FEU 01 – The Examination and Test fire of Firearms and Weapons

Table of Contents

- 1. Scope
- 2. Background
- 3. Safety
- 4. Materials Required
- 5. Standards and Controls
- 6. Calibration
- 7. Procedures
- 8. Sampling
- 9. Calculations
- 10. Uncertainty of Measurement
- 11. Limitations
- 12. Documentation
- 13. References

1. Scope

- 1.1. This procedure is comprised of two Parts:
 - 1.1.1. The process for how test fires are generated and documented by technicians for NIBIN entry.
 - 1.1.2. The process for the examination of firearms, approximate barrel length and overall measurements, trigger pull measurements and safety testing by examiners. This will include the examination of simulated and improvised weapons.

2. Background

2.1. To establish the practices for documenting the examination of evidence to conform to the requirements of the Department of Forensic Sciences (DFS) Forensic Science Laboratory (FSL) *Quality Assurance Manual*, the accreditation standards under ISO/IEC 17025:2017, and any supplemental standards.

3. Safety

- 3.1. All Firearms Safety protocols in Appendix A will be adhered to when handling firearms.
- 3.2. Staff members should use universal precautions with evidentiary materials.

FEU01 - Examination and Test Fire of Firearms and	Page 1 of 14	
Weapons	Issuing Authority: Interim Director	
Document Control Number: 1359	Issue Date: 9/7/2021 11:49:21 AM	
Revision: 16		
UNCONTROLLED WHEN PRINTED		

- 3.3. All test firing requires the use of eye and ear protection. All individuals in the firing ranges will wear eye and ear protection during test firing.
- 3.4. When handling evidence that is pending Evidence Processing during Render Safe requests, gloves, mask, and disposable lab coat will be worn to prevent DNA and latent print contamination.
- 3.5. Ensure the firearm functions as designed and the barrel is clear of any obstructions prior to test firing.

4. Materials Required

- 4.1. Firearms Reference Collection
- 4.2. Dummy rounds
- 4.3. Ammunition Reference Collection

5. Standards and Controls

5.1. Staff will only use ammunition from the Ammunition Reference Collection and firearms and/or components from the Firearms Reference Collection.

6. Calibration

6.1. Refer to the FEU09 Equipment and Calibration Procedure.

7. Procedures

- 7.1. Render Safe Procedures
 - 7.1.1 If the FEU is requested to assist with rendering a firearm safe, the following steps will be taken:
 - 7.1.1.1 During regular business hours, the requester can safely transport the firearm to the FEU Test Fire Waiting area, and a qualified FEU analyst can assist, while the requester waits. If possible, the requester can take documentary photographs with the assistance of the FEU analyst. In these circumstances, no chain of custody transfer is required; anything that is removed from the firearm will be given to the requester, along with the firearm for packaging and submission.
 - 7.1.1.2 If the firearm is retrieved from the loaded firearm locker in room1137, the FEU analyst will verify that the final packaging has been provided by the requester and transfer the firearm to themselves in LIMS.

FEU01 - Examination and Test Fire of Firearms and	Page 2 of 14
Weapons	Issuing Authority: Interim Director
Document Control Number: 1359	Issue Date: 9/7/2021 11:49:21 AM
Revision: 16	
UNCONTROLLED WHEN PRINTED	

- 7.1.2 The FEU analyst will ensure that all precautions are taken to minimize impact to possible DNA and latent print evidence recovery, including appropriate PPE listed in section 3.4. If it is determined that the firearm will need to be altered (e.g. soaked, cut) in order to render it safe, Evidence Processing will be notified via email before any steps are taken.
- 7.1.3 The FEU analyst will create a Render Safe request in LIMS, assign it to themselves, and document the following (in accordance with LIMS 06 Guide to Render Safe):
 - 7.1.3.1 The condition of the firearm upon receipt, and upon release, will be documented via photographs and notes;
 - 7.1.3.2 actions taken to render the firearm safe will be described in notes;
 - 7.1.3.3 and anything that is removed from the firearm will be described in notes and photographed.
 - 7.1.3.4 Photographs will include scale, DFS number, item number, initials, date, and step in the process, and will be stored in Mideo and exported to the Imaging Module under the relevant request.
- 7.1.4 Anything that is removed from the firearm will be packaged according to DOM 10 – Evidence Handling Procedures and LIMS 06 Guide to Render Safe and itemized in LIMS as appropriate, unless collected in the presence of the requester.
- 7.1.5 If there is an evidence processing request for the firearm, it will be placed in an LFU locker in room 2169, along with the final packaging that was provided by the requester. The key for the locker will be placed inside the lockbox in room 2169, and an email will be sent to the Evidence Processing team to notify them that the firearm is ready to be processed.
- 7.1.6 If there is no evidence processing request for the firearm, it will be placed in the loaded gun locker in room 1137.
- 7.1.7 The items that were removed from the firearm (e.g. cartridge case(s), projectile(s), cartridge(s)) will be returned to the loaded gun locker in room 1137.
- 7.1.8 Upon completion of the process, an email will be sent to the requester to notify them that the firearm and additional items are ready to be submitted to the CEU.
- 7.1.9 All emails related to the completion of the request will be saved to the Imaging Module under the relevant request. These include notifications to LFU, requestor(s), and FEU Management.

7.2. General

FEU01 - Examination and Test Fire of Firearms andPage 3 of 14WeaponsIssuing Authority: Interim DirectorDocument Control Number: 1359Issue Date: 9/7/2021 11:49:21 AMRevision: 16Image: Authority Sector Deputies

- 7.2.1. Prior to an examination of a firearm. FEU staff will ensure that all additional testing for trace evidence (e.g. Evidence Processing) has been completed, if applicable.
- 7.2.2. All firearms/weapons submitted to the FEU are routinely test fired by technicians for NIBIN entry only. Technicians may be required to testify regarding the test firing process; however this is not regarded as a function test. Technicians are limited to testify only about the test firing of the firearm and their observations during this time. The examination of firearms including function tests are conducted and reported by examiners.
- 7.2.3. On removing the firearm from the container, make sure that the firearm is unloaded and safe.
- 7.2.4. A firearm with an obliterated or removed serial number will be retained for serial number restoration examination.
- 7.2.5. All firearms received by the analysts will be engraved with initials, DFS case number and Item numbers.
- 7.2.6. Previously submitted firearms:
 - 7.2.6.1. Analysts will screen all firearms during preliminary examinations to ensure that previously submitted firearms are detected.
 - 7.2.6.2. All previously submitted firearms will be reported to management.
 - 7.2.6.3. Quarterly database searches will be conducted to ensure that no duplicate serial numbers were missed during preliminary examinations.

PART I Test Fires - Analysts

- 7.3. Test Fires
 - 7.3.1. Test Fires are routinely generated for NIBIN entry and is not regarded as a full examination. Test fires may be used by examiners to conduct macroscopic and microscopic examinations.
 - 7.3.2. Evaluate that the firearm is safe to be test fired (e.g. free from cracked barrel or bore obstruction). If there is any question as to the condition of the firearm to be safely test fired, hold for evaluation from an examiner. Use a remote firing device if required. The safety of all FEU staff members comes first. A safety check will be completed by a second qualified analyst prior to test firing.
 - 7.3.3. Ammunition will ONLY be loaded in the firing range and tank room. Always point the firearm in a safe direction. Treat all firearms as if they are loaded. When evaluating a firearm for full-auto capability, no more than two cartridges will be loaded into the magazine, and the firearm will be discharged in the

FEU01 - Examination and Test Fire of Firearms and	Page 4 of 14	
Weapons	Issuing Authority: Interim Director	
Document Control Number: 1359	Issue Date: 9/7/2021 11:49:21 AM	
Revision: 16		

firing range (not the water tank). Any firearm being test fired using unloaded primed cases, will be test fired in the indoor range.

- 7.3.4. Attempts will be made to test fire the firearm in the same condition as received.
- 7.3.5. Test Firing should be done utilizing the magazine which was provided with the firearm, unless there is a request regarding whether a magazine has been inserted into the firearm. If such a request is received, no magazine will be inserted prior to tool mark examination. If a magazine is provided, but not utilized for test fire, the reason will be recorded in the Test Fire worksheet notes. If a magazine is not provided, a Firearms Reference Collection (FRC) magazine should be substituted if available; if a FRC magazine is used, it must be documented on the Test Fire worksheet. Magazine capacity will be determined using inert ammunition when possible.
- 7.3.6. Firearms that are determined to be "safe" and "operable," but have obscured and/or missing information, or have missing and/or damaged parts that are not essential to the firing process, should be test-fired using the Remote Firing Cart, when practical.
- 7.3.7. The documentation of the Test Firing will be completed on the Test Fire Worksheet in LIMS at the time of the examination. The Test Fire Worksheet must be printed and returned with the firearm for any firearms being submitted to CEU/ECB.
- 7.3.8. Barrel and overall length measurements recorded on Test Fire Worksheets as part of a routine test fire and function test will be recorded as approximations and measurements will not require traceability.
- 7.3.9. Technicians will seek the assistance of an examiner if the firearm does not function. If technicians can restore the firearm to generate test fires independently, the steps to make the firearm operable have to be documented in the technical notes. Any technical support provided by the examiner will be documented in the technical notes, initialed and dated.
- 7.3.10. Walk-in Test Fires must be accompanied by an evidence form from the submitting agency. Electronic copies of submission paperwork will be retained for FEU documentation.
- 7.3.11. A second qualified analyst will review the following information for testfires to ensure accuracy:
 - 7.3.11.1. Test-Fire packet Review the information on test fire packet label against the firearm, DFS #, CCN#, Item #, Make, Model, Caliber and Serial number. The review will be recorded on the test-fire packet label with the initials and date of the reviewer.

FEU01 - Examination and Test Fire of Firearms and	Page 5 of 14
Weapons	Issuing Authority: Interim Director
Document Control Number: 1359	Issue Date: 9/7/2021 11:49:21 AM
Revision: 16	

District of Columbia Department of Forensic Sciences

- 7.3.11.2. Test-Fire worksheet Review the information on the worksheet against the firearm: Make, model, caliber, serial number, type, bore condition and action and safety (if applicable).
- 7.3.11.3. LIMS data entry Review the information in LIMS to ensure:
 - 7.3.11.3.1. The evidence type of the firearm is correct,
 - 7.3.11.3.2. The firearm is related to the appropriate test-fire request,
 - 7.3.11.3.3. The firearm is related to the appropriate NIBIN entry request, if applicable
- 7.3.11.4. The review of the test-fire worksheet and LIMS data entry will be recorded in LIMS with the initials and date of the reviewer in the notes field of the worksheet.
- 7.4. Ammunition
 - 7.4.1. For NIBIN entry, a minimum of two test fired cartridge cases and projectiles will be generated; one nickel and one brass finished primers if available. If unloaded primed cases are used in place of full cartridges, the reason will be given in the Test Fire worksheet notes.
 - 7.4.2. For MPD duty-issued firearms, test fires must be done using MPD duty issue ammunition if available.
 - 7.4.3. Additional testing may be required to determine the mode of fire, e.g. full automatic fire or burst mode.
 - 7.4.4. For any firearm being submitted for destruction, a minimum of four test fires are required, including, but not limited to, two nickel and two brass finished primers.
 - 7.4.5. The test fired bullets and cartridge cases are secondary evidence items and will be marked with the analyst's initials, item number and DFS case number. The cartridge cases and bullets will be placed in a designated envelope.
 - 7.4.5.1 If more than one case requires cartridges of similar family or caliber, samples will be etched or color coded prior to test firing.
 - 7.4.6. The envelope will be appropriately labeled and prior to disposition to evidence storage it will be properly sealed in accordance with the DOM10 Evidence Handling Procedures.
 - 7.4.7 Any ammunition components that will not be retained as secondary evidence may only be discarded in the appropriate labeled bins in the firing range. Additional test fires not retained as secondary evidence may be retained as training or demonstrative exemplars but should not be labeled with DFS case and item numbers.

FEU01 - Examination and Test Fire of Firearms and	Page 6 of 14	
Weapons	Issuing Authority: Interim Director	
Document Control Number: 1359	Issue Date: 9/7/2021 11:49:21 AM	
Revision: 16		
UNCONTROLLED WHEN PRINTED		

7.5. LIMS Requirements

- 7.5.1. The LIMS Guide to Test Fire forms an integral part to understanding the required fields and steps that must be completed.
- 7.5.2. Complete the following fields within the Firearm data:
 - 7.5.2.1. Make
 - 7.5.2.2. Model
 - 7.5.2.3. Caliber
 - 7.5.2.4. Serial Number
 - 7.5.2.5. Firearm type
 - 7.5.2.6. Finish
 - 7.5.2.7. Bore condition
 - 7.5.2.8. Barrel length
 - 7.5.2.9. Capacity
 - 7.5.2.10. Cylinder Rotation
 - 7.5.2.11. Operating Condition
 - 7.5.2.12. Sawed off
 - 7.5.2.13. Country of Manufacture/Importer
 - 7.5.2.14. Barcode
 - 7.5.2.15. Applicable check boxes (unload upon depart, magazine, flexicuff inserted)
- 7.5.3. Complete the following additional fields within the Firearm data only when applicable:
 - 7.5.3.1. Action field: record ghost guns by typing "Ghost gun" in this field
 - 7.5.3.2. Safety field: record full-auto modifications by typing either "Modified F/A-F" if the firearm modification functions full auto, or "Modified F/A-NF" if the firearm modification does not function full auto
- 7.5.4. Firearm must be related to the Test Fire request and the evidence type must be accurate (i.e. firearms, firearms-simulated, firearms-magazine) prior to Draft Complete. Record initials, date, and results of test fire in Edit Findings for test fire and initials and date for firearm data entry.
- 7.5.5. Creation of Test Fire Packet in LIMS must happen contemporaneously with physical creation of test fires to ensure accurate chain of custody.

FEU01 - Examination and Test Fire of Firearms and	Page 7 of 14	
Weapons	Issuing Authority: Interim Director	
Document Control Number: 1359	Issue Date: 9/7/2021 11:49:21 AM	
Revision: 16		
UNCONTROLLED WHEN PRINTED		

- 7.5.6. Firearm must be related to the NIBIN entry request.
- PART II Firearms examination Examiners
- 7.6. Function test
 - 7.6.1 A function test will be conducted to determine if the firearm functions as designed by the manufacturer. If the firearm malfunctions, the reason will be documented in the technical notes.
 - 7.6.2 If the firearm is not operable, restore the firearm to firing condition if possible upon notification to the contributor; record this in the Case Activities log in LIMS.
 - 7.6.3 If the firearm is restored to firing condition, ensure that the steps taken are listed in the technical notes. The reference number of a firearm and/or parts of a firearm from the FEU Firearms Reference Collection (FRC) will be recorded in the technical notes.
 - 7.6.4 Firearms may be test fired utilizing all firing modes in which the firearm is capable of discharging.
 - 7.6.5 Any modifications that are observed will be documented on the firearms worksheet.
 - 7.6.6 Complete the applicable fields on the Mideo Firearms worksheet. Key information of the firearm will include but not be limited to:
 - 7.6.6.1 Make/Manufacturer
 - 7.6.6.2 Model
 - 7.6.6.3 Serial number
 - 7.6.6.4 Action type
 - 7.6.6.5 Safety features
 - 7.6.6.6 Magazine type and capacity- Magazine capacity will be determined using inert ammunition when possible and reported as "checked capacity".
 - 7.6.7 If requested, simulated firearms will be examined and the examination process captured in the technical notes. Sufficient information will be recorded to support the results and conclusions of the report.
- 7.7. Air Powered Weapons/Simulated Firearms/Improvised Weapons
 - 7.7.1. All BB/Pellet, and other air powered weapons, will be discharged in the indoor range. Discharge the weapon once, using a target board placed down range, or other means of ensuring the projectile is being discharged. BB/pellet

FEU01 - Examination and Test Fire of Firearms and	Page 8 of 14	
Weapons	Issuing Authority: Interim Director	
Document Control Number: 1359	lssue Date: 9/7/2021 11:49:21 AM	
Revision: 16		
UNCONTROLLED WHEN PRINTED		

weapons are documented on a Test Fire worksheet, but not test fired without contributor request:

- If an air powered weapon is submitted with request for test fire, a CO2 7.7.1.1. cartridge may be submitted or supplied by the FEU (subject to contributor approval).
- 7.7.2. Bulleted ammunition will not be fired in simulated or improvised weapons. Unfired cartridge cases (primers) should be used if required.
- 7.8. Barrel length measurements (Relevant to PART II).
 - 7.8.1. When the barrel or overall length of a firearm measurement is requested, measurement methods listed in FEU-13 Estimation of Uncertainty of Measurement will be used. Requests for barrel length measurements will only be completed by DFS analysts/examiners who have participated in the Uncertainty of Measurement study as described in FEU13.
 - 7.8.2 Revolver barrels are measured using a tape measure placed next to the barrel, from the rear end of the barrel just forward of the cylinder to the muzzle.
 - 7.8.3. Barrels on other firearms are measured with the action closed using a tape measure and dowel rod. Any muzzle brake or other addition to the barrel will be included in the barrel length measurement only if fixed; non-fixed additions will not be measured as part of barrel length. The firing pin must be cocked to ensure it does not protrude through the breech face preventing the dowel rod from making contact with the breech.
 - 7.8.4. Insert a dowel rod in the barrel until it reaches the breech face. Mark the dowel rod at the muzzle, if necessary, to indicate the distance from breech face to muzzle. Remove the dowel rod and measure the length from the end to the mark using a tape measure.
- 7.9. **Overall Length**
 - 7.9.1 When the barrel or overall length of a firearm measurement is requested, measurement methods listed in FEU-13 Estimation of Uncertainty of Measurement will be used. Requests for overall length measurements will only be completed by DFS analysts/examiners who have participated in the Uncertainty of Measurement study as described in FEU13.
 - 7.9.2 Measure the distance between the muzzle of the barrel and the rearmost portion of the weapon measured on a line parallel to the axis of the bore. With the firearm positioned in the measuring platform, a square is placed at a right angle on the T-Square touching the muzzle to determine the overall length measurement.

Page **9** of **14**

FEU01 - Examination and Test Fire of Firearms and Weapons Issuing Authority: Interim Director Document Control Number: 1359 Issue Date: 9/7/2021 11:49:21 AM **Revision: 16**

- 7.9.3 When measuring a shortened or altered firearm, the barrel or the overall length, the measurement will be from the longest point.
- 7.10. Trigger Pull Testing
 - 7.10.1. Ensure that the firearm is unloaded.
 - 7.10.2. The free weights will be used to conduct this test.
 - 7.10.3. Single Action
 - 7.10.3.1 Ensure that the action is cocked in the single-action position.
 - 7.10.3.2 Position the firearm with the muzzle facing up (perpendicular to the floor).
 - 7.10.3.3 Ensure that all safeties that would prevent the firearm from firing are disengaged.
 - 7.10.3.4 Rest the trigger hook on the appropriate center of the trigger, making sure that it is not in contact with any other part of the firearm and is parallel to the bore.
 - 7.10.3.5 Add or remove weight in $\frac{1}{2}$ or $\frac{1}{4}$ lb. increments and slowly raise the firearm until the weights are not resting on any surface.
 - 7.10.3.6 Return to the resting position and continue to add weight and raise the firearm until the hammer or striker falls and a range of values can be established in which the hammer/striker does not fall at the lower end and consistently falls at the upper end of the range.
 - 7.10.3.7 Repeat the test at least three times to ensure repeatability and document the range determined.
 - 7.10.3.8 Trigger pull measurements are recorded as a range.
 - 7.10.4. Double Action
 - 7.10.4.1. Follow steps for single action trigger pull weight determination, with the exception of cocking the hammer or striker.
 - 7.10.4.2. For a firearm that is SA/DA, the trigger pull weights must be taken for both actions.
- 7.11. Drop Test
 - 7.11.1. Accidental discharge testing suspected as being caused by a drop will be conducted in the FEU indoor range when specifically requested by the contributor or when a firearms analyst determines such a test is necessary.
 - 7.11.2. Prior to any test being conducted, the firearms analyst will inform the contributor of the potential risk of significant damage to the firearm.

- 7.11.3. The discharge test will be conducted in all firing modes and with the magazine, clip or remaining revolver cylinder chambers fully loaded with a primed cartridge case(s). This test should be conducted after all other examinations have been completed.
- 7.11.4. All testing undertaken in order to attempt to duplicate the conditions under which the firearm discharged, including but not limited to the planes listed below. The firearm or firearms will be dropped in such a way as to cause them to strike the rubber mat surface in each of the following attitudes:
 - 7.11.4.1 Barrel vertical, muzzle down.
 - 7.11.4.2 Barrel vertical, muzzle up.
 - 7.11.4.3 Barrel horizontal, bottom up.
 - 7.11.4.4 Barrel horizontal, bottom down.
 - 7.11.4.5 Barrel horizontal, left side up.
 - 7.11.4.6 Barrel horizontal, right side up.

8. Sampling

8.1. Not applicable

9. Calculations

9.1. Not applicable

10. Uncertainty of Measurement

10.1. The overall and barrel length of firearms measurements are regarded as quantitative measurements and the uncertainty associated with the measurement will be reported, if the measurement is included in the report. If the submitter requests the measurement of a firearm, the measurement will be reported. Procedures for estimating uncertainty of measurement are found in FEU-13 Estimation of Uncertainty of Measurement and calculations of estimated uncertainty of measurement are found on the FSL network drive.

11. Limitations

11.1. Due to damage or other factors, some or all of the above examinations might not be possible. It is at the discretion of the firearms examiner as to what examinations are necessary and if they should be conducted.

FEU01 - Examination and Test Fire of Firearms and Weapons Document Control Number: 1359 Revision: 16

Page **11** of **14** Issuing Authority: Interim Director Issue Date: 9/7/2021 11:49:21 AM

- 11.2. Barrel length measurements are dependent on the straightness of the dowel rod and the assessment of the muzzle end in relation to the dowel rod. Overall length measurements are dependent on proper alignment in the measuring platform.
- 11.3. Trigger pull weight measurements are dependent on the position of the firearm, the force of the test pull, and the accuracy of the weights.

12. Documentation

12.1. Test Fire Worksheet (current version)

13. References

- 13.1. Forensic Science Laboratory Quality Assurance Manual (Current Version)
- 13.2. DFS Departmental Operations Manuals (Current Versions)
- 13.3. FSL Laboratory Operations Manuals (Current Versions)
- 13.4. FEU-LIMS-01 Guide to Firearms Analysis (Current Version)
- 13.5. FEU-LIMS-02 Guide to Test Fire (Current Version)
- 13.6. FEU-LIMS-06 Guide to Render Safe (Current Version)
- 13.7. FEU-13 Estimation of Uncertainty of Measurement (Current Version)
- 13.8. ISO/IEC 17025:2017 General Requirements for the Competence of Testing and Calibration Laboratories, International Organization for Standardization, Geneva, Switzerland.
- 13.9. ASCLD/LAB International, Estimating Uncertainty of Measurement Policy (July 2012).
- 13.10. ANAB, Guidance on reporting uncertainty of Measurement for calibration laboratories (March 2018).
- 13.11. SAAMI Z299.5-2016, "Voluntary Industry Performance Standards Criteria for Evaluation of New Firearms Designs Under Conditions of Abusive Mishandling for the Use of Commercial Manufacturers"
- 13.12. OSAC Draft: Best Practice Recommendations for the Safe Handling of Firearms and Ammunition. https://www.nist.gov/system/files/documents/2018/04/23/best_practice_recomme ndations_for_the_safe_handling_of_firearms_and_ammunition.pdf
- 13.13. OSAC Draft: Standard for Barrel and Overall Length Measurements for Firearms. https://www.nist.gov/system/files/documents/2018/02/06/standard_for_barrel_an d_overall_length_measurements_for_firearms.pdf

FEU01 - Examination and Test Fire of Firearms and Weapons Document Control Number: 1359 Revision: 16 Page **12** of **14** Issuing Authority: Interim Director Issue Date: 9/7/2021 11:49:21 AM

District of Columbia Department of Forensic Sciences

Appendix A FIREARM SAFETY

The following protocols must be adhered to when handling any firearms:

- 1.1 Wear additional PPE (eye & ear protection) when discharging a firearm.
- 1.2 Treat every firearm as though it is loaded until you verify that it is not.
- 1.3 Point the muzzle in a safe direction.
- 1.4 Keep finger off the trigger and outside the trigger guard until ready to fire.
- 1.5 Always ensure target and backstop.
- 1.6 When in doubt about a safety issue, consult with a senior examiner or FEU Management before starting a procedure.
- 1.7 When transporting firearms throughout the laboratory, employ a mechanism to visually ensure that the chamber is empty and/or the action is open. Acceptable methods are zip tie, empty chamber indicator, or locking the chamber in the open position if possible. Do not transport firearms with magazines inserted.
- 1.8 Ensure that the barrel and chamber are clear of obstructions before firing.
- 1.9 When evaluating a firearm for full-auto capability, do not load more than two cartridges in the magazine, and do not fire into the water recovery tank.
- 1.10 When preparing to fire, do not close the action of the firearm on a live cartridge unless the muzzle is pointed downrange or placed securely in the tube of the water recovery tank.
- 1.11 Follow all safety instructions for the use of test firing equipment, to include the water recovery tank, firing range, remote firing devices, or any other bullet recovery method.
- 1.12 If a loaded or potentially loaded firearm is submitted, take it immediately to the firing range and render it safe.
- 1.13 Use extreme caution when inspecting/examining firearms that are damaged or in poor condition.

- 1.14 Utilize the remote firing device for any circumstances in which there may be a potential safety concern in discharging the firearm.
- 1.15 Utilize primed cases or downloaded cartridges for any circumstances in which it may be unsafe to discharge commercial cartridges (discretionary).
- 1.16 Do not use cell phones in the intake area, tank room, or firing range.
- 1.17 Do not allow live ammunition in the testing area for trigger pull weight determinations. Any examination that involves live ammunition must occur only in the designated test fire areas.
- 1.18 Do not allow individuals in the intake area work space, tank room, or firing range unless they are involved in the testing process.
- 1.19 Ensure that all individuals in the tank room or firing range are wearing appropriate PPE before the firearm is discharged. This includes ballistic vests for anyone not behind the Witness Protection Shield.
- 1.20 Anyone not involved in the test-firing process, who is in the tank room or firing range, will be behind the Witness Protection Shield during the test-fire process.
- 1.21 Additionally, FEU staff are encouraged, though not required, to participate in the DFS Medical Surveillance Program, for regular testing of lead levels.
- 1.22 All FEU personnel are required to notify another analyst (or FEU Management) in FEU prior to and after test firing is performed.
- 1.23 In the absence of another analyst and FEU Management, appropriate personnel (i.e. DGS, MPD) should be notified prior to and after test firing is performed.
- 1.24 At any time, if the firearm that is required to be test fired is potentially malfunctioning, another analyst or appropriate personnel is required to be in the room with the analyst performing the test firing.

FEU01 - Examination and Test Fire of Firearms and Weapons Document Control Number: 1359 Revision: 16 Page **14** of **14** Issuing Authority: Interim Director Issue Date: 9/7/2021 11:49:21 AM