IIA2: Paper

I. INTRODUCTION

It is often important for the Questioned Document Examiner to conduct examinations of paper(s) to determine consistency, potential source and/or genuineness. Charred documents can also be stabilized for further examination (Refer to Alterations and Obliterations).

II. INSTRUMENTATION

Magnification loop, stereo microscope, comparison microscope, adequate lighting, alternate light sources, ESDA and paper thickness gauge (See Appendix VI).

III. MINIMUM STANDARDS & CONTROLS

Refer to Appendix I.

IV. EXAMINATION PROCEDURE

Nondestructive testing methods will be applied to paper examinations to determine consistency, common origin and genuineness; or to restore charred documents for further examination. An actual examination may include one or more of the following:

A. Examination of paper(s) for consistency

1. Visual examination using appropriate magnification. Examine and compare color, width of lines, web or woven pattern, size, shape, etc…
2. Transmitted light: With light transmitting through the document examine and compare watermarks if present. If additional information needs to be obtained from the watermark for dating purposes attempt to locate the manufacturer and obtain any relevant information.
3. Ultraviolet: Examine visually, with magnification if necessary. Examine for fluorescence of filler or whiteners and/or the presence of fluorescent planchettes, fibers or printed material. It must be noted that within a ream of paper from a company it is possible to find two sheets that fluoresce differently.
4. If necessary weigh the sheet of paper and factor the basis weight.
5. If necessary measure the papers thickness.
6. If necessary examine the paper for indented impressions (Refer to Recovering Indented Impressions).
7. Examine the paper for physical damage such as staple holes, binder marks, perforations, folds, etc…

B. Examination of Fracture Pattern Match:

1. Visual examination: Examine and compare color, width of lines, web or woven pattern, size, shape, etc… Separate multiple sheets and attempt to match pieces together.
2. Ultraviolet: May be valuable in separating multiple sheets of shredded paper. Examine and compare fluorescence visually, with magnification if necessary.
3. Magnification: Using appropriate magnification devices compare and attempt to match

torn or cut edge(s) by examining fibers and/or printed material.

C. Charred Documents

1. Separate all sizable pieces using forceps.
2. If necessary moisture can sometimes be used to minimize breakage caused by the separation process. Typical solvents include glycerin and/or water applied in a fine mist. Before adding moisture, test a sample of the charred material to assure any printed or written material will not be adversely affected by the choice of solvent.
3. Once suitable separation has been accomplished, the charred items can be placed between two glass plates for further examination (Refer to Alterations and Obliterations). It will probably be necessary to tape the edges of the glass plates to prevent slippage.

D. Report Conclusions:

1. Paper comparisons – Conclusions for paper comparisons can include that the papers are of common origin; it could not be determined whether or not the papers are of common origin and the papers are not of common origin. All conclusions for paper comparisons will include the methods used in the comparison and the basis for the opinion.

2. Fracture Pattern Match – Conclusions for fracture pattern match examinations can include that the separate pieces of paper were at one time joined; it could not be determined whether or not the different pieces of paper were at one time joined together and the pieces of paper did not originate from the same source or piece of paper. All conclusions for fracture pattern match examinations will include the methods used in the comparison and the basis for the opinion

3. Charred Documents - Conclusions regarding charred documents may include whether or not information is decipherable. If information is decipherable then the information should be included in the report. If the information cannot be deciphered then the reasons for the inconclusive opinion should be outlined in the report. All charred document examination reports will include the different methods utilized in the examination process..

REFERENCES

1. ASTM E 1658-04, *Standard Guide for Expressing Conclusions for Forensic Document Examiners*
2. ASTM E 2288-03, *Standard Guide for Physical Match of Paper Cuts, Tears, and Perforations in Forensic Document Examination*
3. ASTM E 2325-05, *Standard Guide for Non-destructive Examination of Paper*
4. ASTM E 2331-04, *Standard Guide for Examination of Altered Documents*
5. Conway, J. *Evidential Documents;* Bannerstone House: IL, 1978; pp 157-175.
6. Hilton, O. *Scientific Examination of Questioned Documents;* Elsevier: N.Y., 1982; pp 24, 25, 32-48, 75-84.
7. Harrison, W. R. *Suspect Documents;* Nelson-Hall: Chicago, IL, 1981; pp 6-27, 92.
8. Kelly, J. S., Lindblom, B. S., *Scientific Examination of Questioned Documents*, Taylor & Francis Group, Boca Raton, FL, Chapter 14, 15 and 27.
9. Questioned Document Section Article Library

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Approval

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