



2014-2015 SANTA CLARA COUNTY CIVIL GRAND JURY REPORT

SANTA CLARA COUNTY CRIME LAB ON THE RIGHT TRACK

Introduction

The Santa Clara County Civil Grand Jury (Grand Jury) received a request to investigate the details described in a San Jose Mercury News article of May 5, 2014¹. The article reported that on January 31, 2014, a Santa Clara County District Attorney Crime Laboratory (Crime Lab) criminalist used the wrong reference standard in testing a set of blood/urine specimens for the presence of methamphetamine. The test results reported false positives and could have affected people arrested on suspicion of being under the influence of a controlled substance. The Crime Lab caught the mistake and all specimens were retested with the correct standard. Seven of those specimens resulted in inconclusive results. The retests of the seven cases showed true positives; however, the outcome of these cases did not change. The Crime Lab reported the details of the error to the Office of the District Attorney (DA's Office), who then issued a press release (May 5, 2014) prior to the release of the newspaper article.

The Santa Clara County Crime Laboratory is also accredited by the American Society of Crime Laboratory Directors/Laboratory Accreditation Board (ASCLD/LAB). The ASCLD/LAB accreditation allows the Crime Lab to become certified and have access to the Combined DNA Index System (CODIS). In pursuit of this certification, the Crime Lab has to undergo audits from outside agencies including an audit in 2012.

The Grand Jury wanted answers to the following questions:

- How did this mix-up happen?
- How did the Crime Lab investigate and fix this problem?
- Does the Crime Lab have rules and quality practices that will detect and prevent mix-ups like this in the future?

¹ http://www.mercurynews.com/crime-courts/ci_25702369/crime-lab-uses-wrong-chemical-2-500-methamphetamine

Background

The Crime Lab provides services to all criminal justice agencies within Santa Clara County (County) and at times assists District Attorney offices in other counties. Crime Lab criminalists evaluate and analyze evidence, interpret results, provide expert testimony in court related to the full spectrum of physical evidence recovered at crime scenes, and offer technical assistance and training to other agencies. The Crime Lab employs over 65 criminalists, technicians, and support staff.

Crime Lab Units

The Crime Lab consists of the following units:

- **Computer Forensics** – Analyzing information related to computing devices and digital storage devices
- **Comparative Evidence** – Comparing evidence marks such as firearms, tools, shoes, and tires to evidence marks for evidence
- **Forensic Biology I, II, & III** – Using biology such as DNA techniques, anthropology and ornithology, odontology to analyze evidence
- **Chemistry** - Analyzing liquids, powders, and stains to determine identity
- **Trace** – Identifying trace materials that are transferred during a crime such as hair, fibers, soil, textiles, and rope
- **Toxicology** – Analyzing biological evidence to determine the presence of toxic substances

The Crime Lab analytical disciplines include:

- **Controlled Substance Analysis** – Preliminary screening and testing which is followed by confirmatory testing for controlled substances
- **Firearms/Tool Marks** – Comparative analysis of marks on evidence found at a crime scene for such things as wear, corrosion, and use
- **Forensic Biology** – Using biology such as DNA techniques, anthropology and ornithology, odontology to analyze evidence
- **Forensic Toxicology** – Analyzing biological evidence to determine the presence of toxic substances
- **Latent Print Processing** – Collecting, examining, analyzing, comparing, and verifying fingerprints
- **Questioned Documents** – Establishing authenticity of questioned documents by analyzing such things as handwriting, commercial printing, photocopies, papers, and inks
- **Trace Evidence** – Analyzing materials such as hair, fibers, soil and rope which may have transferred from other people, other objects or from the environment

- **Computer Crimes** – Analyzing crimes where a computer or mobile device may have been used
- **Digital And Multi-Media Evidence** – Analyzing evidence such as computer files, audio files, video recordings, and optical media
- **Crime Scene Analysis** – Collecting and analyzing all evidence found at a crime scene such as body fluids, ballistics, explosives, DNA, and fingerprints

Job descriptions have been established for all technical and managerial positions in the Crime Lab. These positions are: Director of the Crime Laboratory, Assistant Crime Laboratory Director, Crime Laboratory Quality Manager, Supervising Criminalists, Criminalists, Property/Evidence Technicians, Criminal Investigators, and Medical Laboratory Assistant. The Supervising Criminalist and Criminalists are all required to have a Bachelor's Degree in Natural or Applied Science. Criminal Investigators require 60 semester hours of college level courses.

Crime Lab Accreditation

The Crime Lab is accredited by the American Society of Crime Laboratory Directors/Laboratory Accreditation Board (ASCLD/LAB)², a corporation specializing in the accreditation of public and private crime laboratories. The ASCLD/LAB conducts a complete system wide audit of the Crime Lab facility once every five years. The ASCLD/LAB also performs smaller, less comprehensive audits annually. Under this accreditation the Crime Lab conforms to ISO/IEC standard 17025:2005.³

The ASCLD/LAB accreditation allows the Crime Lab to become certified and have access to the Combined DNA Index System (CODIS).⁴ In pursuit of this certification, the Crime Lab has undergone audits from outside agencies including an audit in 2012 conducted by the Department of Justice Office of the Inspector General, audit division. This audit focused on the Crime Lab's compliance with standards governing the CODIS activities. The CODIS system allows crime labs to compare and match DNA profiles electronically to assist law enforcement located all across the United States in solving crimes. As a result of this audit, the Crime Lab was found to be in compliance with the National DNA Index System (NDIS)⁵ participation requirements.

An accredited laboratory is one that has received formal recognition that it meets or exceeds a list of standards, including the FBI Director's Quality Assurance Standards⁶, to perform specific tests. Notably, a laboratory does not have to be part of a public

² ASCLD/LAB-International Program Scope of Accreditation

³ 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.

⁴ CODIS <http://www.fbi.gov/about-us/lab/biometric-analysis/codis/codis-and-ndis-fact-sheet>

⁵ NDIS <http://www.fbi.gov/about-us/lab/biometric-analysis/codis/codis-and-ndis-fact-sheet>

⁶ Quality Assurance Standards for DNA Data basing Laboratories. Federal Bureau of Investigation, 2009. <http://www.fbi.gov/hq/lab/html/databasinglab.htm> See also Quality Assurance Standards for DNA Testing Laboratories. Federal Bureau of Investigation, 2009. www.fbi.gov/hq/lab/html/testinglab.htm

entity; it can also be a nonprofit professional association of persons actively involved in forensic science that is nationally recognized within the forensic science community in accordance with the provisions of the Federal DNA Identification Act (42 U.S.C. Section 14132)⁷ or subsequent laws.

The disciplines covered by the ASCLD/LAB accreditation include:

- Controlled Substances
- Human Performance Forensic Toxicology
- Post-Mortem Forensic Toxicology
- Nuclear DNA Analysis
- Body Fluid Identification
- Fibers And Textiles
- Gunshot Residue
- Hair Analysis
- Fire Debris
- General Physical And Chemical Analysis
- Firearms Analysis
- Tool Mark Analysis
- Latent Print Processing
- Document Examination
- Computer Forensics
- Video Analysis
- Audio Analysis
- Impressions Evidence (footwear/tires)
- Bloodstain Pattern Analysis

In addition to the ASCLD/LAB audits, the Crime Lab conducts its own internal audit on an annual basis. The internal audits are conducted by lab managers who audit the management requirements of their quality system and peer teams of three to five auditors who audit the technical requirements.

Methodology

Based on a submitted complaint, the Grand Jury focused its inquiry on controlled substance analysis. The Grand Jury attended a presentation, question and answer session, and tour of the Crime Lab.

In developing this report, the Grand Jury participated in a tour of the Crime Lab, conducted interviews with District Attorney Crime Lab Staff, requested documents pertinent to the investigation, and performed online searches for information and documents relating to the Crime Lab and its certification.

⁷ U.S. Code 42 U.S.C. §14132 – Index to Facilitate Law Enforcement Exchange of DNA Identification Information

While touring the Crime Lab facility, the Grand Jury:

- Observed the work spaces and lab equipment,
- Confirmed chemical storage facilities with the corresponding control sheets,
- Viewed equipment calibration stickers with inspection dates,
- Reviewed the on-line data collection along with hard-copy samples of their Standard Operating Procedures (SOPs) which are version controlled, and
- Reviewed the incident of the Meth Test Mix-Up with Crime Lab personnel.

Documents reviewed included the following:

- Santa Clara County Crime Laboratory Corrective Action Request #14-002 (CAR) Scope of Accreditation certificate #ALI-307-T issued by the American Society of Crime Laboratory Directors/Laboratory Accreditation Board (ASCLD/LAB),
- Santa Clara County Crime Laboratory Toxicology Administrative Manual,
- Administrative Directives Manual,
- The 2013 Crime Lab Annual Report,
- The 2014 Final Budget, and
- The 2014 Internal Audit Report for the Santa Clara County District Attorney Crime Laboratory.

Crime Laboratory documents reviewed from internet sites:

- Organizational Charts
- Addendum to the Crime Laboratory Organizational Chart
- Crime Laboratory Services

Discussion

The Grand Jury's objectives were to determine whether the Crime Lab has flawed, inadequate procedures for testing methamphetamine in evidence specimens. Could this error happen again? How does the Crime Lab maintain its status as having one of the highest accreditations for forensics in the nation?⁸

The Crime Lab's Role with the District Attorney and Law Enforcement

The need for testing of blood, saliva, or urine by the Crime Lab usually begins when a law enforcement officer has contact with a person whom they believe is displaying signs and symptoms of being under the influence of a controlled substance. The law enforcement officer will conduct a field sobriety test tailored to the suspected substance (e.g. stimulant, alcohol, depressant). Depending on what controlled substance is suspected, law enforcement will facilitate the collection and submission of blood, urine,

⁸ Office of District Attorney Press Release, April 23, 2012.

or saliva specimens to the Crime Lab for confirmation that a controlled substance was “present” in a specimen. In preparing the case for prosecution, the DA’s Office works with the Crime Lab to obtain scientific confirmation that a specimen is positive for a controlled substance and further identify the type and strength of controlled substance present in the specimen.

Screening Tests (Presumptive) versus Confirmatory Tests

The Crime Lab conducts an initial test (screening test) followed by two confirmatory tests on the specimen before it can be reported as positive that a controlled substance is present.

The Toxicology Unit first uses a process called Enzyme ImmunoSorbent Assay (EIA)⁹, which is a standard screening test used to determine if there are any drugs present in the sample.¹⁰ EIA is able to detect up to ten different drugs in blood or urine and the test can detect either a particular drug or drug class. Reference standards are added to each sample and will react to the presence of a drug and change the sample’s color if the drug is present. Each reference standard has a specific concentration level that is the cutoff or reference threshold for detection. This cutoff threshold is established by the Crime Lab using documented national and international values agreed upon by law enforcement agencies.

Results are recorded in a database and any specimen that shows an EIA response at or above the specified reference cutoff is considered presumptive positive. EIA test results are considered presumptive, not conclusive, because a positive screen results can be due to other chemical cross reactions, and might not indicate substance use (e.g. amphetamine positive screen results may be caused by over the counter cold medications).

The EIA test has a cut-off value or threshold above which a sample is considered positive.¹¹ The threshold is established by the Crime Lab and is set high enough so that inadvertent drug exposure (e.g. poppy seed ingestion) does not produce a positive result.¹²

The Crime Lab reports the results of the presumptive positive test to the DA’s Office and awaits further direction on whether it should proceed with a confirmation test. Sometimes, the DA elects to proceed with a prosecution without requiring further confirmation details if other evidence in the case is sufficient. If the DA intends on relying on the toxicology results for the prosecution, the DA will request that the specimen undergoes Gas Chromatography and Mass Spectrometry (GC-MS), which is the mechanism used to conduct a confirmatory test.

⁹ ELISA, or EIA, is an acronym for enzyme-linked immuno assay. ELISA is a test that detects and measures antibodies in your blood. This test can be used to determine if you have antibodies that are related to certain infectious conditions.

¹⁰ Refer to Appendix A: Drug Testing Process Flow diagrams

¹¹ Sarah Kerrigan, Ph.D., *Drug Toxicology for Prosecutors*, Oct 2004, p. 40

¹² Sarah Kerrigan, Ph.D., *Drug Toxicology for Prosecutors*, Oct 2004, p.39

GC-MS reflects the industry standards for drug detection specificity and accuracy as to the concentration. However, GC-MS is expensive and more labor intensive. Accordingly, not all presumptive positive results go through these processes.

Gas Chromatography (GC) can confirm the presence of a specific drug or its metabolized form when the EIA test screen is positive. The GC-MS reference chemical concentrations are twice as sensitive as the EIA version. For example, the threshold cutoff is much lower for isolating Tetrahydrocannabinol (THC)¹³ or methamphetamine molecules. The Gas Chromatography is completed first and it separates the compounds found in the samples and prepares them for the next confirmation test called Mass Spectroscopy (MS). Mass Spectrometry (MS) is technology that analyzes the molecules of a sample to identify and find the “fingerprint” which identifies the unique characteristics of a specific drug.

Mix-Up

The methamphetamine and THC reference standards for the presumptive EIA test have a higher cutoff threshold. The GC and MS test stations (the confirmatory tests) use lower cutoff reference standards for methamphetamine and THC confirmation. These reference chemical standards are from the same manufacturer and have similar labels. The criminalist performing the EIA test made the error while preparing the new batches of reference standard solutions used for the presumptive EIA test by incorrectly using the reference standard for the GC-MS tests.

The criminalist was trained in running the EIA test but did not realize that the GC-MS reference standards have a more sensitive (lower) cutoff. The criminalist retrieved the methamphetamine and THC standards for GC-MS and used those as his reference chemical in the EIA test.

Following established protocol, the criminalist logged the chemical solution that was used into the Toxicology Unit Control Log. From January 1, 2014 to March 30, 2014, a total of 2,573 THC and methamphetamine samples were run at the EIA test station and found to be presumptive positive using the improper reference standard. This use of the incorrect reference standard resulted in more presumptive positive samples reported due to the lower cutoff threshold associated with GC-MS reference solution. It should be noted, that all presumptive positives that were screened at the EIA test station with the wrong solution would still have progressed to the GC/MS confirmatory process if the DA's Office requested confirmation results to introduce at trial.

The mix-up was discovered by another criminalist inspecting the Toxicology Control Log who reported it to the supervisor. The toxicology supervisor understood the implication that the higher sensitivity reference standard might report more false positive results and, further, how those results might affect cases pending with the DA.

¹³ THC or tetrahydrocannabinol is the chemical responsible for most of marijuana's psychological effects.

Crime Lab Transparency

The Crime Lab was concerned that methamphetamine cases might have been impacted if they did not meet their scientifically established cutoff threshold standard during the presumptive testing phase. By working with the chemical standard supplier and their own experimentation, the Crime Lab determined 105 samples were reported as presumed positive for methamphetamine but possibly did not meet the appropriate threshold used at the presumptive phase testing. These 105 samples were retested with the correct reference standard (higher cutoff) and fifteen samples were found to be inconclusive or negative. Due to the potential ramifications of the presumptive positive test results, these fifteen were further tested using GC and MS and seven were found to be positive for methamphetamine. The Crime Lab reported these results to the DA's Office along with details of the EIA test mix-up internal investigation. None of the seven cases that involved false presumptive positives were subjected to prosecution based solely on the first erroneous results.

The Crime Lab supervisor also informed the DA's Office about the details of the EIA test mix-up internal investigation. The DA's Office issued a press release (May 4, 2014)¹⁴ describing what happened and how the Crime Lab resolved the problem as further discussed below.

Corrective Action Request Form

The criminalist who discovered the control log entry initiated a Corrective Action Request (CAR) form to track the investigation of what happened. The Crime Lab Quality Assurance Unit uses a CAR form to document incidents. It identifies changes required so that the Crime Lab can improve test performance and prevent errors with its test processes. The Toxicology Unit reviewed its findings from the incident and then assigned someone to modify training and documents needed to prevent this mistake from occurring in the future. The Crime Lab supervisor interviewed the criminalist, reviewed their Toxicology Administrative Manual, and inspected the storage arrangement used for reference chemical standards. The Grand Jury reviewed the completed CAR form and saw that several areas are listed as contributors to the problem:

- Two different concentrations of reference chemicals are used for methamphetamine testing. One for EIA and one for GC and MS.
- The labels on these reference standards are similar and likely became smudged with frequent usage.
- The criminalist's training was only for executing and performing the EIA test, and was not familiar with the GC-MS reference standards. The criminalist assumed that the chemicals selected were common with what was needed for the EIA test.

¹⁴ Refer to Appendix B; SCC DA Office Press Release, May 4, 2014

Quality Management

As part of its ISO accreditation, the Crime Lab must maintain records of its Business and Quality Assurance procedures and practices. The Grand Jury reviewed several Crime Lab documents used in drug testing. Every written procedure incorporated instructions on how to prepare a test station, calibrate and maintain instruments, create reference standard solutions, and track expiration dates for reference stock. The Grand Jury also found that the Crime Lab performs internal audits and records any non-conformity to its procedures and practices. For a significant non-conformity, a CAR will be initiated to fix a problem. That fix might require updating manuals, equipment modification, or additional technician training steps. The CAR identified this non-conformity with detailed narrative sections that:

- Described how the non-conformity occurred and who was responsible,
- Described the impact on present and past analytical testing and management system operations,
- Determined the root cause of the non-conformity, and
- Described a plan and actions to prevent recurrence of this problem in the future

Grand Jury interviews with Crime Lab personnel supported its understanding that this process of investigating a problem and documenting a fix is a normal regimen. This CAR, as well as other CAR's and quality audits, included acknowledgement sign-offs from all levels of the Crime Lab management. Also, the CARs include a periodic monitoring date to ensure that the corrective action fixed the problem.

The Grand Jury acknowledges that the Crime Lab holds itself to a very high standard when analyzing forensic evidence. The Crime Lab must also comply with ISO standards in order to be acknowledged as an accredited forensics lab. There are several guidelines that the Crime Lab must follow if it expects to remain accredited. Below are examples of ISO Standards that have been incorporated into the Crime Lab's training procedures in the Toxicology Administrative Manual.¹⁵

1. Do you have a mechanism for checking that quality management is operating on a day-to-day basis by all staff?
2. Where this is found not to be the case, do you have a mechanism for taking corrective action to ensure that the situation is remedied and not likely to recur?
3. Do you use the information from any quality problem to enable you to identify where the quality system can be improved and do you act on this?

¹⁵ *Complying with ISO 17025, A Practical Guidebook*, Vienna 2009, p.20

4. Do you have mechanisms to monitor trends in quality performance so that failures can be anticipated and dealt with before they become critical?
5. Do you review the performance of your quality system to determine whether it is delivering the objectives which you have identified for it?

In addition, a permanent Quality Manager position was created whose duties include in-house policing of all units and maintaining a corrective action database and a hard-copy archive. A check and balance system exists in each of the forensic units where, if mistakes occur, they will be caught quickly.

The Grand Jury found the Crime Lab staff to be very open, cooperative and transparent when it came to describing its operations, database, and reporting problems. Interviews of Crime Lab personnel have confirmed that they have a mature, well-developed quality system that is capable of developing Cause and Corrective Action for incidents such as the Meth Test Mix-Up. Documentation provided by the Crime Lab has shown that the incident was handled in a thorough and professional manner.

The Grand Jury's review of the documentation and interview responses revealed that the criminalist involved with the mix-up has received additional training. Also, the Crime Lab now has a process whereby each analyst and the technical support personnel engaged in testing activities will successfully complete at least one internal or external proficiency test per calendar year in his/her forensic science discipline.

The Crime Lab has updated training methods by revising the Crime Laboratory Toxicology Administrative Manual and training materials for new employees.

The Crime Lab decided to replace the GC-MS reference standard solutions with one common concentration used for the EIA, GC and MS test stations. The labels now have larger print to avoid a mix-up for methamphetamine or other substance testing in the future.

The revised procedures section of the Toxicology Administrative Manual now requires a second criminalist to verify the drug stock batch used when mixing a new testing reference solution.

The Grand Jury was told the Crime Lab staff will continue to monitor each other in order to verify that these procedures are followed precisely. The Crime Lab presented to the Grand Jury results of recent audits that were conducted after the mix-up which showed no deficiencies in the areas related to the methamphetamine testing.

Conclusions

The Grand Jury acknowledges the performance and dedication of the Crime Lab administration and staff. Interviews and discussions with Crime Lab personnel revealed that they have an experienced and vigilant staff that follows a comprehensive quality process.

The Crime Lab meets or exceeds the list of ASCLD/LAB standards including the FBI Director's Quality Assurance Standards. As a result, the Crime Lab is certified to have access to the Combined DNA Index System (CODIS), which allows them to access the nationwide DNA system maintained by the FBI. The Crime Lab has received recognition from The American Society of Crime Laboratory Directors/Laboratory Accreditation Board (ASCLD/LAB). Additionally, the Crime Lab undergoes various audits: an ASCLD/LAB audit performed every five years, the Department of Justice audits upon request, a yearly ISO/IEC standard 17025 audits, and yearly internal audits to maintain their keen sense of efficiency.

In regards to the investigation of the methamphetamine testing:

- The Crime Lab demonstrated transparency in reporting this incident.
- The Corrective Action Request Form generated by the Crime Lab's quality organization was found to contain excellent detail on the handling of the incident, which enabled the Grand Jury to track the incident from start to finish. The Crime Lab is commended for their reporting and handling of the incident.
- The Crime Lab's Meth Test Mix-Up was corrected by modifying the test procedure and using a single reference standard for the EIA, GC, and MS tests.
- The Crime Lab changed container labeling by using new and larger container labels, storing the solution in another room/cabinet, and having a second technician double check the verification of the solution being used.
- The Crime Lab has an experienced and vigilant staff that follows well-developed quality control processes.
- The Crime Lab changed container labeling by using new and larger container labels, storing the solution in another room/cabinet, and having another technician verify the solution being used.
- The Crime Lab has experience and vigilant staff that follow well-developed quality control processes.

Findings and Recommendations

Finding 1

The Crime Lab's continued ASCLD/LAB accreditation and accreditation from both national and ISO/ IEC standards is testament to a culture that maintains a highly qualified staff and operation.

Recommendation 1

No recommendation.

Finding 2

The Crime Lab demonstrated transparency in reporting this incident.

Recommendation 2

No recommendation.

Finding 3

The Crime Lab's Meth Test Mix-Up was corrected by modifying the test procedure and using a single reference standard for the Enzyme ImmunoSorbent Assay (EIA), Gas Chromatography (GC), and Mass Spectrometry (MS) tests.

Recommendation 3

No recommendation.

Finding 4

The Crime Lab changed container labeling by using new and larger container labels, storing the solution in another room/cabinet, and having another technician verify the solution being used.

Recommendation 4

No recommendation.

Finding 5

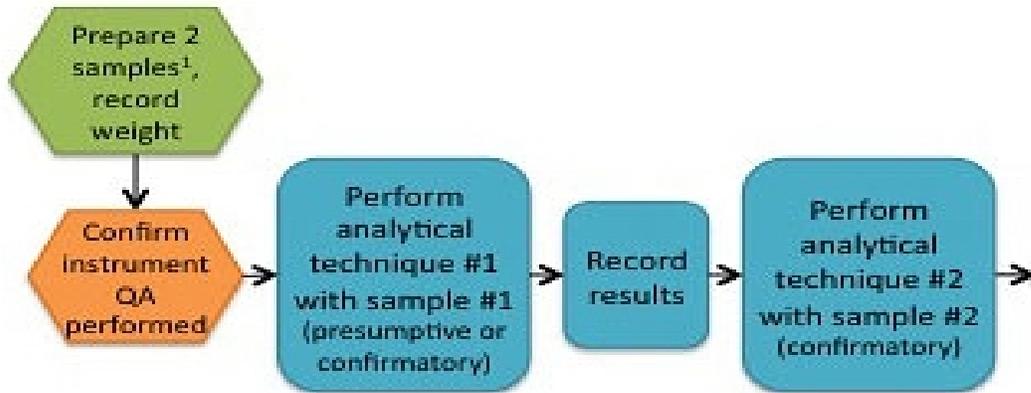
The Crime Lab has experienced and vigilant staff that follows well-developed quality control processes.

Recommendation 5

No recommendation.

Appendix A

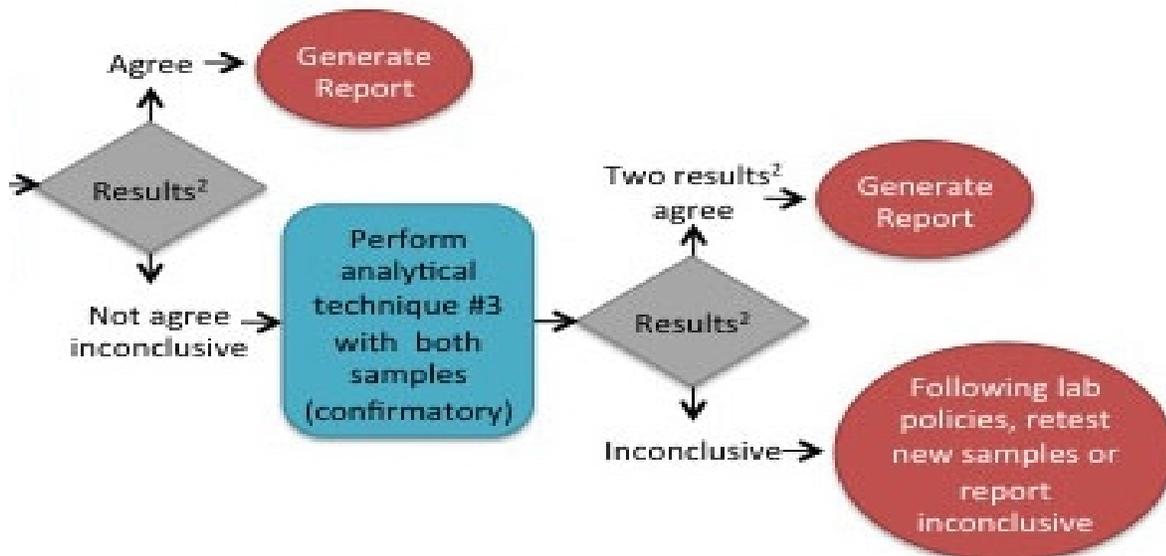
Figure 1: Screening Test (EIA) #1 and Confirmation Test (Gas Chromatograph) #2



¹ When possible, two individual samples are prepared

² Results are positive or negative for a controlled substance, but results from two techniques must agree

Figure 2: Confirmation Test (Mass Spectrometry) #3



Appendix B

<http://www.sccgov.org/sites/da/newsroom/newsreleases/Pages/NRA2014/Elevated-Methamphetamine-Crime-Lab-Test-Found,-Fixed.aspx>

Elevated Methamphetamine Crime Lab Test Found, Fixed

For release on May 5, 2014

CONTACT: David Angel, Assistant District Attorney, (408) 792-2857

ELEVATED METHAMPHETAMINE CRIME LAB TEST FOUND, FIXED

The Santa Clara County District Attorney's Office has found and fixed a two-month error in crime lab testing for the presumptive presence of methamphetamine. The Office is disclosing the issue to defendants, and taking steps to ensure future tests are accurately generated.

The one-time error caused six methamphetamine test results taken from January through March to show a presumptive "positive" test, which were later determined by a confirmatory test to be "negative." None of these six individuals are in-custody based upon the potentially erroneous presumptive result. One case is civil and not criminal, and in one case charges were never filed. In another case, a defendant pleaded "No Contest" and was sentenced to jail after the presumptive test result erroneously gave a "positive" for methamphetamine. However, further testing confirmed he was "negative" for methamphetamine, but he was "positive" for PCP. The PCP test was not available at the time of the defendant's plea. The attorneys for all the potentially affected defendants have been notified. The DA's Office is also notifying about 2,500 defendants and their lawyers that their test results were processed during the period in question, even though these tests have already been re-evaluated and determined to be accurate.

Said District Attorney Jeff Rosen: "Human error will always exist within the criminal justice system. However, it is vital that we quickly find any possible mistakes and quickly fix them. We did that in this case."

When testing blood or urine for the presence of drugs, the Crime Lab performs a presumptive screening test. Each sample is tested twice, and the results are either "positive," "negative," or "inconclusive." All "inconclusive" tests are tested further. "Positives" and "negatives" are reported as such. An "inconclusive" or "negative" result does not necessarily indicate the absence of methamphetamine in the blood. Rather, because the Crime Lab adheres to the highest accreditation standards, it will report as "negative" or "inconclusive" those cases where the presence of methamphetamine is present in the person's system, but below a certain threshold.

A criminalist in April discovered the error, caused when another criminalist created control standards for the test using an incorrect compound that increased the test's sensitivity. Pending a review, the analyst who made the initial mistake has been re-assigned from drug testing duties. As part of the review, four years of methamphetamine test control results were back-checked and ratified as accurate.

Freshly created drug control samples will be documented and double-checked by a second criminalist prior to use and test control standard reagents will be labeled more clearly.

Appendix C Documents Reviewed

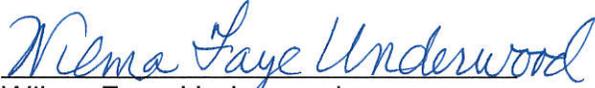
1. Newspaper article dated 5/5/2014 – *Crime lab uses wrong chemical in 2,500 methamphetamine tests in Santa Clara County*
2. Corrective Action Request CAR # 14-002 dated 4/4/2014 (Confidential)
3. *ASCLD/LAB-International Program – Scope of Accreditation* – Corresponds to Certificate Number ALI-207-T dated 3/20/2012
4. *2014 Internal Audit Report for the Santa Clara County DA's Laboratory Summary Non-Conformance Report with Responses* dated 5/19-6/2/2014
5. Sarah Kerrigan, Ph.D., *Drug Toxicology for Prosecutors*, Oct 2004, p. 39
6. *Complying with ISO 17025, A Practical Guidebook*, United Nations Industrial Development Organization Vienna ,2009, p. 20
7. FBI – CODIS and NDIS Fact Sheet, *Frequently Asked Questions (FAQs) on the CODIS Program and the National DNA Index System* <http://www.fbi.gov/about-us/lab/biometric-analysis/codis/codis-and-ndis-fact-sheet>
8. International Laboratory Accreditation Cooperation *Why become an Accredited Laboratory?*
9. San Jose Mercury News Article dated 1/5/2011 – *New Crime Lab Director Named*
10. *Inspection And Inquiry Report Into Santa Clara County Crime Laboratory.pdf*
11. General Requirements: Accreditation Of Field Testing And Field Calibration Laboratories
12. Crime Lab Administrative Directives Manual- Rev. 4, 10-2-14
13. *An Examination of Forensic Science in California*, November 2009
14. *Elevated Methamphetamine Crime Lab Test Found, Fixed - District Attorney - County of Santa Clara*
15. General Requirements: ACCREDITATION OF FIELD TESTING AND FIELD CALIBRATION LABORATORIES , *American Association for Laboratory Accreditation*

16. Molly E. Griswold, Its More Complex Than You Think - A Chiefs Guide to DNA, Police Executive Research Forum, Washington, DC 20036, 2010
17. Simplified Guide Drug Chemistry, National Forensic Science Technology Center, 7881 114th Avenue, North Largo, Florida 33773
18. Santa Clara County Crime Lab Procedures:
 - a. 1.2.4 - Drug Testing Quality Assurance Rev.8
 - b. 1.6.3 - Specifications for GCMS Results- Rev 7
 - c. 2.1.1 - Toxicology Training Scope-Rev.5
 - d. 2.2.3 - GCMS Training Module-2
 - e. 2.3.3 - GCMS Analysis Training Checklist- 2
 - f. 3.5.1 - Blood MDMA Confirmation Method- 2
 - g. 3.9.1 - Organizing and Distributing GCMS Paperwork Procedure- 2

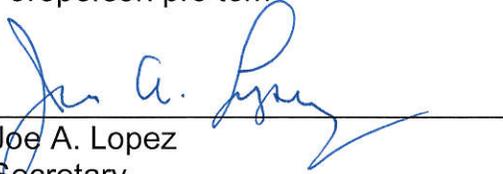
This report was PASSED and ADOPTED with a concurrence of at least 12 grand jurors on this 9th day of June, 2015.



Elaine K. Larson
Foreperson



Wilma Faye Underwood
Foreperson pro tem



Joe A. Lopez
Secretary



James L. Cunningham, Jr.
Secretary pro tem

June 29, 2015

A typographical error was discovered following the distribution of copies of the report entitled "Santa Clara County Crime Lab, On The Right Track."

The second paragraph on page 7 references Mass Spectroscopy, but it should reference Mass Spectrometry.