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Greg Suhr
Chief of Police
San Francisco Police Department
850 Bryant St., #525
San Francisco, CA 94103

Re: Allegations of Serious Misconduct in the San Francisco Police Department Crime Laboratory and the Paul Coverdell Forensic Science Improvement Grant Program

Dear Chief Suhr,

I allege that serious misconduct, which substantially affects the integrity of forensic results, has occurred at the San Francisco Police Department Crime Laboratory ("Crime Lab"). Recently, it has come to light that the Crime Lab misused the California SDIS DNA database by failing to follow procedures required of it for participation in the state and national database. This suggests that the Crime Lab committed serious misconduct.

The actions of Crime Lab personnel substantially affect the integrity of forensic results because improper procedures were followed and the state SDIS database was misused. This error may have led the police away from real perpetrators and resulted in the conviction of an innocent. Additionally, it affects the integrity of the state SDIS database as well as the conviction in this case.

Under the Paul Coverdell Forensic Science Improvement Grant ("Coverdell") program, the San Francisco Police Department Internal Affairs Division, has been designated to investigate allegations of serious negligence or misconduct at the Crime Lab, a laboratory receiving grant funding under the Coverdell program. As such, Internal Affairs is required to investigate this allegation.

I. The problem and its implications

Laboratory personnel in the Crime Lab, in the case of People v. Marco Hernandez, failed to follow its own protocols and misused the SDIS system.

In March 2012, lab analyst Mignon Dunbar, tested cuttings taken from an item of evidence identified as Item 1C. Ms. Dunbar isolated DNA from these cuttings using differential extractions. One of the cuttings, Item 1C-3/3 SP gave rise to a mixed sample of at least two individuals. During this time period a reference sample from the victim in the case, Judith, was obtained and analyzed. No report was issued. In July 2012, the lab received the reference sample for Marco Hernandez. DNA was extracted and analyzed from this reference sample and

the profile compared to the mixture of Item 1C-3/3 SP. The lab concluded that Mr. Hernandez could not be excluded as a minor contributor to this item and issued a report stating this conclusion as well as a statistical assessment of the evidence.

A year later, in June 2013, Ms. Dunbar submitted two interpretations of the minor components of the mixture to Cherise Boland, the CODIS administrator. Ms. Boland approved both interpretations of Item 1C-3/3 SP and on June 14, 2013, the two interpretations were uploaded to the state SDIS database by David Jackson.

During trial in this case in December 2014, the lab provided documentation to the defense of the two uploads and resulting partially matching profiles under protective order. The first "Interpretation 1" resulted in 5 candidate matches in the state database. The second, "Interpretation 2" resulted, at the time of trial, to 28 candidate matches. Ms. Dunbar testified that she compared the candidate matches to the mixed profile in Item 1C-3/3 SP and excluded all but Mr. Hernandez. Her technical leader also compared the candidate matches but testified that there were two potential candidate matches — one being Mr. Hernandez. Because this was a "solved" case, Ms. Dunbar compared Mr. Hernandez's reference profile and dispositioned the one that matched Mr. Hernandez as the match or hit, and all the others as "non match."

Lab Protocols

The lab failed to follow its own protocols in a number of ways. First, the "opinion" that there were interpretations of the minor contributor to the mixed sample, one of which excluded Mr. Hernandez, was not contained in the report issued by the lab. The lab's protocol states explicitly

> **Interpretation of DNA Typing Data (QAS 9.6.4)**: The interpretation of DNA data is considered a combination of qualitative (analysis) and quantitative (interpretation) assessments. An analyst should note all analysis and interpretation observations within the case notes either on the electropherogram page or on a separate note page. All data and conclusions are summarized in a report.[1]

Second, given the ambiguity of the profile, lab reported an opinion of inclusion when in fact the profile, under the lab's protocol, should have been declared inconclusive. Third, lab personnel destroyed notes on the comparison of the 5 and 28 candidate matches to the mixture in Item 1C-3/3 SP which is contrary to their policy of retaining all notes in a case (see above). This destruction led lab personnel to testify that they were unsure who had done the original comparisons or how those comparisons were conducted.

NDIS Rules

Lab personnel also violated the rules for upload to the state SDIS database by uploading an uninterpretable profile. Given that the proper opinion that the lab should have reached of inconclusive, both profile interpretations that were uploaded were not "interpretable" under NDIS rules.

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[1] SFPD Forensic Biology Procedures, at pg 77

> 4.2.1.1 DNA records submitted to NDIS shall be interpretable. In accordance with the validation studies performed by and the standard operating procedures of the NDIS participating laboratory, any data used to make an exclusion can be included in the DNA record submitted to NDIS.[2]

As evidenced by the lab's upload to SDIS of two interpretations of one evidence item, the mixed profile was not interpretable by their protocols. The data uploaded was not "fully deduced" as required by NDIS guidelines.

The lab also violated NDIS policy by uploading data at two loci that were consistent with alleles from the victim in the case.

> 4.2.1.8 A laboratory submitting a DNA record to the Forensic, Forensic Mixture, or Forensic Partial Indexes at NDIS that is derived from forensic evidence, shall only offer those alleles that are attributed to the putative perpetrator(s). Alleles derived from forensic DNA records that are unambiguously attributed to a victim or individuals other than the perpetrator(s), such as an elimination sample, shall not be offered to NDIS.

These two loci are the loci which differed in the two interpretations uploaded to SDIS. All alleles at these two loci were attributable to the victim and should not have been uploaded.

In addition, most of the data uploaded to SDIS was below the lab's stochastic threshold and required assumption of allelic dropout, increased stutter and peak height ratio imbalance. At the time of this upload, the NDIS manual clearly stated that testing conditions that had demonstrated stochastic effects based on the lab's validated procedures was not eligible for upload.

> 4.2.1.10 Low Template or Low Copy DNA analyses shall not be submitted to NDIS.
> 4.2.1.10.1 Based upon a laboratory's internal validation, any DNA typing results generated from limited quantity and/or quality DNA template ***using conditions that have demonstrated increased stochastic effects*** are defined as Low Template or Low Copy DNA analyses. The stochastic effects which may be observed in DNA samples subjected to these conditions include allelic drop in or drop out, increased stutter and increased intra locus peak height imbalance.[3]

Additionally, the lab did not follow the procedure laid out in the NDIS manual for when a case is "solved."

> 6.1.3.3 Step 3: Casework Laboratory Notifies Offender Laboratory
> At this stage, the Casework and Offender Laboratories begin collaborating. The Casework Laboratory informs the Offender Laboratory that the Candidate Match requires confirmation. If the case is ***solved***, the ***Casework Laboratory shall query the Offender Laboratory with the name associated with the solved case to***

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[2] National DNA Index System (NDIS) Operational Procedures Manual, FBI Laboratory, Version 1, Effective January 31, 2013, at 32.
[3] *Id.* at 33 [emphasis added].

determine if there are any discrepancies. If no discrepancies, the case may be dispositioned as a Conviction Match, documented, and it will not be necessary to proceed with the confirmation process. If there are discrepancies, please refer to Section 6.3 for suggested confirmation procedures.[4]

Once the lab identifies a case as "solved" and finds discrepancies, there are specific steps to be followed that were not followed in this case. The lab identified two candidates that could not be excluded from the evidence profile for Interpretation 2. A defense expert who reviewed the same profiles concluded that 14 (15 if you include the defendant) individuals could not be excluded. Rather than following the procedure outlined below, the lab engaged in a process that inappropriately eliminated one of the candidates by comparing the ***candidate profiles to the defendant's reference sample***. Nothing in the NDIS manual allows this type of comparison.

6.3.2.1 Step 1: (Solved Case) The Names of the Offender and the Putative Perpetrator Are Compared

The initial step involves a comparison of the named offender with the name of the putative perpetrator which may be performed by the laboratory(ies) involved or the Submitting Law Enforcement Agency. If the names are different, the laboratory or Submitting Law Enforcement Agency will search the criminal history records for the offender's known aliases. If the putative perpetrator's name matches the offender's name (or aliases), the Conviction Match is confirmed. If the putative perpetrator's name does not match the offender's name (or aliases), continue on to Step 2.

6.3.2.2 Step 2: (Solved Case) Check of Identifying Information

The laboratory involved or the Submitting Law Enforcement Agency will obtain the putative perpetrator's identifying information, including fingerprints, if available, and compare that information with the information submitted with the offender's DNA sample. If the identifying information of the putative perpetrator and that of the offender match, then the putative perpetrator is using a new alias and the Conviction Match is confirmed. Notification may be provided to the appropriate authorities to update their records to include this new alias. If the identifying information of the putative perpetrator and the offender do not match, continue on to Step 3.

6.3.2.3 Step 3: (Solved Case) Internal Confirmation Procedure Implemented

If it is determined that the identifying information of the putative perpetrator does not match the identifying information of the offender, the Offender Laboratory will follow its internal match confirmation procedure to ensure that no administrative errors occurred during sample processing. If there were no processing errors, the Offender Laboratory shall notify the Casework Laboratory that will be responsible for communicating the information to the Submitting Law Enforcement Agency or authorized criminal justice agency and that appropriate follow up is necessary.[5]

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[4] *Id.* at 44 [emphasis added].

[5] *Id.* at 48.

Finally, the lab did not assess the profiles that it was uploading satisfied the rarity requirement for upload.

> 4.2.1.7 Forensic mixture and forensic partial DNA records submitted to NDIS shall be reviewed by the submitting laboratory to ensure the DNA records satisfy a statistical threshold for match rarity of approximately one in the size of the NDIS database.[6]

While the laboratory generated a statistic for the profile as a whole, it did not do so for either of the interpretations that were entered into the SDIS database. Additionally, the Crime Lab did not maintain these interpretations of the data in the case file which resulted in the information being provided to counsel mid trial which hampered her ability to effectively represent Mr. Hernandez.

II. Other issues

Given the history of the Crime Lab, including the loss of accreditation for the narcotics division and the conviction of Crime Lab personnel for theft of controlled substances from the lab as well as a previous incident in which Crime Lab personnel in the biology division destroyed written documentation of a sample switch and failed to inform their accrediting body of the switch, Internal Affairs needs to take this seriously and investigate the misconduct of the above individuals as well as the practices in place in the lab to prevent such problems from occurring.

III. The Required Statutory Response to Allegations

The allegations mandate specific action under the Paul Coverdell Forensic Science Improvement Grant Program, from which the Crime Lab receives funds. As a precondition to receive funding, each applicant was required to furnish:

> A certification that a government entity exists and an appropriate process is in place to conduct independent external investigations into allegations of serious negligence or misconduct substantially affecting the integrity of the forensic results committed by employees or contractors of any forensic laboratory system, medical examiner's office, coroner's office, law enforcement storage facility, or medical facility in the State that will receive a portion of the grant amount.[7]

Congress initiated the grant program in 2000 which, since 2002, has provided states with a fertile source for forensic laboratory funding. The money is intended "to improve the quality and timeliness of forensic science and medical examiner services, and to eliminate backlogs in the analysis of forensic evidence, including controlled substances, firearm examination, forensic pathology, latent prints, questioned documents, toxicology and trace evidence."[8]

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[6] *Id.* at 33.

[7] 42 U.S.C. § 3797k (4) (2004).

[8] A description of the funding stream is available on the National Institute of Justice's Web site, at http://www.nij.gov/nij/topics/forensics/lab-operations/capacity/nfsia/welcome.htm .

The grants play a central role in virtually all states' forensic laboratory funding.[9] The Department of Justice's National Institute of Justice (NIJ), a division of the DOJ's Office of Justice Programs (OJP), administers the Coverdell grants. The NIJ disbursed $862,611 to the State of California, Office of Emergency Services, which disbursed $13,768.00 to the Crime Lab.

IV. Scope of the Investigations

The federal government has long recognized its duty to the public to identify and remedy the causes of catastrophic errors. For example, when an airplane crashes or a train derails, the National Transportation Safety Board (NTSB) immediately conducts an investigation into the causes of the incident and makes recommendations. Such investigations enable the government to figure out what went wrong and, even more importantly, what can be done to correct the problem and prevent it from happening again. Congress realized the benefit of the approach, and with its passage of the Justice for All Act of 2004 (JFAA) and the attendant changes to the Coverdell granting process, it brought this model to the nation's forensic entities. As the office for fielding Coverdell Program allegations connected with the Crime Lab, Internal Affairs is responsible for investigating these allegations for the benefit of the City and County of San Francisco and the criminal justice system at large.

The process Internal Affairs utilizes when it conducts this investigation is a crucial consideration, as well. The U.S. Government Accountability Office has developed standards for sound audits[10] like the one I am requesting, and the YYY's investigation will have the resonance and impact that Congress intended if it adopts the spirit of the GAO's recommendations. With that context in mind, I would ask Internal Affairs to:

(1) identify the source of the alleged problems;
(2) identify whether there was serious negligence or misconduct;
(3) describe the method used and steps taken to reach the conclusions in parts 1 and 2;
(4) identify corrective action to be taken;
(5) where appropriate, conduct retrospective re-examination of other cases which could have been affected by the same problem;
(6) conduct follow-up evaluation of the implementation of the corrective action, and where appropriate, the results of any retrospective re-examination;
(7) evaluate the efficacy and completeness of any internal investigation conducted to date;
(8) determine whether any suggested laboratory protocol change might also benefit other laboratories within its investigatory jurisdiction; and
(9) present the results of Parts 1-8 in a public report.

Any corrective action must not result exclusively in blame of a particular person for a particular act, but instead should determine the underlying causes of the act via "root cause analysis," the

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[9] See U.S. Department of Justice, Office of the Inspector General, Evaluation and Inspections Division, "Review of the Office of Justice Programs' Forensic Science Improvement Grant Program," (December 2005), available at http://www.usdoj.gov/oig/reports/OJP/e0602/final.pdf.

[10] See "Government Auditing Standards: January 2007 Revision," available at http://www.gao.gov/govaud/d07162g.pdf. See sections 3.01-3.39

purpose of which is to solve problems by correcting or eliminating root causes, as opposed to merely addressing immediately obvious symptoms.

We are thankful that Congress has made it possible for Internal Affairs to investigate this allegation. We expect that public concern will be alleviated by knowing the Internal Affairs is involved in ensuring that Congressional intent is fulfilled for the good of City and County of San Francisco and the criminal justice system at large. I ask that Internal Affairs investigate the circumstances described above as promptly as possible and release its resulting findings without undue delay.

Sincerely,

Bicka Barlow
Attorney

cc: ASCLD-LAB; OIG US Dept. of Justice; California Dept. of Justice, CODIS lab