SECTION	POSSIBLE CONCLUSIONS FOR MICROSCOPIC COMPARISONS OF AMMUNITION COMPONENTS

10.0 Possible Conclusions for Microscopic Comparisons of Fired Ammunition

10.1. Identification: There is present an agreement of a combination of individual characteristics and all discernible class characteristics where the extent of agreement exceeds that which can occur in the comparison of tool marks made by different tools and is consistent with the agreement demonstrated by tool marks known to have been produced by the same tool.

10.1.1 The bullet was fired from the suspect firearm.

10.1.2 The bullets were fired in the same firearm.

10.1.3 The cartridge case/shotgun shell was fired in the suspect firearm.

Note: Matching chamber marks can indicate that the cartridge case/shotgun shell was fired in the suspect weapon; however, to prove that conclusion the examiner must either work live rounds through the action of the firearm and these live rounds must not reproduce the matching chamber marks on the fired cartridge case/shotgun shell or show that the chamber marks on more than two (2) cartridges are all in the same relationship to extractor/ejector marks and the position/location of the firing pin impression and/or other known fired in marks.

10.1.4 The cartridge cases/shotgun shells were fired in the same firearm.

10.1.5 The cartridge/cartridge case/shotgun shell was chambered in and/or extracted and/or ejected from the suspect firearm.

10.1.6 The cartridges/ cartridge cases/shotgun shells were chambered in and/or extracted from and/or ejected from the same firearm.

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10.1.7 The cartridge/cartridge case/shotgun shell was worked through the action of the suspect firearm.

10.1.8 The cartridges/cartridge cases/shotgun shells were worked through the action of the same firearm.

10.1.9 Other possible identifications based on tool marks on cartridges/cartridge cases/shotgun shells.

10.2 Inconclusive: A: There is some agreement of individual characteristics and all discernible class characteristics, but insufficient for an identification.

B: There is agreement of all discernible class characteristics without agreement or disagreement of individual characteristics due to an absence, insufficiency, or lack of reproducibility.

C: There is an agreement of all discernible class characteristics and disagreement of individual characteristics, but insufficient for elimination.

10.2.1 It cannot be determined if the bullet was or was not fired from the suspect firearm.

10.2.2 It cannot be determined if the bullets were fired from the same firearm.

10.2.3 It cannot be determined if the cartridge case/shotgun shell was or was not fired in the suspect firearm.

10.2.4 It cannot be determined if the cartridge cases/shotgun shells were fired in the same firearm.

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10.2.5 It cannot be determined if the cartridge/cartridge case/shotgun shell was or was not chambered in and/or extracted from and/or ejected from the suspect firearm.

10.2.6 It cannot be determined if the cartridges/cartridge cases/shotgun shells were chambered in and/or extracted from and/or ejected from the same firearm.

10.2.7 It cannot be determined if the cartridge/cartridge case/shotgun shell was or was not worked through the action of the suspect firearm.

10.2.8 It cannot be determined if the cartridges/cartridge cases/shotgun shells were worked through the action of the same firearm.

10.2.9 Other inconclusive determinations based tool marks on cartridge/cartridge cases/shotgun shells.

10.3 Elimination: There is significant disagreement of discernible class characteristics and/or individual characteristics.

10.3.1 The bullet was not fired from the suspect firearm.

10.3.2 The bullets were not fired in the same firearm.

10.3.3 The cartridge case/shotgun shell was not fired in the suspect firearm.

10.3.4 The cartridge cases/shotgun shells were not fired in the same firearm.

10.3.4 The cartridge/cartridge case/shotgun shell was not chambered in and/or extracted from and/or ejected from the suspect firearm.

10.4 Unsuitable: Unsuitable for microscopic comparison.

10.4.1 Small lead fragments and/or bullet jacket fragments that exhibit no class characteristics and/or individual characteristics.

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10.5 Examiners must include in their notes all conclusions reached from the microscopic comparison of evidence bullets, cartridges, cartridge cases, shotgun shells and/or test fired ammunition components. Examiners must also explain their reasons for reaching these conclusions. The reasons must be clear and succinct and should be able to be understood by any other competent firearms examiner. The examiners should include the position and type of index marks used and which of the test fires (if an evidence firearm was fired) was used or if more than one test fire was used to reach their conclusions. Also, their notes must indicate if any live rounds were worked through the action and the results of the microscopic examination and/or comparison of these live rounds. A sample notes page can be viewed on the next page.

10.6 No formatted spaces on any case work sheets are to be left blank. It is permissible to use N/A (not applicable) or a single line through unused spaces. If a work sheet contains multiple formatted sections, those not utilized must be crossed through or deleted.

Test Fire

Firearm Item #:	**Make/Serial #:**
# of Tests Fired:	**Test Marked:**
Manufacturer:	
Type of Ammunition:	
Date Fired:	

Microscopic Examination Observations and Conclusions