Questioned Documents Section

Training Manual
1.0 - PROGRAM OBJECTIVES

1.1 The objective of this program of instruction is to prepare individuals to make independent examinations, comparisons, analyses and judgments in the challenges most commonly encountered by document examiners. These challenges include, but are not limited to, the following: identifying persons as having written or printed a certain document; revealing alterations, additions or deletions; identifying the source of typewriting; examining and comparing inks, papers and writing instruments; establishing dates, sources, history and relationship of documents; determining the methods by which a document was produced; establishing the sequence of writings or parts of a document; restoration of water soaked and/or charred documents; photocopy machine identification and physical matching of torn or broken pieces. This training program may also be used for retraining or maintenance of skills and expertise.

A trainee will be assigned a principle trainer to oversee the trainee’s progress through the program.

1.2 The trainee will also be expected to become knowledgeable in the fields of imaging and photography as it applies to documents; court chart preparation; and learn the techniques of expert testimony useful in presenting the reasons for their findings.

1.3 The trainee must learn and demonstrate the correct methods for logging in cases, proper procedures for evidence reception and handling. LIMS training and QA training will expand progressively as the trainee’s training advances.

1.4 The trainee must be able to explain "scientific method" and its application to laboratory work and document examination, write reports which conform to the required format for the laboratory. Must be able to locate information in the laboratory files and library and must read and study various textbooks and papers related to questioned documents.

1.5 The trainee must develop a good working knowledge of questioned document terminology and forensic science terminology:

- ASTM E 444 or current Standard Descriptions of Scope of Work Relating to Forensic Document Examiners
- ASTM E 2195 or current Standard Terminology Relating to the Examination of Questioned Document
- ASTM E 1732 or current Standard Terminology Relating to Forensic Science
1.6 The three (3) year basic program must prepare the Trainee to conduct the various examinations expected of a Forensic Document Examiner. But it is recognized that the training does not end with the completion of the three year program and that study and training will go on as long as the person continues in this profession. As such, we must introduce the trainee to all the subjects and give him/her the necessary training to allow him/her to advance later into the more complex areas on their own.

1.7 The training times indicated are only suggested and are dependent upon the progress of the student. In general, the total length of the course should be approximately three years and no trainee should be permitted to testify until they have successfully completed the first year and a half to two years of the training program and received some mock trial training. During this two year period the trainee will be required to form judgments on the cases submitted to the laboratory for analysis. The purpose of this is to demonstrate throughout the training period that for the most part the document examiner’s work requires subjective judgments relative to the probability that similar characteristics will appear in the writings of two different individuals, or two different typewriters, or associated problems.

1.8 It is difficult to design a program and keep it current in some of the more advanced fields mentioned. It is when the document examiner has a specific problem involving the new technologies that he/she must turn to the necessary reference material available at that time.

1.9 Requiring day to day decisions will give the trainee the experience and maturity required to form judgments as well as providing the principle trainer with some concept of the trainee’s progress. This program is not designed, nor intended to be a program of self instruction. The profession of Questioned Document Examination has long recognized that only through the apprenticeship form of training can a person truly learn and build the experience necessary to accurately practice in this profession.

1.10 It is recognized that individual and specific outside workshops, training, and study may complement and enhance the CMPD Crime Laboratory Questioned Document Training Program. However, these additional trainings are not necessary for the trainee to become proficient.


1.13 Reference material listed in this manual is not all inclusive and should be used as the beginning of researching the specific topic area.

1.14 During the training period, all practice case work, written opinions and personal tracking-training manuals will be reviewed and signed off by the principle trainer. All of the trainee’s competency tests will be reviewed and approved by the principle trainer and administratively reviewed by the CMPD Laboratory Director. All training requirements must be completed by the trainee and the trainee must be competency tested before the trainee may issue official case reports. All training will be documented in the trainee’s Staff Qualifications File.

1.15 All paperwork (including all competency tests and conclusions) generated by the trainee during his/her training period, will be retained permanently in the trainee’s training file. This file will remain in the Questioned Document Section permanently as proof of the trainee’s fulfillment of finishing all of the requirements in the CMPD Crime Lab Questioned Document Section Training Program.

1.16 The QD Section Administrator has the primary responsibility to provide training to a new employee.

1.17 Training may be given directly or in conjunction with other qualified members of the section.

1.18 Trainees should attend in-service and outside recommended schools as they become available.

1.19 Trainees may be suggested to visit other laboratories during the training period. The length of visitation will be arranged between the laboratories.

1.20 During the training period, all practice casework, written opinions and personal tracking-training manuals will be reviewed and signed off on by QD Section Supervisor. All of the trainee’s competency tests will be reviewed and approved by the QD Section Supervisor and administratively reviewed by the Crime Lab Director. All training requirements must be completed by the trainee and the trainee must be Competency tested before the trainee may issue official case reports.

1.21 The training protocol for the CMPD Crime Lab Questioned Document Section encompasses thirty-six (36) months. This training is specifically designed to meet or exceed recognized standards established in the discipline. For example see American Board of Forensic Document Examiners (ABFDE) guide lines and is modeled in part after the following:
1.23 Activities outlined in the protocol may be covered at different points during the training. This is due to, and dependent upon, the opportunities presented in cases received which may or may not allow for coverage of all topic areas, or for topic areas to be learned in the order they are presented in this manual. Using actual cases to demonstrate a particular area may not always be possible.

1.24 Referenced external documents, developed by other organizations or agencies, may be cited and used to enhance this training program.

1.25 Successful completion of the training program areas is determined by evaluations of the mastery of the concepts. Evaluations will occur during the training program. Evaluations will include oral and written examinations, and/or the preparation of essay material by the trainee to demonstrate their familiarity with the concepts.

1.26 During the training period, all practice case work, written opinions and personal tracking-training manuals will be reviewed and if feasible, signed off on by a QD section member. All of the trainee’s competency tests will be reviewed and approved by a QD Section Supervisor and administratively reviewed by the Crime Laboratory Director.

1.27 Prior to the reporting of conclusions in Questioned Document Examination Casework, all training requirements must be completed by the trainee and the trainee must be competency tested by the QD Section Administrator. In addition, all paperwork and testing must be administratively reviewed by the Crime Laboratory Director.

2.0 -TRAINING REQUIREMENTS MODULE

2.1 Complete the General Laboratory Training Program, which in addition to general lab information, specifically covers training in ethics and criminal law and procedures.

2.2 Learn history of the QD Section within the CMPD Crime Laboratory.
2.3 Brief overview of the field of Document Examination slide presentation on Document Section.

2.4 Familiarization with various books and reference files in the laboratory from which reading assignments will be made:
   - ASKSAM
   - QD Library
   - Web Resources (examples: ASQDE, ABFDE, ASTM, AAFS, etc.)

2.5 Reading assignments will be coordinated, as to specific topics, with the training outline. The trainee may be required to submit brief outlines on assigned readings.

2.6 Introduction to Evidence handling procedures:
   - ASTM E 1492 or current Standard Practice For Receiving/Documenting/Storing & Retrieving Evidence
   - ASTM E 1459 or current Standard Guide for Physical Evidence Labeling and Related Documentation Intake Policy

Trainee’s Performance Review – (approximate time of training involved with this section is 1 month).

In the event of unsatisfactory performance, extensions of the training period may be implemented; specific deficiencies will be identified along with a plan of affirmative assistance, such as additional training and/or further competency testing.

2.7 Supervised case examination activities, mock case examination exercises and related activities

2.8 Continued refinement of learned skills

3.0 - TRAINING PROTOCOL MODULE

3.1 Instrument Orientation

The trainee will receive instruction and shall become familiar with instrumentation available to the unit and the variety of applications and uses for the instruments:

   3.1.0 Stereo Microscope
   3.1.1 ESDA
   3.1.2 Visual Spectral Comparator 6000/HS
   3.1.3 Measuring Devices
   3.1.4 Typewriter Grids
   3.1.5 Micrometer
3.2 Imaging System Orientation

3.2.1 Hardware Introduction
   3.2.1.1 Imaging Computer
   3.2.1.2 Imaging Scanner
   3.2.1.3 Imaging Printers

3.2.2 Software Introduction
   3.2.2.1 Adobe Photoshop
   3.2.2.2 Adobe Acrobat

3.3 Trainee’s Performance Review – (approximate time of training involved with this section is 1 month)

In the event of unsatisfactory performance, extensions of the training period may be implemented; specific deficiencies will be identified along with a plan of affirmative assistance, such as additional training and/or further competency testing.

3.4 Supervised case examination activities, mock case examination exercises and related activities

3.5 Continued refinement of learned skills

4.0 - HANDWRITING & HAND PRINTING MODULE

4.1 Handwriting and Hand printing

4.1.1 The trainee will begin to receive instruction in the examination of handwriting and hand printing and shall become familiar with the following areas:

   ASTM E 2290 or current Standard Guide for the Examination of Handwritten Items
   ASTM WK 10717 or current Standard Guide for Examination of Handwritten Items for Simulation and Tracing
   QD SOP IA1 Handwriting Comparisons
   QD SOP Altered and Obliterated Documents
   QD SOP IB2 Indented Writing
   QD SOP Appendix I Minimum Standards and Controls
   QD SOP Appendix II Opinion Terminology

4.1.2 Each examination will be closely supervised and discussed in depth

4.1.3 Case preparation and report writing and discussion of range of opinions
ASTM E 1658 or current Standard Terminology for Expressing Conclusions of Forensic Document Examiners

4.1.4 Abnormal, Disguised, Careless and Unnatural writing

4.1.5 Forgeries

4.1.6 Eliminations

4.1.7 Introduction to various writing instruments

4.1.8 Graphology

Graphology is not studied as a recognized forensic discipline or a credible means of document examination. It is covered in this training program to give the trainee exposure to the topic so that he/she may discuss this topic with others when asked to do so. The CMPD Crime Lab does not endorse the use of Graphology, Graphoanalysis or any of its related fields

4.1.9 Trainee’s Performance Review – (approximate time of training involved with this section is 1 month)

In the event of unsatisfactory performance, extensions of the training period may be implemented; specific deficiencies will be identified along with a plan of affirmative assistance, such as additional training and/or further competency testing

4.1.10 Trainee will examine evidence under the direction of the training examiner

4.1.11 Supervised case examination activities, mock case examination exercises and related activities

4.1.12 Continued refinement of learned skills

5.0 CASEWORK INTRODUCTION MODULE

The trainee will begin to receive instruction and begin to inventory specific cases and shall become familiar with the following areas

5.1 Trainee will begin the process of learning to organize a case and prepare the case for examination. This will include learning the process of copying and/or

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1These areas of instruction are ongoing throughout the training period. Development of knowledge and skills in these topic areas are ongoing
imaging the evidence. This process of case organization and examination will be done under the direct supervision of the trainer. This will involve tasks of case preparation for examination by other members of the section. Trainee may be allowed to examine various cases, depending upon the nature of the examinations.

5.2 Trainee will attempt to formulate an opinion on cases for examination, for comparison with the conclusions reached by the training scientist, and discussion.

5.3 Continuation of previous month’s activities.

5.4 Schedule trainee for the Questioned Document Course 101 course offered by the U.S. Secret Service, if available. While, it is recognized that individual and specific outside workshops, training, and study programs may complement and enhance the CMPD Crime Lab Questioned Document Training Program, these additional trainings are not necessary for the trainee to become proficient. This request will be made by the Section Administrator through the official channels via the local office of the U.S. Secret Service.

5.5 Trainee’s Performance Review – (approximate time of training involved with this section is 1 month) In the event of unsatisfactory performance, extensions of the training period may be implemented; specific deficiencies will be identified along with a plan of affirmative assistance, such as additional training and/or further competency testing.

5.6 Supervised case examination activities, mock case examination exercises and related activities.

5.7 Continued refinement of learned skills.

6.0- IMAGING AND PHOTOGRAPHY MODULE

6.1 The trainee will receive instruction and become familiar with imaging and photographic techniques.

6.1.1 Electromagnetic Spectrum

6.1.2 Ultraviolet

6.1.3 Infrared
   Infrared Absorption
   Infrared Transmission
   Infrared Luminescence
6.1.4 Filters & their use
  - Barrier
  - Long Pass
  - Band Pass
  - Excitation
  - Dichroic

6.1.5 ASTM E 1422 or current Standard Test Method for Forensic Writing Ink Comparisons
  ASTM E 1789 or current Standard Guide for Writing Ink Identification
  Foster and Freeman VSC 6000 Video Spectral Comparator Hardware Manual; November 2011
  Foster and Freeman VSC 6000 Video Spectral Comparator Software Manual; November 2011
  Foster and Freeman Standard Sample Pack for VSC 6000; October 2008

6.1.6 Trainee’s Performance Review – (approximate time of training involved with this section is 1 month)

  In the event of unsatisfactory performance, extensions of the training period may be implemented; specific deficiencies will be identified along with a plan of affirmative assistance, such as additional training and/or further competency testing

6.1.7 Supervised case examination activities, mock case examination exercises and related activities

6.1.8 Continued refinement of learned skills

7.0 – TYPEWRITERS MODULE

7.1 Introduction to Typewriters

  The trainee will receive instruction and become familiar with examination techniques for typewriters, ribbons, and font classification

7.1.1 General Examination Principles

  ASTM WK 8054 or current Standard Guide for Examination of Typewritten Items
  Haas Atlas
  Bouffard
  Crown
  QD SOP IA2 Typewriters and Other Machine Impressions
7.1.2 Additional Reference Documentation

Terminology
Theory of Typewriter Identification
The Meaning of Significance
Types of Typewriting Characteristics
The Process of Comparison
Typebar
Single Element
Proportional Spacing
Alterations or Insertions into a Typed Document
Electronic
Computer Fonts

7.1.3 Introduction to Ribbon Examinations

ASTM Standard E 2287 or current Standard Guide for Examination of Fracture Patterns and Paper Fiber Impressions on Single-Strike Film Ribbons and Typed Text

7.1.4 Equipment Used

Ribbon Readers
Comparison Microscope (Firearms and Toolmarks Section)
VSC 6000/HS

7.1.5 Trainee’s Performance Review – (approximate time of training involved with this section is 1 month)

In the event of unsatisfactory performance, extensions of the training period may be implemented; specific deficiencies will be identified along with a plan of affirmative assistance, such as additional training and/or further competency testing

7.1.6 Supervised case examination activities, mock case examination exercises and related activities

7.1.7 Continued refinement of learned skills

8.0 - COUNTERFEIT EXAMINATIONS MODULE

The trainee will receive instruction and become familiar with examination techniques for counterfeit documents:

8.1 Printing Processes
QD SOP IB3 Counterfeit
8.1.1 Terminology

8.1.2 Ink
QD SOP IIA1 Inks

8.1.3 ASTM E 2389 or current Standard Guide for the Examination of Documents Produced with Liquid Inkjet Technology

8.1.4 Toner

8.1.5 ASTM E 2390 or current Standard Guide for the Examination of Documents Produced with Toner Technology
QD SOP IA3 Photocopiers and Other Office Machine Systems

8.1.6 Other Processes
Lithography
  Offset Lithography
  Gravure
  Rotogravure
  Intaglio
  Letterpress
  Screen
  Flexography

8.1.7 Paper
ASTM E 2325 or current Guide for the Non-Destructive Examination of Paper
QD SOP IIA2 Paper

8.1.8 Digital imaging
Foster and Freeman VSC 6000 Video Spectral Comparator Hardware Manual; November 2011
Foster and Freeman VSC 6000 Video Spectral Comparator Software Manual; November 2011
Foster and Freeman Standard Sample Pack for VSC 6000; October 2008

8.1.9 Desktop Publishing

8.1.10 U.S. Currency

8.1.11 General Examination Principles

8.1.12 Checks

8.1.13 General Examination Principles
8.1.14 Other types of counterfeits (i.e. lottery tickets, refund coupons, event
tickets, vehicle titles, etc.)

8.2 Introduction to Check Protector Examinations

The trainee will receive instruction and become familiar with examination
techniques for check protectors:

8.2.1 General Examination Principles

8.2.2 Printing Processes

8.2.3 ABFDE Classification & Identification of Check Writers

8.2.4 ASTM E 2285 or current Standard Guide for Examination of
Mechanical Checkwriters
QD SOP IA2 Typewriters and Other Machine Impressions

8.3 Trainee’s Performance Reviews – (approximate time of training involved with
this section is 3 months)

In the event of unsatisfactory performance, extensions of the training period
may be implemented; specific deficiencies will be identified along with a plan
of affirmative assistance, such as additional training and/or further
competency testing

8.4 Supervised case examination activities, mock case examination exercises
and related activities

8.5 Continued refinement of learned skills

9.0 - INK EXAMINATIONS MODULE

9.1 Introduction to Ink Examinations

The trainee will receive instruction and become familiar with examination techniques
for ink examinations

9.1.1 Visual

9.1.2 Microscopic

9.1.3 VSC 6000/HS Techniques
9.1.4 Imaging Techniques

9.1.5 Photographic Techniques

9.1.6 Thin Layer Chromatography

9.1.7 ASTM E 1422 or current Test Method for Writing Ink Comparisons

9.1.8 ASTM E 1789 or current Standard Guide for Writing Ink Identification

9.1.9 Principles of differentiation versus identification

9.1.10 Ink Dating

9.1.10.1 Review of Techniques:
   Static Approach
   Ink Library Comparison
   Dye based techniques
   Solvent based techniques

9.1.10.2 IRS Ink Laboratory

9.1.10.3 U.S. Secret Service Laboratory

9.2 Introduction to Seal and Stamp Examinations
The trainee will receive instruction and become familiar with examination techniques for seals and stamps:

9.2.1 General Examination Principles

9.2.2 Dry Seals

9.2.3 ASTM E 2286 or current Standard Guide for the Examination of Dry Seal Impressions

9.2.4 Stamps

9.2.5 ASTM E 2289 or current Standard Guide for the Examination of Rubber Stamps

9.2.6 Cachet

9.2.7 Foster and Freeman VSC 6000 Video Spectral Comparator Hardware Manual; November 2011
Foster and Freeman VSC 6000 Video Spectral Comparator Software Manual; November 2011
9.2.8 QD SOP IIA1 Inks

9.2.9 QD SOP IA2 Typewriters and other Machine Impressions

9.2.10 QD SOP IB3 Counterfeit

9.3 Trainee’s Performance Review – (approximate time of training involved with this section is 2 months)

In the event of unsatisfactory performance, extensions of the training period may be implemented; specific deficiencies will be identified along with a plan of affirmative assistance, such as additional training and/or further competency testing.

9.4 Supervised case examination activities, mock case examination exercises and related activities

9.5 Continued refinement of learned skills

10.0 - OTHER DOCUMENT EXAMINATION MODULES

10.1 The trainee will receive instruction, review literature and become familiar with examination techniques in the following areas:

10.1.1 ASTM Standards

ASTM E 2325 or current Standard Guide for the Non-Destructive Examination of Paper
ASTM WK 8055 or current Standard Guide for the Restoration and Preservation of Charred Documents
ASTM WK 8072 Guide for the Restoration and Preservation of Water Soaked Documents
ASTM E 2288 or current Standard Guide for Physical Match of Papers Cuts, Tears, and Perforations in Forensic Document Examinations
ASTM E 2291 or current Standard Guide for Indentation Examinations
ASTM E 2331 or current Standard Guide for Examination of Altered Documents
Operation of the ESDA
Basic Guidelines for the Examination of Questioned Document Evidence
Operation of the Comparison Microscope
Use and Maintenance of the Video Spectral Comparator 6000/HS
Use and Maintenance of the Veho Compact Video Microscope
Erasures
Obliterations
Determination of Direction of Writing Instrument Strokes
Paper Examinations
Impression Device Examinations
Printing Processes

10.1.2 Additional Training

Sequence of Lines and Direction of Stroke
Charred Document Examinations
Water Soaked Document Examinations
Tape, paper and match fracture pattern matching

10.2 Trainee’s Performance Reviews – (approximate time of training involved with this section is 1 month)

In the event of unsatisfactory performance, extensions of the training period may be implemented; specific deficiencies will be identified along with a plan of affirmative assistance, such as additional training and/or further competency testing

10.3 Supervised case examination activities, mock case examination exercises and related activities

10.4 Continued refinement of learned skills

11.0 - COPIERS, FAXES AND PRINTERS MODULE

11.1 The trainee will receive instruction, review literature and become familiar with examination techniques in the following areas:

11.1.1 Photocopy machines
Classification and Identification of Modern Office Copiers
QD SOP IA3 Photocopiers and Other Office Machine Systems
ASTM E 444 or CURRENT STANDARD
ASTM E 1732 or CURRENT STANDARD
ASTM E 2195 or CURRENT STANDARD
ASTM E 2331 or CURRENT STANDARD
ASTM E 2388 or CURRENT STANDARD
ASTM E 2389 or CURRENT STANDARD

11.1.2 Printers
Computer Printer Database 1977-1998

11.1.3 Facsimile machines
Basic Fax Facts (1993)
11.1.4 Expert Testimony

Trainee will be scheduled for mock trial training
Trainee will accompany unit members for court appearances²

11.2 Trainee’s Performance Review – (approximate time of training involved with this section is 3 months)

In the event of unsatisfactory performance, extensions of the training period may be implemented; specific deficiencies will be identified along with a plan of affirmative assistance, such as additional training and/or further competency testing

11.3 Supervised case examination activities, mock case examination exercises and related activities

11.4 Continued refinement of learned skills

12.0 -REFINING HANDWRITING EXAMINATIONS MODULE

12.1 The Trainee will be responsible for receiving and completing all training cases assigned

12.2 All activities will be closely scrutinized by the section supervisor and/or designated trainer

12.3 Trainee will work various types of handwriting cases.

12.4 Trainee will research and perform various handwriting projects and report conclusions to the section supervisor.

12.5 Trainee will read various handwriting articles from the QD reference files and also current articles as they are presented in literature.

ASTM E 2290 or current Standard Guide for Examination of Handwriting Items
ASTM WK 10717 or current Standard Guide for Examination of Handwritten Items for Simulation and Tracing

² Due to the possibility of limited court appearances by the section, this activity may begin earlier in the training, at the discretion of the unit supervisor.
12.6 Trainee will participate in moot court exercises, at the discretion of the principle trainer.

12.7 Trainee’s Performance Review – (approximate time of training involved with this section is 9 months) In the event of unsatisfactory performance, extensions of the training period may be implemented; specific deficiencies will be identified along with a plan of affirmative assistance, such as additional training and/or further competency testing.

12.8 Supervised case examination activities, mock case examination exercises and related activities.

12.9 Continued refinement of learned skills.

13.0 - REFINEMENT OF HANDWRITING EXAMINATIONS CON’T.

13.1 All opinions will be administratively and technically reviewed by the unit supervisor and/or designee
ASTM E 2290 or current Standard Guide for the Examination of Handwritten Items
ASTM WK 10717 or current Standard Guide for Examination of Handwritten Items for Simulation and Tracing
QD SOP IA1 Handwriting
QD SOP IB2 Recovering Indented Writing

13.2 All activities will be closely scrutinized by the section supervisor and/or designated trainer

13.3 Trainee will continue to work various types of handwriting cases

13.4 Trainee will continue to research and perform various handwriting projects and report conclusions to the section supervisor

13.5 Trainee will continue to read various handwriting articles from the QD reference files and also current articles as they are presented in literature

13.6 Trainee’s Performance Review – (approximate time of training involved with this section is 12 months)

In the event of unsatisfactory performance, extensions of the training period may be implemented; specific deficiencies will be identified along with a plan of affirmative assistance, such as additional training and/or further competency testing
Extensions of the training period may be implemented; specific deficiencies will be identified, with a plan of affirmative assistance in the specific area, according to current contractual rights.

13.7 Supervised case examination activities, mock case examination exercises and related activities

13.8 Continued refinement of learned skills

13.9 The trainee will be evaluated to determine if he/she is competent to begin functioning independently. This evaluation may include:

- Trainer and/or supervisor evaluations and observations
- Interviews and the ability to articulate and demonstrate sound casework reasoning
- Mock testing performance
- Competency Testing

14.0 REFERENCES

14.1 References

- CMPD Crime Lab QD Reference File
- CMPD Crime Lab QD Video/CD Reference File
- CMPD QD Library
- ASTM E 30-02 Standards
- American Society of Questioned Document Examiners
- American Board of Forensic Document Examiners
- American Academy of Forensic Sciences
- Journal of Forensic Science
- Southern Association of Forensic Document Examiners
- QDAD

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3 This list is not to be construed as all inclusive; the literature and references listed represent a portion of the materials available and it is understood that reference materials will continue to be developed and evolve.