A. Purpose:

The following range of conclusions and definitions were developed by the Association of Firearm and Tool Mark Examiners (AFTE) to use as a guideline for reporting the results when conducting a microscopic comparison. The descriptions of such results in an examination report may be worded as the examiner sees fit.

B. Responsibility:

Forensic Science Examiners assigned to the Firearms Unit.

C. Range of Conclusions:

1. Identification:

   Agreement of all discernible class characteristics and sufficient agreement of a combination of individual characteristics where the extent of agreement exceeds that which can occur in the comparison of toolmarks made by different tools and is consistent with the agreement demonstrated by toolmarks known to have been produced by the same tool.

   When an association is made the report shall indicate that the identification was made based on similar class characteristics and sufficient agreement of individual characteristics.

2. Inconclusive:

   i. Some agreement of individual characteristics and all discernible class characteristics, but insufficient for an identification. This will be noted in the worksheet at Inconclusive A (Inc A).

   ii. Agreement of all discernible class characteristics without agreement or disagreement of individual characteristics due to an absence, insufficiency, or lack of reproducibility. This will be noted in the worksheet as Inconclusive B (Inc B).

   iii. Agreement of all discernible class characteristics and disagreement of individual characteristics, but insufficient for an elimination. This will be noted in the worksheet as Inconclusive C (Inc C).

   When an inclusive finding is made, the report shall include the reason for such result. The following are some acceptable report wording for reporting an inconclusive:

Submission 002 bullet exhibits the same general rifling class characteristics as those produced by the Submission 003 firearm (Make/Model and Serial Number); however the result of the microscopic comparison was inconclusive due to the lack of sufficient suitable corresponding microscopic markings. It was not possible to identify or eliminate the Submission 002 bullet as having been fired from Submission 003.

Submission 002 bullet exhibits the same general rifling class characteristics as those produced by the Submission 003 firearm (Make/Model and Serial Number); however the result of the microscopic comparison was inconclusive due to the absence, insufficient detail or lack of reproducibility of individual corresponding microscopic markings. It was not possible to identify or eliminate the Item 2 bullet as having been fired from Submission 003.

Submissions 005 and 006, fired bullets, were microscopically examined and exhibit the same general rifling class characteristics; however the result of the microscopic comparison was inconclusive due to absence or insufficient detail of individual corresponding microscopic markings. It was not possible to identify or eliminate the bullets as having been fired in the same firearm.

3. Elimination:

   Disagreement of discernible class characteristics and/or individual characteristics.

   When an elimination is made, the report should indicate the reason for this elimination.

4. Unsuitable:

   Unsuitable for examination.

   The following are some acceptable report wording for unsuitable results.

   Submission 001, a fired bullet, was microscopically examined, and no marks suitable for microscopic comparison were observed.

   Submission 002, lead fragment, was microscopically examined and determined to be unsuitable for identification with any firearm due to the lack of microscopic markings for comparison.

   Due to the lack of microscopic markings for comparison, the Submission 003 cartridge case is not suitable for identification with any firearm.

Due to damage and the lack of microscopic markings for comparison, the Submission 004 bullet is not suitable for identification with any firearm.

D. References:

1. AFTE Glossary