

# TEXAS FORENSIC SCIENCE COMMISSION

*Justice Through Science*

FINAL REPORT ON LABORATORY SELF-  
DISCLOSURE NO. 22.17, FORT WORTH POLICE  
DEPARTMENT CRIME LABORATORY (PROFICIENCY  
TESTING)

April 14, 2023



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## **I. BACKGROUND AND JURISDICTION**

### **A. History and Mission of the Texas Forensic Science Commission**

The Texas Forensic Science Commission (“Commission”) was created during the 79<sup>th</sup> Legislative Session in 2005 with the passage of HB-1068. The Act amended the Code of Criminal Procedure to add Article 38.01, which describes the composition and authority of the Commission.<sup>1</sup> During subsequent legislative sessions, the Texas Legislature further amended the Code of Criminal Procedure to clarify and expand the Commission’s jurisdictional responsibilities and authority.<sup>2</sup>

The Commission has nine members appointed by the Governor of Texas.<sup>3</sup> Seven of the nine commissioners are scientists or medical doctors and two are attorneys (one prosecutor nominated by the Texas District and County Attorney’s Association and one criminal defense attorney nominated by the Texas Criminal Defense Lawyer’s Association).<sup>4</sup> The Commission’s Presiding Officer is Jeffrey Barnard, MD. Dr. Barnard is the Chief Medical Examiner of Dallas County and Director of the Southwestern Institute of Forensic Sciences in Dallas.

### **B. Commission Jurisdiction**

#### **1. Investigations of Professional Negligence and Professional Misconduct Resulting from Laboratory Self-Disclosures**

Texas law requires the Commission to “investigate in a timely manner, any allegation of professional negligence or professional misconduct that would substantially affect the integrity of:

- (A) the results of a forensic analysis conducted by a crime laboratory;
- (B) an examination or test that is conducted by a crime laboratory and that is a forensic examination or test not subject to accreditation; or

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<sup>1</sup> TEX. CODE CRIM. PROC. art. 38.01.

<sup>2</sup> See e.g., Acts 2013, 83rd Leg. ch. 782 (S.B. 1238) §§ 1-4 (2013); Acts 2015, 84th Leg. ch. 1276 (S.B. 1287) §§ 1-7 (2015); TEX. CODE CRIM. PROC. art 38.01 § 4-a(b).

<sup>3</sup> TEX. CODE CRIM. PROC. art. 38.01 § 3.

<sup>4</sup> *Id.*

(C) testimony related to an analysis, examination, or test described by paragraph (A) or (B).”<sup>5</sup>

The term “forensic analysis” is defined as a medical, chemical, toxicological, ballistic, or other examination or test performed on physical evidence, including DNA evidence, for the purpose of determining the connection of the evidence to a criminal action.<sup>6</sup>

Crime laboratories must report professional negligence or professional misconduct to the Commission.<sup>7</sup> The statute does not define the terms “professional negligence” and “professional misconduct.” The Commission defined those terms in its administrative rules.<sup>8</sup>

“Professional misconduct” means the forensic analyst or crime laboratory, through a material act or omission, deliberately failed to follow the standard of practice that an ordinary forensic analyst or crime laboratory would have followed, and the deliberate act or omission would substantially affect the integrity of the results of a forensic analysis. An act or omission was deliberate if the forensic analyst or crime laboratory was aware of and consciously disregarded an accepted standard of practice required for a forensic analysis.

“Professional negligence” means the forensic analyst or crime laboratory, through a material act or omission, negligently failed to follow the standard of practice that an ordinary forensic analyst or crime laboratory would have followed, and the negligent act or omission would substantially affect the integrity of the results of a forensic analysis. An act or omission was negligent if the forensic analyst or crime laboratory should have been but was not aware of an accepted standard of practice.

## 2. Accreditation Jurisdiction

The Commission is charged with accrediting crime laboratories and other entities that conduct forensic analyses of physical evidence.<sup>9</sup> The term “crime laboratory” includes a public or private laboratory or other entity that conducts a forensic analysis. In addition to disclosing

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<sup>5</sup> TEX. CODE CRIM. PROC. art. 38.01 § 4(a)(3).

<sup>6</sup> TEX. CODE CRIM. PROC. art. 38.35(a)(4).

<sup>7</sup> *Id.* at § 4(a)(1)-(2) (2019). Pursuant to the Forensic Analyst Licensing Program Code of Professional Responsibility, members of crime lab management shall make timely and full disclosure to the Texas Forensic Science Commission of any non-conformance that may rise to the level of professional negligence or professional misconduct. *See*, 37 Tex. Admin. Code § 651.219(c)(5) (2018). In practice, this

<sup>8</sup> 37 Tex. Admin. Code § 651.302 (7) and (8) (2020).

<sup>9</sup> TEX. CODE CRIM. PROC. art. 38.01 § 4-d(b).

nonconformances that may rise to the level of professional negligence or misconduct, laboratories are required to disclose significant nonconformities and include the Commission on substantive communications with their accrediting bodies.<sup>10</sup>

### 3. Licensing Jurisdiction

Under Texas law, a person may not act or offer to act as a forensic analyst unless the person holds a forensic analyst license.<sup>11</sup> While accreditation is granted to entities that perform forensic analysis, licensing is a credential obtained by individuals who practice forensic analysis. The licensing program took effect on January 1, 2019.

The law defines the term “forensic analyst” as “a person who on behalf of a crime laboratory accredited by the Commission technically reviews or performs a forensic analysis or draws conclusions from or interprets a forensic analysis for a court or crime laboratory.”<sup>12</sup>

Pursuant to its licensing authority, the Commission may take disciplinary action against a license holder or applicant for a license on a determination by the Commission that a license holder or applicant for a license committed professional misconduct or violated Texas Code of Criminal Procedure Article 38.01 or an administrative rule or other order by the Commission.<sup>13</sup> Disciplinary proceedings and the process for appealing a disciplinary action by the Commission are governed by the Judicial Branch Certification Commission.<sup>14</sup>

#### **C. Jurisdiction Applicable to this Self-Disclosure**

The disclosing crime laboratory, the Fort Worth Police Department Crime Laboratory (“FWPDCL”), is accredited by the ANSI National Accreditation Board (“ANAB”) under the

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<sup>10</sup> TEX. CODE CRIM. PROC. art. 38.01 § 4(a)(2); *Id.* at § 4-d(b-3); 37 Tex. Admin Code § 651.8(d)(2) (2017); 37 Tex. Admin Code § 651.219(c)(5) (2020).

<sup>11</sup> *Id.* at art. 38.01 § 4-a(b); 37 Tex. Admin. Code § 651.201(c) (2018).

<sup>12</sup> *Id.* at art. 38.01 § 4-a(a)(2).

<sup>13</sup> *Id.* at art. 38.01 § 4-c; 37 Tex. Admin Code § 651.216(b) (2019).

<sup>14</sup> TEX. CODE CRIM. PROC. art. 38.01 § 4-c(e); 37 Tex. Admin. Code § 651.216(d) (2019).

International Organization for Standardization (“ISO”) accreditation standard 17025:2017 (ISO/IEC 17025:2017). Several of the licensees referenced in FWPDCL’s disclosures are forensic analyst license holders, licensed in various disciplines by the Commission since December 2018. This report is the result of an investigation based on the FWPDCL’s initial March 23, 2022 self-disclosure to the Commission (*See, Exhibit A*) in response to ANAB’s February 22, 2022 notification to the FWPDCL that the laboratory was not meeting certain accreditation requirements. (*See, Exhibit B.*)

#### **D. Investigative Process**

The Commission’s administrative rules set forth the process by which it determines whether to investigate a self-disclosure as well as the process used to conduct the investigation.<sup>15</sup> When the Commission receives a self-disclosure from a laboratory, it may take one of two actions: (1) determine the root cause analysis and corrective actions by the laboratory were sufficient to address the issues raised and no further action by the laboratory is required; or (2) initiate an investigation to further review the issues raised by the self-disclosure. The Commission’s rules also describe the process for appealing final investigative reports and, separately, disciplinary actions by the Commission against a license holder or applicant.<sup>16</sup>

#### **E. Limitations of this Report**

The Commission’s authority contains important statutory limitations. For example, no finding by the Commission constitutes a comment upon the guilt or innocence of any individual.<sup>17</sup> The Commission’s written reports are not admissible in civil or criminal actions nor does the Commission have the authority to subpoena documents or testimony.<sup>18</sup> Information the

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<sup>15</sup> 37 Tex. Admin. Code § 651.304-307 (2019).

<sup>16</sup> 37 Tex. Admin. Code § 651.309 (2019); *Id.* at § 651.216 (2019).

<sup>17</sup> *Id.* at § 4(g) (2019).

<sup>18</sup> *Id.* at § 11 (2019).

Commission receives during any investigation is dependent upon the willingness of stakeholders to submit relevant documents and respond to questions. The information gathered in this report is not subject to the standards for admission of evidence in a courtroom. For example, no individual testified under oath, was limited by either the Texas or Federal Rules of Evidence (e.g., against the admission of hearsay) or was subject to cross-examination under a judge's supervision.

## **II. SUMMARY OF DISCLOSURE AND OBSERVATIONS OF THE COMMISSION**

### **A. Chronology of Disclosures and Assessment Activity**

This report contains observations and recommendations regarding a self-disclosure filed by the FWPDCL on March 23, 2022, (*See, Exhibit A*) in response to ANAB's February 22, 2022 notification to the FWPDCL that the laboratory was not meeting certain requirements of ISO/IEC 17025:2017's AR 3125 7.7.5 pertaining to proficiency tests administered by the laboratory and ISO/IEC 17025: 2017 5.4 pertaining the requirement for laboratory activities to be carried out in such a way as to meet the requirements of the laboratory's regulatory authorities (such as the Commission).<sup>19</sup> (*See, Exhibit B.*) The Commission determined the self-disclosure required additional investigation and formed an investigative panel at its quarterly meeting on July 22, 2022. The investigative panel consisted of Sarah Kerrigan, Ph.D., Jasmine Drake, Ph.D., and Patrick Buzzini, Ph.D.

After FWPDCL's initial disclosure, ANAB notified the Commission that it would continue to evaluate the proficiency testing issues it had identified in conjunction with upcoming onsite assessment activity. On August 23-25, 2022, the FWPDCL underwent a three-day full re-

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<sup>19</sup> (ANSI National Accrediting Body incorporated this requirement for compliance and disclosure to local regulatory authorities in a revised version of Accreditation Requirement 3125 (AR 3125) effective 2/1/2023. The provisions applied to this self-disclosure by ANAB initially were part of the earlier version of AR 3125 (2017) and from ISO/IEC 17025:2017 5.4, as cited in ANAB's February 22, 2022 letter to the FWPDCL. The newly incorporated requirement from local regulatory compliance can be found in [AR 3125 5.4.2 \(2023\)](#) and applies to all ANAB accredited crime laboratories accredited by the Commission.)



accreditation assessment for renewal of accreditation. This report also describes nonconformities (unrelated to proficiency testing) identified by ANAB during the assessment and resolved subsequently by the laboratory.<sup>20</sup>

## **B. AR 3125 Nonconformities Cited by ANAB Related to Proficiency Monitoring**

On February 22, 2022, ANAB informed the FWPDCCL that the laboratory was not meeting certain accreditation requirements pertaining to its proficiency testing program.<sup>21</sup> In sum, ANAB observed three substantive deficiencies regarding FWPDCCL's proficiency monitoring program: one related to the timing of the test administration; one related to the acceptance of inconclusive test results in the firearms discipline when the expected result was elimination or identification; and one related to a lack of documentation for the rationale underlying these decisions. Specifically, ANAB observed:

- 1) Some FWPDCCL proficiency test participants submitted their completed tests *after* the manufacturer published the consensus results in violation of the AR 3125 7.7.5 a) requirement "that results of the test are not known or readily available to the participant being monitored";
- 2) FWPDCCL's process for monitoring performance by intralaboratory comparison, interlaboratory comparison, proficiency testing or observation-based testing did not

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<sup>20</sup> In addition to the initial self-disclosure, ANAB's re-accreditation assessment activity and the Commission's investigation spawned multiple Corrective Action Reports (CARs). On June 22, 2022, the acting quality manager initiated CAR 22.04 to address the non-consensus PT results and CAR 22.05 to address related issues raised by ANAB and the TFSC in its June letter. In July of 2022, FWPDCCL closed out CAR 22.002 and CAR 22.005 in response to ANAB's suggestion that they split the issues into more specific, separate CAR's. The issues raised by the accreditation assessment were assigned as follows: CAR 22.06 (weighing events in chemistry), CAR 22.007 (NIBIN authorization documentation issue), CAR 22.08 (documentation of items with no work performed in firearms), and 22.10 (direct observation in firearms). In addition, the outstanding issues raised regarding proficiency testing were assigned CAR 22.11 (TFSC licensing proficiency requirement), CAR 22.12 (testing after publication of results), CAR 22.13 (treatment of inconclusive non-consensus results in proficiency testing) and CAR 22.14 (proficiency testing technical records).

<sup>21</sup> [Accreditation Requirement 3125 7.7.5](#) requires a laboratory to establish a process for monitoring the performance of the laboratory and personnel to: a) ensure that results are *not known or readily available to the participant being monitored*; b) ensure use of approved methods by the individual(s) whose performance is being monitored; c) establish criteria for successful performance prior to the monitoring activity being conducted; d) require a mechanism to ensure the quality of the monitoring activity prior to personnel performance being monitored; e) for calibration laboratories, require the monitoring activity to be performed using an item that was calibrated by the person whose performance is being monitored; and f) require notification to ANAB within 30 days when the expected result is not attained during any monitoring activity.

have established criteria for determining “successful completion” in violation of AR 3125 7.7.5 c); and

- 3) FWPDCCL did not maintain appropriate technical records related to its proficiency testing in violation of AR 3125 7.7.8.f).

ANAB also informed FWPDCCL that because of these nonconformities, the laboratory was not in compliance with ISO/IEC 17025:2017 5.4, which requires accredited laboratories to carry out laboratory activities in such a way as to meet the requirements of the laboratory’s “regulatory authorities,” in this case the Commission.<sup>22</sup> Specifically, the FWPDCCL failed to comply with the requirements of the forensic analyst licensing program, which state that forensic analysts must be “routinely proficiency-tested in accordance with and on a timeline set forth by the laboratory’s accrediting body proficiency test requirements.”<sup>23</sup> In other words, because FWPDCCL was out of compliance with ANAB’s requirements, the laboratory was also out of compliance with the Commission’s licensing rules.

Of particular interest to the Commission in the nonconformities identified by ANAB was the concern related to AR 3125 7.7.5 c), because it reflects a longstanding challenge in the firearms discipline with how to treat inconclusive results that are inconsistent with ground truth when that information is known, such as in the context of proficiency testing, black box studies or similar empirical testing.

### **C. Laboratory Policy Regarding Non-Consensus Inconclusive Results in Firearms**

The laboratory’s standard operating policy for proficiency testing described acceptance criteria for proficiency test results as follows: “successful participation in proficiency testing consists of obtaining test results that are *identical to* the target results of a specific test.”<sup>24</sup> Tests

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<sup>22</sup> ISO/IEC 17025:2017 5.4.

<sup>23</sup> 37 Tex. Admin Code § 651.207(h)(1) (2022).

<sup>24</sup> SOP 1451.6.

purchased from proficiency test providers are designed to be consensus-based. The correct result for a consensus-based test is the consensus result unless the proficiency test provider indicates otherwise in their report. However, ANAB identified a section in FWPDCCL's standard operating procedure that diverged from the other disciplines and raised considerable risk with respect to the handling of inconclusive conclusions in proficiency testing for the firearms discipline. The provision in the SOP stated:

**NOTE: In the event that an 'inconclusive determination' is obtained for a specific proficiency test, while the 'target [consensus] results' describe either a positive association, or an elimination, the matter will be discussed with the analyst, and a thorough review of all examination notes, data sheets, technical documents, and justification statements will be completed. An "inconclusive determination" is considered to be a valid conclusion, and therefore, when supported by appropriate analytical documentation, will not be treated as an error on a proficiency test. Any additional investigation will be completed as necessary, to the satisfaction of the analyst and the Quality Manager." (Bold in original.)<sup>25</sup>**

The Commission and ANAB both recognize that "inconclusive" may be an appropriate result depending on the discipline and the test. The possibility is accounted for by the proficiency test provider, which establishes pre-defined criteria to determine acceptance (i.e., how many test-takers must reach a specific conclusion in order for a different conclusion to be 'flagged' as unexpected or outside the consensus). ANAB emphasized that all results flagged by the proficiency test providers based on this evaluation (including inconclusive results) are to be treated as *unexpected results* meriting additional review.

ANAB also observed that FWPDCCL's policy does not address what criteria are used for acceptance of monitoring activities generally. While the laboratory may evaluate proficiency test

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<sup>25</sup> See, **Exhibit C**, FWPDCCL Proficiency Monitoring SOP 1451.6 Section 3. (*Effective date 10/11/19*) The Commission asked FWPDCCL for an explanation of how this language was included in the SOP and whether it originated from the quality manager, members of the firearms unit, or another source. The former quality manager could not recall the language's origin, and there is no documentation of how this language made its way into the SOP.

data not submitted to the proficiency test provider as an intralaboratory comparison or interlaboratory comparison, neither approach included a clear written description of what constitutes acceptance. For example, there were no acceptance criteria of monitoring results for the 19-526 test series in firearms. According to records provided to ANAB by FWPDCCL in January 2022, three out of four FWPDCCL test participants did not obtain consensus results. The fourth participant did report the consensus result (elimination); however, his test was among the group of tests administered *after* the consensus result had already been published by the manufacturer.<sup>26</sup> ANAB questioned how all four results were deemed “successful” when they in fact were different (three inconclusive; one elimination).<sup>27</sup>

ANAB’s review of FWPDCCL documentation did not answer these questions. For the proficiency tests for which analysts submitted *inconclusive* as the result where the expected or consensus result was *elimination*, the record noted that “a discussion occurred,” yet no documentation of the discussion was available for ANAB to review. Thus, there was no way for ANAB (or anyone else) to know what support was offered for the three inconclusive results, why

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<sup>26</sup> The fourth participant (the one who submitted the expected/consensus result) was the laboratory director. He was not engaged in active casework during this time period.

<sup>27</sup> FWPDCCL disclosed two additional “no consensus” firearms proficiency tests involving inconclusive results in January 2023 (CAR 22.15 and 22.16). CAR 22-016 states: “If the analyst is reporting inconclusive on a large proportion of items in cases where the ground truth is exclusion, this may become exculpatory evidence. This Type II error (or false negative) is far preferable in forensic science as it minimizes false positives. However, it theoretically may leave some cases open due to the lack of definitive forensic conclusions.” While staff understands what FWPDCCL is trying to express here—the long-held perception in the forensic community that “false negatives” are better than “false positives” when viewed from the lens of minimizing wrongful conviction—the CAR reflects a misunderstanding of what a “false negative” is. A “false negative” refers to the scenario in which an analyst reaches a conclusion of elimination for same-source samples. It is NOT a scenario in which the analyst reaches an inconclusive result for different-source samples. Rather, the CAR highlights difficult questions regarding specificity in firearms analysis. Performance of firearms analysts on different-source samples (i.e., eliminations) is historically weaker than performance on same-source samples (i.e., identifications). The field’s sensitivity rates (how often they reach an identification conclusion on same-source comparisons) greatly exceed their specificity rates (how often they reach an elimination conclusion on different-source comparisons). See, e.g., *Blind Testing in Firearms: Preliminary Results from a Blind Quality Control Program* at: <https://onlinelibrary.wiley.com/doi/pdf/10.1111/1556-4029.15031>. Because issues like sensitivity and specificity in firearms analysis have broad application, they will be discussed in greater detail in the Commission’s upcoming report in response to a complaint filed on behalf of Nanon Williams.

the quality manager was comfortable accepting the analysts' justifications, or why only one out of four analysts reached the consensus (elimination) result.

#### **D. FWPDCCL Corrective Action Report (CAR) 1**

On March 23, 2022, the FWPDCCL submitted its first corrective action report (referred to in this report as CAR 1) describing the proficiency tests concerns identified by ANAB.<sup>28</sup> (**Exhibit A.**) ANAB and the Commission observed that CAR 1 did not adequately address concerns regarding the proficiency testing issues identified. In CAR 1, the laboratory explained that although there was a known due date for the proficiency test completion, analysts sometimes shared proficiency test material as a cost-saving measure. Because of this practice, it took longer to complete the testing process, with some analysts completing their work after the due date and after the date the results were published.<sup>29</sup>

The laboratory maintains that late proficiency testing by some analysts was not due to any intentional effort to wait until the publication of expected results for the benefit of those analysts. Due to the passage of time and the weaknesses in quality system documentation during this period, the Commission is unable to reach any conclusion about whether any individual analyst who took a proficiency test late was aware of the test provider's expected result before taking the test. It appears that in general, however, expiration date oversights were primarily due to weaknesses in the quality system during the time period and did not result from an intentional scheme to allow certain analysts to benefit from published results.<sup>30</sup> The laboratory no longer asks analysts to share proficiency testing materials and complies with proficiency testing expiration dates.

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<sup>28</sup> CAR 22.0002 (March 23, 2022).

<sup>29</sup> In one case, the analyst was out of the laboratory on FMLA and took the proficiency test upon return, which was after the expected results had already been published.

<sup>30</sup> The Commission has discussed quality system weaknesses in prior reports. *See, e.g.,* Final Report on Complaint No. 20.47 Crutcher, Teresa @ p.21 [https://www.txcourts.gov/media/1453156/fr\\_crutcher-](https://www.txcourts.gov/media/1453156/fr_crutcher-)

With respect to inconclusive determinations on firearms proficiency tests that did not align with expected (consensus) result of exclusion or identification as previously discussed, the laboratory explained that “inconclusive” answers on proficiency testing were not necessarily considered “error” just because they differed from the consensus. Where the analyst reached a non-consensus inconclusive answer, the process was for the analyst to meet with the quality manager to explain the rationale for the non-consensus result. If the quality manager (who had no training or experience in firearms examination) found the analyst’s explanation reasonable, the inconclusive result was deemed “correct” for purposes of the proficiency test. The CAR provided no examples in which the quality manager challenged an analyst’s rationale behind an inconclusive result being deemed acceptable despite a conflict with an expected result.<sup>31</sup>

FYPDCL’s CAR 1 also dismissed the potential significance of the inconclusive non-consensus results as an indicator of analyst performance in casework by reasoning that the laboratory’s casework procedure allows for consultation between analysts, which is not an option in proficiency testing. Inconclusive results are less likely in casework because the analysts “consult” with each other on challenging comparisons thereby allowing them to reach a more definitive conclusion of exclusion or identification.<sup>32</sup> This response raised more questions than it answered with respect to both weaknesses in the current proficiency testing system and FYPDCL’s approach to firearms casework and related documentation.

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[07282021.pdf](#) and Final Report on Fort Worth Police Department Crime Laboratory Self-Disclosure No. 21.49 @ p. 17. [https://www.txcourts.gov/media/1454540/fr\\_fwpdcl-morrison-040822-city-of-ft-worth-edits-1.pdf](https://www.txcourts.gov/media/1454540/fr_fwpdcl-morrison-040822-city-of-ft-worth-edits-1.pdf).

<sup>31</sup> There was one 2021 serial number restoration proficiency test where the quality manager questioned the analyst’s inconclusive result, but the discrepancy was ultimately identified by the proficiency test provider (CTS) as a sample issue with the test itself. The quality manager’s practice was to defer to the firearms unit; if no one raised a technical concern about an inconclusive result on a proficiency test, the quality manager did not believe the inconclusive result should be viewed as an “error.”

<sup>32</sup> See, **Exhibit A**, “FYPDCLCL CAR 22-002” for full details.

## **E. Commission Request for Additional Information**

On June 22, 2022, Commission staff requested additional information. (*See, Exhibit D.*)

### 1. Non-Compliant Proficiency Monitoring Activities

The Commission asked FWPDCCL to identify any proficiency testing certification forms issued pursuant to the licensing program requirements<sup>33</sup> that were factually incorrect (in whole or in part) when submitted to the Commission. The Commission also requested the laboratory provide the date on which each non-compliant analyst became compliant.

The Commission informed the laboratory that the proficiency monitoring issues identified by ANAB—along with a list of casework performed by any analyst during the period when the proficiency testing documentation for the analyst was out of compliance with accreditation rules, licensing rules (or both)—required disclosure to the Tarrant County Criminal District Attorney’s Office so that prosecutors could assess their own disclosure obligations under the Michael Morton Act and related state and federal law.

### 2. Non-Consensus Inconclusive Results and Related Explanation

The Commission’s June letter also raised concerns about the laboratory’s process for addressing non-consensus inconclusive determinations in firearms proficiency testing. The Commission explained that in any forensic discipline, non-consensus results may raise questions about the analytical abilities of the analyst who took the test. Indeed, the whole point of proficiency testing is to evaluate, in an ongoing way, whether forensic analysts are sufficiently proficient to continue performing the analytical methods required of their forensic disciplines. At the same time, the Commission recognizes that non-consensus results do not necessarily mean an analyst lacks

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<sup>33</sup> *See, 37 Tex. Admin. Code § 651.208(d)*

proficiency in the discipline, as there may be reasonable explanations for non-consensus results that have nothing to do with analyst ability.<sup>34</sup>

By deeming inconclusive findings universally acceptable, FWPDCCL's policy excused non-consensus inconclusive results in proficiency testing by 75% (3/4) of the firearm section. Indeed, the policy created an incentive for analysts to choose "inconclusive" for challenging comparisons to ensure their proficiency testing results would be deemed acceptable. Though it is true that the policy allowed the quality manager discretion in overriding an analyst's explanation for non-consensus results, there is not a single example of the former quality manager overriding the justification of a firearms analyst for a non-consensus inconclusive result in proficiency testing involving firearm/toolmark comparison.

The need to thoroughly vet the gap between the consensus result and the individual examiner's inconclusive result is not cured by the FWPDCCL's explanation that in actual casework, the analyst may consult with his or her peers as needed to reach a more definitive conclusion. Indeed, this "consultation in casework" explanation raises more questions than it answers. For example, does the case record signal to end-users in the criminal justice system that the comparison was so challenging or the evidence of such low quality that consultation was needed? Has the laboratory considered the human factors concerns involved when, *but for the consultation process*, an analyst would be unable or unwilling to reach the reported result? How does the laboratory ensure verification is serving its intended purpose when there is consultation among analysts? How has the laboratory accounted for these factors in its procedures?

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<sup>34</sup> The Commission evaluates non-consensus results regularly and has seen a range of issues arise in proficiency testing, such as problems with the shipment or testing materials once they arrive at the laboratory, testing that requires the analyst to perform a step or a test method that is not actually performed by the laboratory, etc. Once vetted, the laboratory reasonable concludes (and the Commission concurs) that the non-consensus results do not raise concerns about analyst competence. They may raise questions about whether the laboratory is adequately communicating the limitations of its test methods to end-users, or whether current proficiency testing offerings in forensic science are fit for their intended purpose, but these issues are beyond the scope of this report.



In its June letter, the Commission emphasized to the laboratory that *non-consensus results must be addressed and evaluated*. Root cause analysis, corrective action and (in some cases) retroactive case review may be required to ensure the integrity of previously issued results by the firearm section. The letter also requested an updated corrective action report for the firearm non-consensus results, including documentation of discussions between the analyst and quality manager designed to evaluate the analyst's explanation for inconclusive results that were inconsistent with the consensus result.<sup>35</sup>

#### **F. Additional Corrective Action Reports Regarding Proficiency Testing**

In July 2022, the FWPDCCL submitted two additional CARS—CAR2 and CAR3 (*See, Exhibit E-F.*) in response to the Commission's letter requesting additional information.<sup>36</sup> The laboratory experienced a change in the quality manager position around the time of the submission of CAR2 and CAR3, appointing a latent print supervisor with quality assurance experience as interim acting quality manager when the quality manager retired. With this change came notable improvements in thoroughness, attention to detail, and thoughtful analysis of the issues presented in quality system documentation. The Commission observes the same trend has continued since the laboratory appointed a permanent quality assurance manager in December 2022.

##### **1. Tests Taken After Consensus Results Published by Test Provider**

CAR3 also indicated the laboratory's understanding that completion of a proficiency test after the manufacturer's release of the consensus results is a clear violation of AR 3125 7.7.5 and that prior noncompliance was an oversight by the laboratory. The laboratory explained that its intent to save on cost was not intent to circumvent or disregard accreditation standards. The

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<sup>35</sup> *See, Exhibit D*, June 22, 2022, Commission Letter to FWPDCCL.

<sup>36</sup> CAR2 refers to FWPDCCL CAR 22.04 dated July 7, 2022 and CAR3 refers to CAR 22.05 dated July 18, 2022.

laboratory indicated it took the following corrective actions with respect to the proficiency testing timing issue:

- Updated its proficiency testing SOP to ensure compliance with all AR 3125 provisions.
- Evaluated each analyst for full compliance with proficiency testing (and therefore licensure) requirements. Determined all dates of non-compliance and indicated that in a chart provided to the Commission.
- Documented disclosure of the proficiency testing issues to the Tarrant County Criminal District Attorney's Office.

FWPDCCL ultimately identified fifteen (15) total proficiency tests taken from 2015-2021 in which the participant submitted the test results *after* the manufacturer published the consensus results. Eight (8) of the fifteen (15) tests were taken by a single employee (the laboratory director), but the issue spanned seven different employees. For the time periods during which the employees were out of compliance with the requirement, the laboratory identified the following criminal cases:

- Forensic biology/DNA analyst: 1 case as reporting analyst; 59 cases as technical reviewer
- Blood alcohol analyst 1: 7 cases as reporting analyst; 797 as technical reviewer
- Blood alcohol analyst 2: 1 case as technical reviewer
- Seized drugs analyst: 393 cases as reporting analyst; 177 as technical reviewer
- Serial number restoration analyst: 2 cases as reporting analyst
- Firearms and serial number restoration analyst: 1 case as verifier and technical reviewer
- Firearms analyst (laboratory director): no cases worked during this time period.<sup>37</sup>

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<sup>37</sup> The laboratory director requested the Commission put his license into "inactive" status on July 18, 2022. (*See, Exhibit G.*)

On September 12, 2022, the interim acting quality manager sent a formal notice to the Tarrant County District Attorney's Office including a list of analysts deemed to be out of compliance with proficiency monitoring requirements. (*See, Exhibit H* for a copy of the notice.)

## 2. Non-Consensus Inconclusive Results in Firearms

CAR2 identified six (6) proficiency tests with non-consensus results, all in the firearms/toolmark discipline. CAR2 detailed the stated reasons for the non-consensus results and provided the rate of similar findings by other participants in proficiency testing. The corrective actions included a retroactive case review for the analysts involved, a request that ANAB remove [non-firearm] toolmark analysis from the scope of accreditation, and a commitment to continue to strengthen the laboratory's standard operating procedures.<sup>38</sup>

CAR3 addressed additional aspects of the Commission's request for information. The following is FWPDCCL's revised policy regarding the treatment of "inconclusive" non-consensus results:

**While the lab may or may not consider inconclusive results to be errors depending on the discipline and the test, any non-consensus results, including an "inconclusive determination" when the "target results" describe either a positive or negative association, will be investigated as a Quality Issue and documented in a Corrective Action Report.**

### **G. FWPDCCL Accreditation Assessment Findings Unrelated to PT**

On August 23-25, 2022, the FWPDCCL underwent a three-day full re-accreditation assessment by ANAB assessors for renewal of accreditation by ANAB. Commission Associate General Counsel, Leigh Tomlin, observed the accreditation assessment at the FWPDCCL.<sup>39</sup> ANAB included additional nonconformities in its assessment report in addition to the proficiency testing-

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<sup>38</sup> *See, Exhibit E*, FWPDCCL "CAR 22.004" for complete details.

<sup>39</sup> The Commission contracted with firearms subject matter expert Tim Scanlan to observe the accreditation activity on behalf of the Commission, but he was unable to attend due to a requirement that he be present for court testimony on the same days as the scheduled assessment.

related nonconformances which are discussed at length above and therefore not repeated here. There were also items identified by ANAB under the “Conforming with Comment” category. (*See, Exhibit I.*)

## PERSONNEL NON-CONFORMITIES

### 1. 6.2.3.1 ANAB Accreditation Requirement

This provision requires all personnel who perform “testing or calibration” to be competency tested. The terms “testing” and “calibration” include the review and authorization of analytical results and expression of an opinion or an interpretation. Competency testing must include practical examination(s) that cover the spectrum of anticipated tasks related to the test or calibration. The analyst must achieve the competency test’s intended results before performing the same tasks on an evidentiary or calibration item.

ANAB observed that FWPCL’s management system documents required trainees to perform testing (weighing events, color tests, etc.) on casework items *prior to* completing a competency test and receiving authorization. However, upon further investigation, ANAB determined unclear language in the policy led to a misunderstanding by the assessor. The laboratory’s chemistry section training manual referred to “practical exercises” that were actual competency tests for the modules being completed by the trainee. Once the practical exercises are satisfactorily completed, the trainee is authorized to use the instrument or test method. FWPDCCL revised its chemistry training manuals to better clarify how “practical exercises” function as the required module competency tests. ANAB deemed the corrective actions by the laboratory sufficient to resolve the nonconformity.

## 2. 6.2.5 ISO/IEC 17025:2017

This provision requires the laboratory to have a procedure for retention of records for determining competency, selection, training, supervision, authorization, and monitoring the competence of personnel.

ANAB observed there were no authorization records for one FWPDCL firearms technician to perform NIBIN entries. In response to ANAB's identification of the issue, the laboratory issued an authorization form for the NIBIN technician on August 24, 2022. The laboratory determined there was no impact to casework since the analyst completed appropriate competency testing in December 2019 before performing any NIBIN entries. ANAB deemed the corrective actions by the laboratory sufficient to resolve the nonconformity.

## EVALUATION OF MEASUREMENT UNCERTAINTY NON-CONFORMITY

### 3. 7.6.1 ISO/IEC 17025:2017

This provision requires the laboratory to identify contributions to measurement uncertainty. Further, when evaluating measurement uncertainty, the laboratory must consider all contributions that are of significance using appropriate methods of analysis. ANAB observed the laboratory's weighing events did not use appropriate methods of statistical analysis. Specifically, the repeatability data (Type A uncertainty) did not consider the impact from a low number of measurements (i.e., t-table not used in calculations). Additionally, when multiple weighing events occur per test item, FWPDCL did not appropriately account for multiple events in calculations.

In its resolution of the nonconformity, ANAB observed there was some confusion in terminology and procedures the FWPDCL used in calculating measurement uncertainty. The laboratory reevaluated its uncertainty budget and increased its sample size of weighing measurements recorded tenfold and then recalculated their uncertainty of measurement values for

each balance used. Only two balances used in chemistry casework had changes in values. All cases worked on those balances in the past year were reviewed and the change in value had no impact on the level of offense (e.g., state jail felony, third degree felony, etc.). FWPDCCL updated its standard operating procedures for uncertainty of measurement and drug analysis, along with its chemistry training manual. The laboratory also trained all the chemistry staff on the new measurement uncertainty calculations for both seized drugs and toxicology. ANAB deemed the corrective actions by the laboratory sufficient to resolve the nonconformity.

#### GENERAL – PROCEDURE FOR REPORTING RESULTS NON-CONFORMITY

##### 4. 7.8.1.2.2. ANAB Accreditation Requirement

This provision requires a laboratory to have a procedure for reporting results that identify what will be reported for all items received, including items on which no work was performed, items collected or created and preserved for future testing, and for partial work performed.

ANAB observed the laboratory had no reporting procedure to notify the end-user regarding items received by the laboratory but for which no firearms analysis was performed. The laboratory updated the NIBIN triage report in its firearms standard operating procedure, the laboratory-wide report format policy (to remove ambiguous language) and developed a new simplified report agreement. ANAB deemed the corrective actions by the laboratory sufficient to resolve the nonconformity.

#### CONTROL OF DATA AND INFORMATION MANAGEMENT NON-CONFORMITY

##### 5. 7.11.6 ISO/IEC 17025:2017

This provision requires a laboratory to check calculations and data transfers in an appropriate and systematic manner. This requirement does not apply where the calculation or data

transfer is secure and not subject to human error, however. ANAB observed the FWPDC used an incorrect dilution equation in a beverage alcohol analysis case.

To resolve the issue, the laboratory amended the report in the case using the correct equation. The laboratory updated its standard operating procedure specifically to address “suspected alcoholic beverages” to prevent future confusion on which equation to use. The laboratory conducted a case impact analysis and determined this to be the only case of its kind for which the laboratory conducted this type of analysis during the year; therefore, the laboratory concluded the issue resulted in no impact to other casework. ANAB deemed the corrective actions by the laboratory sufficient to resolve the nonconformity.

#### INTERNAL AUDITS – DIRECT OBSERVATIONS NON-CONFORMANCE

##### 6. 8.8.2b).1 ANAB Accreditation Requirement

This provision requires a laboratory to conduct internal audits that include direct observation of a sample of accredited services within each discipline. ANAB observed that two individual analysts did direct observations of themselves conducting their *own* serial number restoration casework over a two-year period.

The laboratory stated these direct observations happened because one unit supervisor took an extended leave and the other misunderstood the form’s instructions. The laboratory identified six serial number restoration cases worked by the analysts during this period of noncompliance, and technical review revealed no issues with any of the case worked. The laboratory explained to its supervisors and staff that direct observations cannot be completed by the person working the case, and the laboratory updated its quality manual to provide clarity on the same. The laboratory also updated its direct observation form to require a blank for the person to list the observer and

the analyst performing the work. ANAB deemed the corrective actions by the laboratory sufficient to resolve the nonconformity.

#### **H. Completion of Assessment Activity by ANAB and Final Resolution of Nonconformities by FWPDCCL**

On October 28, 2022, ANAB notified FWPDCCL that the reassessment activity was successfully completed, and the laboratory accreditation was renewed. ANAB provided the Commission with a final audit report detailing the nonconformity resolution workflow and corrective action closure notes. (*See, Exhibit I.*) Between August 23 and October 28, 2022, FWPDCCL submitted numerous additional corrective action reports responsive to the nonconformities and concerns of both ANAB and the Commission. (*See, supra* at FN 20.) On March 3, 2022, FWPDCCL provided the Commission with a finalized corrective action document, closing the initial corrective action related to the proficiency issues initially identified by ANAB. (*See, Exhibit J.*)

### **III. CAR 23.01 REGARDING “DELETED” QUALITY SYSTEM RECORDS**

The Commission planned to issue this report at its January 27, 2023 quarterly meeting, but shortly before the meeting, the FWPDCCL submitted a disclosure raising concerns that the interim quality manager may have deleted laboratory quality system records after learning she would not be offered the permanent quality manager position. The laboratory notified the Commission, ANAB, and the Tarrant County Criminal District Attorney’s Office of these potentially serious allegations, raising considerable alarm at all levels. Concerns about loss of key documents were ultimately allayed through further investigation, but the disclosure delayed the publication of this report because the Commission did not have sufficient information to know whether any of the “deleted records” might impact the observations and findings contained herein.



Upon receipt of the disclosure, both the Commission and ANAB wrote the laboratory requesting supplemental information and emphasizing the importance of including any supportive information the laboratory may have in its possession describing how the concerns came to the laboratory management's attention. The Commission and ANAB also requested an explanation regarding the extent of the loss of data and types of data alleged to have been lost. The laboratory was unable to provide further information at that time. While the Commission appreciates and encourages timely disclosure, it is important the laboratory refrain from making serious allegations amounting to professional misconduct absent supporting evidence. Laboratories always have the option (and many do) to contact the Commission to inform staff of a potential issue when identified, but refrain from filing a written disclosure until the laboratory has reasonable sense of the scope of the matter. The repercussions for the criminal justice system may be severe when the laboratory makes significant allegations against a former employee, especially one with responsibility over the entire quality system, only to later conclude the documents of concern were in the laboratory's possession.

#### **IV. FINDINGS: PROFESSIONAL NEGLIGENCE AND MISCONDUCT**

This report describes multiple failures in the laboratory's management and quality system with respect to proficiency monitoring, many of which have spurred significant challenges for the Tarrant County Criminal District Attorney's Office in the area of legal disclosure compliance. However, those failures do not constitute professional negligence or misconduct in "forensic analysis," which is defined as an expert examination or test on physical evidence for the purposes

of connecting the evidence to a criminal action.<sup>40</sup> The quality division has since made significant personnel changes over the last nine months, including the hiring of a permanent quality manager.

## V. RECOMMENDATIONS

The Commission makes the following recommendations:

- As ANAB stated during its re-accreditation assessment, the laboratory would benefit from putting more resources into its quality division. The hiring of a new, permanent quality manager is a good start, but the quality manager will need support and resources to meet the many diverse challenges facing the crime laboratory.
- The laboratory should continue its efforts to integrate new technology (e.g., 3-D optical microscopy) due to its potential to increase objectivity in firearms analysis.
- The laboratory should consider retaining an independent expert to review non-consensus inconclusive results in firearms proficiency testing as well as a random sampling of inconclusive casework results for all firearms analysts. The subject matter expert may make recommendations on ways the firearms unit can improve its analytical processes both with respect to proficiency testing and in actual casework.
- For all cases where firearms analysts engage in a “consultation” process, the laboratory should formalize and document the process and consider the potentially biasing impact of the consultation on verification. Documentation is particularly important so that end-users understand the case was complex, the quality of the evidence low, or other factors important to transparency. To the extent the Organization of Scientific Area Committees (OSAC) Registry standards provide guidance for “consultation” cases in firearms, the laboratory should follow that guidance. Absent firearms-specific guidance, the laboratory should refer to recommendations regarding similar “consultation” cases in the friction ridge discipline.
- The Commission strongly encourages—as it has in the past for this laboratory and others—strong and independent scientific leadership that embraces a quality-focused culture as well as transparency, accountability, and continuing education, while resisting individual blame or scapegoating.

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<sup>40</sup> Definitions of “professional negligence” and “professional misconduct” may be found in the Commission’s administrative rules here:

[https://texreg.sos.state.tx.us/public/readtac\\$ext.TacPage?sl=R&app=9&p\\_dir=&p\\_rloc=&p\\_tloc=&p\\_ploc=&pg=1&p\\_tac=&ti=37&pt=15&ch=651&rl=302](https://texreg.sos.state.tx.us/public/readtac$ext.TacPage?sl=R&app=9&p_dir=&p_rloc=&p_tloc=&p_ploc=&pg=1&p_tac=&ti=37&pt=15&ch=651&rl=302)