



Quality Division Use Only

Quality Tracking #:	2021-040	Classification:	Corrective Action
Non-Conformance Level:	Class II	Section:	Firearms
Date of Discovery:	03/10/21	Date of Incident:	03/09/21

Forensic Case Number(s), if applicable:	Agency Case Number(s), if applicable:
2021-19299	21-5250-U2588A

Description of Non-conformance:

A firearms examiner assigned to complete a serial number restoration proficiency test as the primary examiner was not able to fully restore all of the serial number characters. She was unable to restore the first character, and the second analyst/verifier did not agree with the primary examiner's conclusions for the last two characters. Therefore, the first character and the last two characters were not reported.

The proficiency test provider subsequently communicated that there were issues with the test and agreed to issue a new test. The email stated "Collaborative Testing Services (CTS) is notifying all laboratories enrolled in the 21-5250: Serial Number Restoration test that during our preliminary review of the data, we have recognized a higher than normal inconsistency rate in the reported results. At this time, we ask that laboratories hold off on any performance evaluations until a full review of the data and investigation into the production for this test is completed."

Additional Information/Follow-Up:

Regarding the unrestored first character, when interviewed, the examiner stated that the character proved challenging to polish since it was very close to an edge.

Serial number restorations are verified by a second firearms examiner as required by Firearms SOP. A second examiner verifies each restored character which means they look at the physical piece of evidence to agree or disagree with the primary examiner's conclusions. In this proficiency test the second examiner could not verify the last two characters because they could no longer be visualized at the later stages of the restoration process before she had a chance to see them. Typically, serial number restoration proficiency tests from CTS are relatively straightforward. The analyst not being able to restore one character and having others not being verifiable was cause for some concern, therefore this workflow and investigation was initiated.

On April 5, 2021, the proficiency test provider CTS notified purchasers of the test that there was an issue identified with the test.

On May 12, 2021, CTS followed up with the following information: "This email serves as an update to the notification you received on April 5, 2021 regarding the higher inconsistency rate noted in the reported data for the 21-5250 Serial Number Restoration Test. CTS recognizes that this test was more difficult than past Serial Number Restoration tests and participants had more difficulty reporting a character with certainty, with many



participants providing multiple possibilities for character(s). Therefore, CTS did not highlight a result as inconsistent from the consensus if the expected character was included in the list of possibilities reported by the participant. Additionally, due to the low response rate for the fourth character, no responses for this character will be highlighted nor will the results be considered as part of the consensus data." CTS then referred the reader to the summary report for further information.

When evaluating the analyst's results in comparison to the consensus results, none of the firearms examiner's characters were flagged as inconsistent from the consensus. In summary, her results were: first character not restored, second and third characters expected results, fourth character (identified by CTS as the most problematic) unexpected results, fifth and sixth characters not reported because they could not be verified, but the analyst correctly identified the expected responses as possibilities in her comments section on the CTS form.

In light of the information provided by CTS, HFSC was not able to determine whether the analyst's results were satisfactory or unsatisfactory.

Summary of Root Cause Analysis:

Note: Incidents are documented for tracking purposes and trend analysis. Root Cause Analysis is not required for incidents.

The first step in the process of restoring a serial number is to polish the area of obliteration. The SOP states the analyst should use a Dremel tool. In this proficiency test, the analyst used a file/rasp in an attempt to smooth the surface. When interviewed she stated that when she was first trained (predating the laboratory's accreditation) on serial number restoration, this was the polishing process she used.

The analyst began the proficiency test while a reporter was doing interviews and filming within the Firearms section. Since the analyst wanted to avoid making noise that could disrupt the reporter, she opted to use the file/rasp as opposed to the Dremel. She also stated that she did not file too hard and did not feel like using the file had a negative impact on the process.

In a later interview, the analyst stated that she was not as comfortable using the Dremel tool because she did not know which attachments to use because in this instance the character was so close to the edge. She didn't feel like she could get the tool in there and be flat. The only attachment she was familiar with was the sandpaper ones and those couldn't get into the space the right way. There were other attachments/polishing pieces, but she has never known what they were made of and was afraid they would be too hard for the metal and end up damaging the piece. When the manager and supervisor discussed this, they realized that they each used different polishing accessories based on user preference.



Actions Taken:

Several areas of concern were identified while investigating this nonconformance, and multiple actions were taken to address these concerns.

On March 17, 2021, the Firearms Manager, Firearms Supervisor, Quality Director, and a Quality Specialist met to discuss concerns over on the analyst's results. At that time HFSC had received information from CTS regarding the expected results but had not yet received information regarding other proficiency test takers reporting unexpected results. Based on the information available from CTS, the manager agreed to speak to the analyst, discuss the test results with the analyst and agreed not to assign her any serial number restoration cases during the investigation into this proficiency test.

HFSC management recognizes that there are challenges to allowing media access to technical areas. To help address these issues, a meeting was held on March 23, 2021, between HFSC executive management and section managers. Part of the discussion included an agreement that forensic practitioners should not perform casework activities while media is present, especially if being filmed and/or interviewed. This information was later shared with staff. Although the meeting was not held because of the results of the proficiency, the outcome of the meeting should help prevent a recurrence in that the analyst in question was trying to be considerate of the media crew while also trying to perform casework/proficiency test activities.

On April 1, 2021, the Firearms Manager had a short discussion with the analyst regarding the test. At that time, the analyst described the challenges she faced with polishing the surface and stated that she was trying to minimize the amount of noise she was making by using a file/rasp instead of the Dremel tool. The Firearms Manager reminded the analyst that using a file/rasp is not in the SOP as a method for polishing though logically it can serve the same purpose, albeit in a substantially less efficient manner.

On April 5, 2021, HFSC received the first notice that there may have been issues with the CTS test. On May 12, 2021, HFSC received further details about the issues as well as the analyst's individual results. CTS offered to send out a second serial number restoration proficiency test to participating laboratories. HFSC agreed to participate in the second test and planned to assign it to the same analyst.

On July 15, 2021, the Firearms Manager and a Quality Specialist met with the analyst to review the results of the first test. The analyst gave a summary of what happened. She was asked if she was confident doing serial number restorations and if she felt she could successfully complete another test. She answered yes to both questions. After reviewing the summary report in comparison to the analyst's responses, the Firearms Manager does not have concerns about the ability of the analyst to perform serial number restorations.

On July 28, 2021, the Firearms Manager emailed a contact at the ATF (who provides serial number restoration training to the forensic firearms community) and asked if they have any guidelines or recommendations on which accessories for the Dremel to use for metal polishing. No response was received from the ATF. The Firearms Manager consulted the Dremel site as well as information available from other vendors for information on some of the types of polishing accessories HFSC has.

The Firearms Manager compiled a binder containing information on how to use the Dremel tools and what the various accessories were best used for. The analysts authorized to do serial number restorations were notified the



binder was available via teams on 8/18/2021. The analyst reviewed the information on 10/20/2021 before she started the second test. During an interview with the Firearms Manager, the analyst said she felt more confident doing serial number restoration cases after she had the opportunity to read through the documentation. On September 21, 2021, HFSC received the second test and assigned it to the examiner. The examiner completed the test and submitted her results to the test provider on November 15, 2021. Results were received from the provider on December 21, 2021 and evaluated by the Firearms Manager and Firearms Supervisor. Both concurred that the examiner obtained consensus results.

Section Manager: Donna Eudaley

Date: 07/11/22

Division Director: Amy Castillo

Date: 07/14/22

Incidents or Corrective Actions that involve the Biology/DNA section are reviewed by the Technical Leader and CODIS Administrator.

Technical Leader: N/A

Date: N/A

CODIS Administrator: N/A

Date: N/A

Quality Director: Erika Ziemak

Date Closed: 07/15/22