidence control procedures minimize the potential for evidence loss and theft.

We agree with this recommendation as it relates to the controlled substance standards keys, lack of surveillance cameras (including video retention), and drug evidence left unattended.

- Security cameras have been added to the evidence vault and vehicle bay, and video retention has been extended to 180 days. Audible alarms have been installed to the three exit-only doors and are armed 24/7.
- Scientists performing work in the latent print discipline have been counseled by the Crime Lab's Quality Assurance Manager regarding the security of evidence while in their possession, during processing, and the need to secure the evidence while not present.
- Security to the controlled substance standards room has been modified to require dual electronic key cards for entrance (two approved individuals must swipe their electronic key cards to gain access to the room) and the key to the controlled substance standards cabinet is now barcoded and transfers of the key are tracked in the LIMS.

We disagree with the recommendation as it relates to temporary storage area keys and excessive access to the evidence vault.

Evidence vault access was discussed under the response to the report conclusions.

The Crime Lab has dedicated evidence rooms inside each laboratory space. These rooms are controlled by electronic key cards and are programmed for access only by building administrators and those performing analysis in the discipline that the evidence storage area is in. Inside these limited access evidence rooms are common/day use lockers. The laboratory quality assurance manual states in Appendix A "Common/Day Use lockers in the discipline laboratories are excluded from tracking. Electronic keys are controlled through the use of a Lenel OnGuard security system." The Crime Lab has undergone numerous ASCLD/LAB assessments with no findings related to this policy, and the policy is in compliance with accreditation standards.

Recommendation 2: The Crime Lab manager should develop policies and procedures to ensure access to the Laboratory Information System (LIMS) is granted based on users' business needs.

We agree with this recommendation. The Crime Lab manager has reviewed the list of permissions in the LIMS and appropriately granted permissions based upon users' needs to perform their duties.

Recommendation 3: The Crime Lab manager should develop and follow detailed written procedures to ensure all employees complete security clearance verification prior to accessing LIMS.

Policy related to this already exists at the department level as part of the department's operational procedures manual (OPM). The Crime Lab's Administrative Assistant III is also the TAC (Terminal Agency Coordinator) and responsible for ensuring compliance.

Recommendation 4: The Crime Lab manager should comply with policies and procedures over drug standards.

We disagree with this recommendation as procedures were and are being followed.

Recommendation 5: DPS' commissioner should develop policies and procedures to ensure performance measures are accurate, relevant, complete, and based on appropriate methodology.

While we disagree with the conclusion reached, we agree with the recommendation that improvements can be made in performance metrics. Guided by the Governor's Office of Management and Budget, performance is the tool the Administration uses to set goals, measure progress, and be accountable to Alaskans for getting results that matter. The Crime Lab manager has been instructed to develop performance measures that can be objectively, accurately, and reproducibly reported.

Additional Comments:

The audit indicates inquiries were made with various labor organizations regarding crime lab related personnel complaints but provides no findings.

Appendix G, Question 3 indicates five respondents answered that they were aware of inappropriate termination. Question 1a has three respondents answering they were laid off. It is a fact that no employees were terminated during the audit period, and only two employees were subject to lay off (all other positions eliminated were vacant). This discrepancy should have been addressed.

Thank you again for the opportunity to provide this response. Please contact me directly if I can provide additional information or clarification.

Sincerely,

Walt Monegan
Commissioner

Cc: Orin Dym, Forensic Lab Manager
Kelly Howell, Administrative Services Director

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Legislative Auditor's Additional Comments

ALASKA STATE LEGISLATURE
LEGISLATIVE BUDGET AND AUDIT COMMITTEE
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January 6, 2017

Members of the Legislative Budget
and Audit Committee:

We have reviewed the Department of Public Safety's (DPS) response to the audit report. Nothing contained in the response causes us to revise or reconsider the report conclusions and recommendations. We reaffirm the conclusions and recommendations.

The following comments address DPS management's disagreements with the report conclusions and recommendations. The comments are organized in a manner similar to DPS' response to the audit.

The New Crime Lab Has Not Expanded Forensic Analysis Services or Decreased Processing Time.

The audit addresses the expectation gap between what the public expected from the new $90 million crime lab and what the lab provides. During the years it sought funding, DPS management asserted that a new lab would increase services, decrease outsourcing, and increase productivity. However, the scope of the final project did not provide for additional services, and did not reduce outsourcing. We note that the audit does not hold DPS at fault for not meeting expectations. The final crime lab design was scaled back and only provides a future opportunity to add services and reduce outsourcing. The reduced scope was approved by the legislature.

The audit concludes that expectations for decreased processing time did not materialize. In the DPS response, the department argues that the audit did not take into account factors that shed a more positive light on productivity such as "overhead" and "additional workload." These factors were taken into account when drafting the final report. Based on a review of all evidence, the audit found the new crime lab did not increase productivity by 20 percent as anticipated by DPS management when seeking legislative funding for the project. Exhibit 5 on page 20 of the report was developed with data provided by the department, and results were

reviewed with DPS management. This exhibit does not show a significant decrease in turnaround time.

We cannot address the productivity statistics provided on page 2 of the DPS response, as the information was not provided during fieldwork or after the audit when we provided a draft copy of the report for comment.

DPS Management Believes Outsourcing is Cost Effective.

Determining the extent of outsourcing was an objective of the audit, at least in part due to the expectation that the new crime lab would provide additional services.

Forensic Analysis Backlogs Were Primarily Due to a Lack of Forensic Staff.

We cannot address the backlog statistics provided on page 4 of DPS' response, as the information was not provided during fieldwork or after the audit when we provided a draft copy of the report for comment. Exhibit 8 on page 23 of the report was developed with data provided by the department, and results were reviewed with DPS management.

Evidence Control Weaknesses Could Impact the Integrity of Evidence.

DPS' response to the audit does not agree with the conclusion, yet the response only disagrees with the audit's finding of excessive access to the evidence vault. There are several other control weaknesses that support the conclusion that the department does not address in its response. These weaknesses, including lack of video surveillance in the evidence vault, leaving drug evidence unattended, and not tracking non-electronic keys, further support the conclusion that weaknesses could impact the integrity of evidence. Regarding access to the evidence vault, we acknowledge that when choosing to implement controls, management must weigh costs versus benefits. This can be a challenging process, made even more difficult by the budgetary constraints faced by the department. When making this determination, it should be noted that preventative controls (evidence technician logging and retrieving evidence) are more effective than detective controls (annual inventory).

Security and Monitoring of the Crime Lab Facility Needs Improvement.

DPS' response to the audit disagrees with the identity and location of the doors mentioned in the audit. Specifically the letter states:

> *Three doors identified are not in areas where Crime lab evidence is received, analyzed, or stored (we are unaware of the fourth door). The doors in question are exit-only doors located in each stairwell. There is no handle on these doors from the outside. The remaining are garage doors; two located in the vehicle examination garage and one in the evidence receiving garage. While there are no cameras on the exterior of these doors, they are exit-only doors and require*

> *a "badge swipe" (access via electronic key card with permissions to the device) to activate which leaves a record of use of the door. These doors can only be activated from inside the facility. There are no door handles or access card readers located on the exterior position of these doors.*

These comments are not supported by audit evidence. Per audit fieldwork, the doors are located in areas where evidence is received, analyzed, or stored. Two exit-only doors are located on the floor occupied by the commissioner's office, of which one connects without having to use an access key card to the chemistry wing. The other two doors are located in the physical discipline wing and are located near the evidence vault and room. Controlled substance evidence is transported and analyzed by chemistry and physical discipline staff in each of the areas. In addition to controlled substances, firearms evidence is transported and analyzed in the physical discipline wing.

Furthermore, DPS management states that unauthorized access by fraudulent claims of identity cannot occur because the lab is separated from public space by secured doors that require electronic key card access. We disagree. Identification checks, sign-in, and visitor badges are physical security best practices designed to protect against the use of lost or stolen access cards, piggy-backing access, and unauthorized guest access. Again, we acknowledge that when choosing to implement controls, management must weigh costs versus benefits.

Performance Measures Were Not Accurate and Complete.

DPS disagrees with several aspects of this conclusion. The Objective, Scope, and Methodology section of the audit states that only FY 15 performance measures were recalculated. Our evaluation of the reliability of data used to calculate performance measures covered the period FY 08 through April 2016. We also take exception to DPS' methodology, which is systematic.

In regards to the inclusion of proficiency tests and competency tests when measuring the lab's performance, we reiterate that this performance measure addresses the lab's mission: "Timely scientific results available to the criminal justice system." Including internal tests routinely completed within a week skews the performance results and improperly makes the lab appear more responsive to the criminal justice system.

DPS' response also disagrees that the database performance metrics are unreliable, yet does not give a reason for disagreement that addresses the audit results. The methodology for conducting this testing is described in the Objectives, Scope, and Methodology section of the audit. Database reliability testing was performed on a random sample of 80 requests from a population of 60,835 based on a confidence level of 90 percent with a precision of +/- 10 percent. Supporting documents for each request was traced to source documents to ascertain data reliability. This sample included 36 DNA database cases. Testing found that all 36 release dates did not agree with the hard copy administrative review checklist completion dates. Eleven of the 36 assign dates did not agree with dates the evidence was removed from the vault for analysis. These results clearly show data is unreliable.

The Crime Lab Manager's Juvenile Daughter Inappropriately Assisted with Crime Lab Operations.

In DPS' response, the commissioner claims that the Crime Lab manager's juvenile daughter was authorized to assist with the inventory of drug standards, and that authorization was not a violation of procedures. The commissioner also claims that appropriate permissions were assigned. We disagree with both of these claims. Allowing a juvenile access to highly sensitive areas demonstrates poor judgment. The Crime Lab manager's daughter's key card allowed her to access the employee entrance, breath alcohol laboratory, instrument rooms located in the biological discipline area, and all discipline offices. Government Auditing Standards issued by the Comptroller General of the United States require that we report significant instances of abuse found during an audit. Abuse involves behavior that is deficient or improper when compared with behavior that a prudent person would consider reasonable and necessary business practice given the facts and circumstances. The facts support a finding of abuse. The commissioner's response makes this finding even more concerning, as it does not acknowledge the seriousness of the manager's actions and the need for corrective action.

Recommendation 1: DPS Commissioner should ensure building security and evidence control procedures minimize the potential for evidence loss and theft.

The section of Appendix A of the laboratory quality assurance referenced in DPS' response was updated October 2016, which was after auditors discussed the finding with management.

Additional Comments

DPS questioned why the audit provides no findings regarding the inquiries with labor organizations. To clarify, inquiries were made with the following organizations about Crime Lab-related complaints during the period FY 07 through April 2016:

- Alaska State Commission for Human Rights (ASCHHR);
- Department of Administration Division of Personnel (DOP);
- United States Equal Employment Opportunity Commission (EEOC);
- Office of the Ombudsman (Ombudsman); and
- DPS Commissioner's Office.

We found that no complaints were filed with the ASCHHR and EEOC. Four complaints were filed with the DPS Commissioner's Office, one complaint was filed with DOP, and one complaint was filed with the Ombudsman. The nature and disposition of the complaints was reviewed and considered when drafting the audit plans.

Sincerely,

Kris Curtis, CPA, CISA
Legislative Auditor

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