

15.1 PURPOSE:

- 15.1.1 To describe the procedures for confirming candidate matches generated by CODIS, assigning dispositions to candidate matches, and notifying outside agencies with relevant information. To follow guidelines outlined in accordance with the requirements for the DNA Database as described in Connecticut General Statute Section 54-102g through m, Section 54-250, and Section 54-254; the NDIS Operational Procedures Manual; and the Memorandum of Understanding between the CT Division of Scientific Services and the FBI.

15.2 RESPONSIBILITY:

- 15.2.1 DNA Section Personnel.

15.3 Confirmation of DNA Database Matches, Overview:

- 15.3.1 A Candidate Match is a possible match between two or more DNA profiles generated by the CODIS software. It is not a Confirmed Match, therefore, no personally identifiable information related to a Candidate Match shall be released by the laboratory.
- 15.3.2 Offender samples submitted for incorporation into the CT DNA Database are not considered evidence; they are considered reference materials for investigation purposes. A confirmatory known sample is required in order to generate a DNA report that contains conclusions regarding any individual identified by the DNA Database. If appropriate, the submitting agency will be asked to supply elimination known samples.
- 15.3.2.1 For the purposes of the following procedures, the term "Offender" shall also represent the Arrestee, Detainee and Legal specimens that are acceptable at NDIS.
- 15.3.3 Offender matches: An Offender Candidate Match occurs when a DNA profile developed from crime scene evidence matches a DNA profile developed from an offender reference sample. Upon notification of an offender match, the case jacket for the associated forensic case is located, the identifying information card for the offender is pulled and a COLLECT database search for the listed individual is conducted. The elements of the search shall include RT50, RT60, SPRC and NCIC. Confirmation that the offender has a listed qualifying offense to be included in CODIS, was not incarcerated on the incident date of the forensic case, and has not previously been convicted of the incident under investigation is completed. If a qualifying offense is not obvious the sample identifying information will be forwarded to a member of the State's Attorney's Office for review and confirmation of a qualifying offense. The response will be included with the paperwork sent for review. The reference sample from the offender and the victim's known (if available or appropriate) are processed and compared to the current profile data. Once the profile data has been confirmed, the submitting

agency, the appropriate State's Attorney's Office, and the Chair of the DNA Databank Oversight Committee are notified of the match by fax or email and supplied with both the forensic case information and offender's identifying information. The three parties are also notified that a formal DNA Report containing conclusions with regard to the identified individual will not be issued until a confirmatory known sample is received and processed. In the case of an interstate match, the information (either the forensic case or offender's identifying information) is supplied to the other NDIS participating laboratory involved in the match. The confirmation process is tracked on DNA-QR-19.

- 15.3.3.1 At the discretion of the CODIS State Administrator, the identifying information of an offender may be released without the retesting portion of the confirmation process as warranted by case details. In cases of (1) clear public danger or exigent circumstances, (2) the offender sample cannot be located, or (3) the laboratory is unable to generate a DNA profile for confirmation; the identifying information for the offender may be released to the submitting agency or other CODIS Laboratory. All other portions of the hit confirmation process will be completed including a comparison of the barcodes on the FTA card and offender information card, confirmation of a qualifying offense and custody status on the incident date. A statement will be included in the hit notification document indicating that the standard hit confirmation process could not be completed at the time of release.
- 15.3.3.2 In the event it is determined that no statistical evaluation can be performed on a candidate match between an offender and a forensic profile, the disposition for the candidate match will be State Defined Disposition #1. The reason (e.g. too complex for STRmix or No STRmix available for outsource data, etc.) will be recorded in the comments section of Match Manager in CODIS and as well as on the Match Detail Report to be placed in the case jacket. If warranted, the forensic profile may need to be deleted from CODIS and a Change in Profile Status issued.
- 15.3.4 Forensic matches: A Forensic Candidate Match occurs when DNA profiles from two forensic samples match to one another. Upon notification of a forensic match, the DNA case jackets for the cases are located. The known samples from the victims are processed (if available or appropriate) and compared to the current profile data. Once the match has been confirmed, the submitting agency(ies), the appropriate State's Attorney's Office(s), and the Chair of the DNA Databank Oversight Committee are notified of the match by fax or email and supplied with the information about the cases and contact information for each agency involved in the match. In the case of an interstate match, the case details and investigator information is supplied to the other NDIS participating laboratory involved in the match. The confirmation process is tracked on DNA-QR-19A.
- 15.3.4.1 When a candidate match occurs between two forensic mixtures or a forensic mixture and a forensic partial, the evaluating analysts may determine the profiles are not suitable for comparison due to insufficient data or profile complexity. Under these circumstances the

disposition for the candidate match will be State Defined Disposition #2. The reason will be recorded in the comments section of Match Manager in CODIS and on the Match Detail Report to be placed in each case jacket.

- 15.3.5 When a Candidate Match (either Offender or Forensic) involves a DNA profile entered into CODIS prior to April 15, 2013, and is marked for NDIS, the match confirmation process shall include confirming the eligibility of the DNA profile entered into CODIS. Under this circumstance, the requirement to confirm eligibility will be denoted in the Confirmation Status on the DNA QR-19 or DNA QR-19A.
- 15.3.5.1 The DNA QR-13, case summary and sample information contained within the case file will be reviewed to substantiate the justification for entering the DNA profile into CODIS. The review of profile eligibility will be conducted prior to the release of any offender/case information to the submitting agency and documented under the appropriate section of the DNA QR 19 or DNA QR-19A.
- 15.3.5.2 If the available information is insufficient to support CODIS eligibility, contact shall be made with the submitting agency to obtain additional information to demonstrate eligibility. Any follow up actions will be documented in the Comments section of the DNA QR-19 or DNA QR-19A. The information obtained from contact with the submitting agency shall be documented on a case memo sheet and attached to DNA QR-13. Eligibility will be documented under the appropriate section of the DNA QR 19 or DNA QR-19A.
- 15.3.5.3 In the event the DNA profile is deemed ineligible to be in CODIS, the appropriate match confirmation process shall be completed. The appropriate disposition will be made in CODIS, then the DNA profile will be deleted from CODIS. The Deleted Specimen Report will be printed and placed in the case file. A note will be made in the Comments section of the DNA QR-19 or DNA QR-19A.
- 15.3.5.4 If this Candidate Match is determined to be an Offender Hit or a Forensic Hit, prior to the release of the information in the Hit Notification, the Department's legal counsel will be consulted. When the Hit Notification form is issued, it will apprise the notified parties of the ineligibility of the DNA profile for CODIS and the subsequent removal of the DNA profile from this database.
- 15.3.6 The designation of "Source Identified ?" in the STR/Y-STR Data Entry field of CODIS is not a legal determination. The designation only indicates that the forensic sample has been associated to a submitted known sample or by means of a CODIS match.
- 15.3.7 The transmission of a hit notification to confirmed fax numbers or email addresses for the submitting agency, State's Attorney's Office, and Chair of the DNA Databank Oversight Committee is deemed to be verification of the requestor of the search.

15.4 Confirmation of Missing Persons Matches

- 15.4.1.1 Missing Persons Candidate matches: A missing person candidate match occurs when a DNA profile from the Relatives of a Missing Person Index matches to a DNA profile from the Unidentified Human Remains (UHR) Index. In addition to autosomal STR results, both the target and candidate profiles should have data from a second DNA technology (mtDNA or Y-STR) or an attempt must have been made to generate a DNA profile using a second technology. Upon notification of a missing persons match, the DNA files for the cases are pulled. Once the match has been confirmed, the OCME and the submitting agency are notified of the match by fax or email and supplied with the information about the cases and contact information for each agency involved in the match. Communications regarding missing person matches should contain sufficient detail, including all known metadata, to allow the Medical Examiner to make a fully informed decision. The laboratory is not confirming the identity of the remains or definitively stating that a relationship exists to a given Pedigree Tree. The official identification of remains will be determined by the Medical Examiner and documented through the issuance of a death certificate.

15.5 Evaluating a CODIS Match

When a candidate match notification is received from Match Manager in CODIS, the match must be evaluated and confirmed. For Candidate Matches in which all loci match at high stringency, the evaluation may be performed by an individual who is currently or was previously a qualified casework DNA analyst. For Candidate Matches in which any loci match at less than high stringency, the evaluation shall be performed by an individual who is currently or was previously a qualified casework DNA analyst in the technology being reviewed.

Matches of Forensic Mixtures and Forensic Partial matches which are based upon the Original CODIS Core Loci shall include an evaluation of the data at additional available loci to filter the match before proceeding with the confirmation process.

In some instances, the evaluation of a candidate match may require additional testing be performed on the involved samples. This testing may include the analysis of additional loci or the use of a second technology, such as mtDNA or Y-STRs.

Depending on the type of candidate match, the appropriate procedure should be followed.

Intrastate Matches:

The CT DESPP-DSS will make a good faith effort to evaluate candidate matches, complete confirmation work, disposition in CODIS and notify the submitting agency(ies) involved in intrastate matches within 30 business days.

For each match generated from a state search:

- Print a copy of the Match Detail report.
- Locate the appropriate case jacket(s).
- Check that the disposition of the match has been automatically changed from **Candidate Match** to **Pending** in Match Manager.

15.5.1.1 Offender to Forensic Sample Match

A qualified individual shall compare the offender DNA profile to the forensic sample DNA profile. In the case of moderate stringency matches, mixtures and partial profiles, this evaluation should include a direct comparison to the electropherograms of the forensic sample.

If warranted, one may proceed to step 15.5.1.1.6.1 and the LR calculation may be completed during the initial match evaluation.

- 15.5.1.1.1 If the profiles are determined not to be a match, a second qualified individual shall review the profiles. If both examiners concur, write **No Match** on the Match Detail Report, initial and date the report and have second examiner initial also. Change the disposition for the match in Match Manager from **Pending** to **No Match**. Place the Match Detail Report in the case jacket and the primary analyst should add their initials as well as the case ID #. In the event that the examiners are unable to agree, consult with the CODIS Administrator and if necessary, the Technical Leader.
- 15.5.1.1.2 If the profiles are confirmed to be a match, determine whether or not the source of the forensic DNA sample has been previously identified by checking the relevant information in the case jacket (e.g. reports). This may include contacting the submitting agency to determine if the case has been solved.
- 15.5.1.1.3 If the source of the forensic DNA sample has been previously identified, obtain a copy of the Offender information card. Verify that the identified source of the DNA sample is the same individual listed as the Offender. Change the disposition in Match Manager from **Pending** to **Conviction Match**. Place the Match Detail Report and the copy of the Offender information in the case jacket, add the appropriate case ID # and analyst's initials, and refile appropriately. Modify the "Source Identified ?" box on the STR/Y-STR Data Entry field in CODIS to "Yes" for the forensic DNA sample.
- 15.5.1.1.3.1 In the event the Offender card information does not match the identified source of the DNA sample, a COLLECT search should be performed to ascertain the Offender's known aliases. If the COLLECT search does not yield a matching name, the laboratory may obtain additional identifying information (such as fingerprints) from the identified source of the

DNA profile and the Offender and compare that information. If the issue remains unresolved, the laboratory will confirm the Offender sample to ensure no administrative errors occurred during sample processing. If no processing errors have been made, refer this match to the DNA Database oversight Panel for guidance.

- 15.5.1.1.4 If the source of the forensic DNA sample has not been previously identified, obtain a copy of the Offender information. Using QR-19 enter the appropriate information to keep a record of the progress of the confirmation process. Conduct a COLLECT search (RT50, RT60, SPRC and NCIC) on this individual and confirm the following:
- 15.5.1.1.4.1 The biographical data on the Offender information card matches the biographical information contained in the criminal history record (SPRC) and the Dept. of Corrections record. Document the concordance of information on the DNA QR 19. If there is a discrepancy, notify the State Administrator.
- 15.5.1.1.4.2 The Offender has been convicted of a qualifying offense as defined in Connecticut General Statute Sec. 54-102g. If a qualifying conviction cannot be readily identified from the COLLECT search, contact DOC Health or the Chair of the Oversight Committee to assist with verification. If the Offender has not been convicted of a qualifying offense, the hit notification will be sent to the Chair of the Oversight Committee only. The offender sample will be moved to a non-searching category within CODIS and will be referred to the DNA Database Oversight Panel for evaluation.
- 15.5.1.1.4.3 The Offender was out of custody on the incident date. If the Offender appears to have been in custody on the incident date, confirm the incident date with the submitting agency, contact DOC Health to determine family status of the Offender (i.e. a known twin), and/or contact DOC administration regarding any furloughs or work release. Confirm the Offender's profile to rule out any incongruities. If no reasonable explanation is found, refer this match to the DNA Database Oversight Panel for evaluation.
- 15.5.1.1.4.4 The Offender has not been convicted of the match offense. If the Offender has been convicted of the match offense, change the disposition in Match Manager from **Pending** to **Conviction Match**. Modify the "Source Identified ?" box on the STR/Y-STR Data Entry field in CODIS to "Yes" for the forensic DNA sample. Determine a known sample from the Offender has been submitted in the related case and compared to the forensic profiles. If so, no further action is required. If no known from the identified Offender has been submitted, issue a Conviction Match Notification.
- 15.5.1.1.5 The Convicted Offender DNA profile will be confirmed by extracting and analyzing a second sample of the Offender's biological sample. If the victim's known is available and has not been processed previously, this sample should be processed also.

- 15.5.1.1.5.1 Locate item #1-1 or #1-2 FTA card and compare the barcode on the FTA card to the barcode on the Offender information card. If the barcodes match, denote this information along with the date and your initials on the photocopy of the Offender information card. Place item #1-1 or #1-2 in the bin Pending Confirmation. If the barcodes do not match, notify the State Administrator.
- 15.5.1.1.5.2 For Offenders submitted prior to the implementation of barcodes, verify the name and numerical identifiers on the card containing the Offender's biological sample to the Offender's information form. If the information matches, denote this verification along with the date and your initials on the photocopy of the Offender information form. If the information does not match, notify the State Administrator.
- 15.5.1.1.6 When the electropherogram and the analysis worksheets from the second testing of the Offender's biological sample are received, compare the profile to the CODIS entry and verify it is the same as the DNA profile. Document the project file in the comments section of STR/Y-STR Data Entry and on the on QR-19 with date and initials. If there is a discrepancy, notify the State Administrator.
- 15.5.1.1.6.1 Upon completion of the second testing of the offender's biological sample, a LR is calculated using STRmix if the offender known cannot be eliminated as the source of or a contributor to the evidence by manual comparison according to SOP 5 and SOP 32. It is not necessary to calculate the LR/run STRmix to determine and/or evaluate a match, if the matching forensic profile is single source or the candidate match has no more than 3 loci matching at moderate stringency and all other loci match at high stringency. The DNA profile from the offender will be exported from CODIS from STR/Y-STR Data Entry. Refer to the DNA QR-304 workbook for instructions on exporting data from CODIS and converting to an acceptable STRmix input file. The primary analyst will complete the deconvolution using STRmix for the appropriate sample with a relevant CODIS candidate match and the CODIS Administrator or designee will calculate the LR based on the previous deconvolution. Document the lowest HPD LR by including pages 1 and 3 of the STRmix report file. For forensic profiles generated by Fusion 6C, if the LR is greater than or equal to 10,000, then proceed with the offender confirmation. If the LR is <10,000, the match will be disposed of as a **No Match** according to 15.5.1.1.1 and no offender information is released. A notation that the LR was <10,000 should be added to the comment section of Match Manager. For forensic profiles generated by Identifiler, Identifiler Plus and GlobalFiler, if the LR is greater than or equal to 1,000, then proceed with the offender confirmation. If the LR is <1,000, the match will be disposed of as a **No Match** according to 15.5.1.1.1 and no offender information is released. A notation that the LR was <1,000 should be added to the comment section of Match Manager. For a **No Match**, the LR can be documented on the Match Detail Report; no DNA QR-19 is necessary. STRmix will not be used to evaluate any matches with forensic profiles

processed with a kit not validated for use with STRmix. The results of STRmix analysis run for the purpose of evaluating a CODIS match will not be reported. The completion of DNA QR-308 Changed and/or Not Reported Interpretations is not required.

- 15.5.1.1.7 Confirm that all appropriate known samples (e.g. victim's known) have been analyzed. If appropriate, process these samples. Compare these profiles to any relevant samples in the case file as a quality assurance measure.
- 15.5.1.1.8 Assign the match the next available hit number and update the hit count.
- 15.5.1.1.9 Change the disposition in Match Manager from **Pending** to **Offender Hit** and enter the hit number in the comments section of the disposition window. Change the Investigation Aided count in CODIS according to CODIS hit counting protocols. Modify the "Source Identified?" box on the STR/Y-STR Data Entry field in CODIS to "Yes" for the forensic DNA sample.
- 15.5.1.1.10 Upon completion of the offender hit confirmation process, complete all appropriate fields on DNA- QR-19. Notification of the CODIS hit shall be completed according to the procedure described in section 15.6.

15.5.1.2 Forensic Sample to Forensic Sample Match

A qualified individual shall compare DNA profiles from the forensic samples. In the case of moderate stringency matches, mixtures and partial profiles, this evaluation should include a direct comparison to the electropherograms. STRmix will not be used to evaluate forensic matches.

- 15.5.1.2.1 If the profiles are determined not to be a match, a second qualified individual shall review the profiles. If both examiners concur, write **No Match** on the Match Detail Report, initial and date the report and have second examiner initial also. Change the disposition for the match in Match Manager from **Pending** to **No Match**. Place the Match Detail Report in the case jacket, add the appropriate case ID # and initials, and refile appropriately. In the event that the examiners are unable to agree, consult with the CODIS Administrator and if necessary, the Technical Leader.
- 15.5.1.2.2 In the event the cases have been previously associated (e.g. through the investigation or during examination process), change the disposition in Match Manager from **Pending** to **Benchmark Match**. If the profiles are determined to be a match, fill out the QR-19A, entering the appropriate information to keep a record of the progress of the confirmation process. Determine whether or not the source of either forensic DNA profile has been previously identified by checking the relevant information in the case jackets (e.g. reports). This may include contacting the submitting agency to determine if either case has been

solved. If the source of both forensic DNA profiles have previously been identified, the match disposition is changed to Investigative Information and the submitting agencies are notified.

- 15.5.1.2.3 Confirm that all appropriate known samples (e.g. victim's known) have been analyzed. If appropriate, process these samples. Compare these profiles to any relevant samples in the case file as a quality assurance measure.
- 15.5.1.2.4 Assign the match the next available hit number and update the hit count. Change the disposition in Match Manager from **Pending** to **Forensic Hit** and enter the hit number in the comments section of the disposition window. Change the Investigation Aided count according to CODIS hit counting protocols.
- 15.5.1.2.5 Upon completion of the forensic hit confirmation process, fill out the appropriate fields on QR-19A. Notification of the CODIS hit shall be completed according to the procedure described in section 15.6.

15.5.2 Interstate Matches

For each match generated from a national search:

- Locate the appropriate case jacket(s).
- Check that the disposition has been automatically changed from **Candidate Match** to **Pending** in Match Manager.

15.5.2.1 CT Forensic Sample to Out-of-State Offender Match

The CT DESPP-DSS will make a good faith effort to evaluate candidate matches, complete confirmation work, and make Offender confirmation requests to other NDIS participating laboratories involved in interstate matches within 30 business days.

- 15.5.2.1.1 Print a copy of the Match Detail report. Compare the Offender DNA profile to the forensic DNA profile. In the case of moderate stringency matches, mixtures and partial profiles, this evaluation should include a direct comparison to the electropherograms of the forensic sample. The comparison must be performed by a qualified casework DNA analyst.
- 15.5.2.1.2 If the profiles are determined not to be a match, a second qualified individual shall review the profiles. If both examiners concur, write **No Match** on the Match Detail Report, initial and date the report and have second examiner initial also. Change the disposition for the match in Match Manager from **Pending** to **No Match**. Place the Match Detail Report in the case jacket, add the appropriate case ID # and analyst's initials, and refile appropriately. In the event that the examiners are unable to agree, consult with the CODIS Administrator and if necessary, the Technical Leader.

- 15.5.2.1.3 If the profiles are determined to be a match, determine whether or not the source of the forensic DNA sample has been previously identified by checking the relevant information in the case jacket (e.g. reports). This may include contacting the submitting agency to determine if the case has been solved.
- 15.5.2.1.4 If the source of the forensic DNA sample has been previously identified, contact the CODIS Administrator from the other CODIS laboratory . Verify that the identified source of the DNA sample is the same individual listed as the Offender (name and date of birth is usually sufficient). Document the exchange of information by placing a copy of an email in the case jacket or making a note of any conversation along with other pertinent information on the Match Detail report, initial and date. File the Match Detail Report in the case jacket. Be sure to include the case ID # and initials on each. Change the disposition in Match Manager from **Pending** to **Conviction Match**. If necessary, modify the “Source Identified?” box on the STR/Y-STR Data Entry field in CODIS to “Yes” for the forensic DNA sample.
- 15.5.2.1.5 If the source of the forensic DNA sample has not been previously identified, confirm that all appropriate known samples (e.g. victim’s known) have been analyzed. If appropriate, process these samples. Compare these profiles to any relevant samples in the case file as a quality assurance measure.
- 15.5.2.1.6 Refer to 15.5.1.1.6.1 to calculate a LR; however, the NDIS offender profile will need to be entered manually into DNA QR-304.
- 15.5.2.1.7 Using DNA-QR-19 enter the appropriate information to keep a record of the progress of the confirmation process. Using or modifying appropriately the following template, make a request to the CODIS Administrator from the other CODIS laboratory to begin their match confirmation process and to respond with their match disposition and the putative perpetrator’s identifying information.

*Approved by Director: Dr. Guy Vallaro***CODIS DNA MATCH DATA REQUEST
OFFENDER MATCH**

Date:

To: Name
 Address
 ORI:
 Ph:
 Email:

From: Name, Title
 ORI: CTCSP3500
 Email:

NDIS Match ID: Match Date:

CT casework specimen # XXX has matched to your offender #XXX.

We have confirmed our forensic profile and have determined that the linked specimens are a MATCH.

Please begin your match confirmation process. Once the process is completed, respond with your match disposition and the putative perpetrator's identifying information.

Our forensic case is a TYPE OF INCIDENT that occurred on DATE in TOWN, CT.

Name

15.5.2.1.8 When the above information is received from the NDIS laboratory, a COLLECT search is conducted. From the COLLECT search information, confirm the following:

15.5.2.1.8.1 The Offender was out of custody on the incident date. If the Offender appears to have been in custody on the incident date, confirm the incident date with the submitting agency, contact DOC Health to determine family status of the Offender (i.e. a known twin), and/or contact DOC Administration for information about furloughs or work releases. If a conflict persists, refer this match to the DNA Database Oversight Panel.

15.5.2.1.8.2 The Offender has not been convicted of the match offense. If the Offender has been convicted of the match offense, change the disposition in Match Manager from **Pending** to **Conviction Match**. Notify the other CODIS laboratory of this information.

- 15.5.2.1.9 Assign the match the next available hit number and update the hit count. Change the disposition in Match Manager from **Pending** to **Offender Hit** and enter the hit number in the comments section of the disposition window. Change the Investigation Aided count according to CODIS hit counting protocols.
- 15.5.2.1.10 Upon completion of the offender hit confirmation process, complete the appropriate fields on DNA-QR-19. Notification of the CODIS hit shall be completed according to the procedure described in section 15.6. Within 14 calendar days of receipt of the personally identifying information from the other NDIS laboratory, the Match notification will be sent to the submitting agency and appropriate State's Attorney's office.
- 15.5.2.2 CT Forensic Sample to Out-of State Forensic Sample Match**
- The CT DESPP-DSS will make a good faith effort to evaluate candidate matches, complete confirmation work, and make case information requests to other NDIS participating laboratories involved in interstate forensic matches within 30 business days. Additionally, the CT DESPP-DSS will make a good faith effort to respond to all requests for confirmation and/or case information from another NDIS participating laboratory involved in interstate forensic matches within 30 business days. STRmix will not be used to evaluate forensic matches.
- 15.5.2.2.1 Print out the Match Detail Report. A qualified individual shall compare DNA profiles from the forensic samples. It may be necessary to contact the other casework laboratory to fully evaluate an interstate forensic candidate match.
- 15.5.2.2.2 If the profiles are determined not to be a match, a second qualified individual shall review the profiles. If both examiners concur, write **No Match** on the Match Detail Report, initial and date the report and have second examiner initial also. Change the disposition for the match in Match Manager from **Pending** to **No Match**. If the other casework laboratory is in agreement that the candidate match is a No Match, place the Match Detail Report in the case jacket and refile appropriately. In the event the examiners are unable to agree, consult with the CODIS Administrator and if necessary, the Technical Leader.
- 15.5.2.2.3 If the profiles are determined to be a match, fill out the QR-19A, entering the appropriate information to keep a record of the progress of the confirmation process. Confirm that all appropriate known samples (e.g. victim's known) have been analyzed. If appropriate, process these samples. Compare these profiles to any relevant samples in the case file as a quality assurance measure.
- 15.5.2.2.4 Determine whether or not the source of the forensic DNA sample has been previously identified by checking the relevant information in the case jacket (e.g. reports). This may include contacting the submitting agency to determine if the case has been solved. If the

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source of the CT forensic DNA sample has previously been identified, contact the other casework CODIS laboratory to determine if their case is unsolved.

15.5.2.2.4.1 If both cases are solved, the case details and investigator information shall be exchanged with the other casework laboratory. When the relevant information is received from the other casework laboratory, that information will be furnished to the submitting agency of the CT case.

15.5.2.2.4.2 If one or both of the cases is unsolved, contact the designated CODIS representative from the other laboratory. Using or modifying appropriately the following template, request that they begin the match confirmation process and respond with their match disposition and the specifics of their case. Provide them with the CT match disposition, the specifics of the CT case and the investigator's contact information.

**CODIS DNA MATCH DATA REQUEST
FORENSIC MATCH**

Date:

To: Name
 Address
 ORI:
 Ph:
 Email:

From: Name, Title
 ORI: CTCSP3500
 Email:

NDIS Match ID: DC Match Date:

CT casework specimen #XX to XX casework specimen #XXXX

We have confirmed our forensic profile and have determined that the linked specimens are a MATCH.

Our case is a TYPE OF INCIDENT that occurred on XX/XX/XXX in TOWN, CT. The investigator is XXXX XXX of the XXXX Police Department (phone). The agency case # XXXXX.

Please confirm your forensic case and forward investigative contact and case information.

Name

- 15.5.2.2.5 When the requested information is received, complete the appropriate fields on QR-19A. Assign the match the next available hit number, and update the hit count. Change the disposition in Match Manager from **Pending** to **Forensic Hit** and enter the hit number in the comments section of the disposition window. Change the Investigation Aided count according to CODIS hit counting protocols.
- 15.5.2.2.6 Upon completion of the forensic hit confirmation process, fill out the appropriate fields on QR-19A. Notification of the CODIS hit shall be completed according to the procedure described in section 15.6.
- 15.5.2.3 CT Offender Sample to Out-of-State Forensic Sample**
- The CT DESPP-DSS will make a good faith effort to respond to all requests for offender confirmation and information from another NDIS participating laboratory involved in interstate matches within 30 business days.
- 15.5.2.3.1 A qualified individual shall compare the CT offender DNA profile to the forensic sample DNA profile and review the DNA data related to the Offender to be prepared to respond to inquiries originating from the out-of-state laboratory.
- 15.5.2.3.2 If the laboratories determine the DNA profiles do not match, change the disposition in Match Manager from **Pending** to **No Match**. No further action is required.
- 15.5.2.3.3 If the laboratories determine the profiles are a match and a request to confirm the Offender sample is received, print out a copy of the Match Detail Report, obtain a copy of the Offender's information and conduct a COLLECT (RT50, RT60, SPRC and NCIC) search. From the COLLECT search, determine that the Offender has been convicted of a qualifying offense and was not incarcerated on the incident date, if the date has been supplied.
- 15.5.2.3.4 If a qualifying conviction cannot be readily identified from the COLLECT search, contact DOC Health or the Chief States' Attorneys' Office to assist with verification. If the Offender has not been convicted of a qualifying offense, the offender identifying information will not be released and the NDIS lab will be notified of the lack of qualifying offense. This offender profile will be moved to a non-searching category within CODIS and the match will be referred to the DNA Database Oversight Panel for evaluation.
- 15.5.2.3.5 If the Offender appears to have been in custody on the incident date, confirm the incident date with the submitting agency, contact DOC Health to determine family status of the Offender (i.e. a known twin), and/or contact DOC administration regarding any furloughs or work release. Confirm the Offender's profile to rule out any incongruities. If a conflict persists, refer this match to the DNA Database Oversight Panel for evaluation.

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- 15.5.2.3.6 The Convicted Offender DNA profile will be confirmed by extracting and analyzing a second sample of the Offender's biological sample.
- 15.5.2.3.6.1 Locate item #1-1 or #1-2 FTA card and compare the barcode on the FTA card to the barcode on the Offender information card. If the barcodes match, denote this information along with the date and your initials on the photocopy of the Offender information card. Place item #1-1 or #1-2 in the bin Pending Confirmation. If the barcodes do not match, notify the State Administrator.
- 15.5.2.3.6.2 For Offenders submitted prior to the implementation of barcodes, verify the name and numerical identifiers on the card containing the Offender's biological sample to the Offender's information form. If the information matches, denote this verification along with the date and your initials on the photocopy of the Offender information form. If the information does not match, notify the State Administrator.
- 15.5.2.3.6.3 When the electropherogram and the analysis worksheets from the second testing of the Offender's biological sample have been received, verify the profile is the same as the DNA profile entered into CODIS. Document the project file in the comments section of STR/Y-STR Data Entry and on DNA-QR-19 with date and initials. If there is a discrepancy, notify the State Administrator.
- 15.5.2.3.7 Fill out the DNA-QR-19 entering the appropriate information to keep a record of the progress of the confirmation process.
- 15.5.2.3.8 Assign the match the next available hit number, update the hit count, and type a summary of the hit. Change the disposition in Match Manager from **Pending** to **Offender Hit** and enter the hit number in the comments section of the disposition window. Change the Investigation Aided count according to CODIS hit counting protocols.
- 15.5.2.3.9 Using, or modifying appropriately, the following template, provide the out-of-state laboratory with the Offender's name and the available identifying information by email or other acceptable communication.

DNA SOP-15 CODIS Hit Confirmations*Approved by Director: Dr. Guy Vallaro*

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**CODIS DNA MATCH DATA RESPONSE
OFFENDER MATCH**

Date:

To: Name
 Address
 ORI:
 phone:
 email:

From: Name, Title
 ORI: CTCSP3500
 email:

NDIS Match ID:

Match Date:

The match of CT offender DB-XX-XXXXXXX to XX casework specimen XXXXXXXXX has been determined to be a MATCH.

Putative Perpetrator's Identifying Information

Name:
DOB:
SID #:
FBI#:

Name

15.5.2.3.10 All generated paperwork will be scanned to the appropriate folder on the U Drive.

15.6 Notification of Offender and Forensic Hits

15.6.1 When either an offender or forensic hit has been confirmed, the submitting agency, the appropriate State's Attorney's office and the Chair of the DNA Databank Oversight Committee shall be notified. This notification may be sent by either facsimile or email using the state email system.

**State of Connecticut Department of Emergency Services and Public Protection
Division of Scientific Services**

Documents outside of Qualtrax are considered uncontrolled.

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- 15.6.2. Use the appropriate Hit Notification Form template. Modifications may be necessary depending on the individual circumstances of each hit and/or case. The Hit Notification Form may be completed by non-scientific personnel.
- 15.6.2.1 Complete the Offender Hit Notification Form template to provide the appropriate case and offender information and to request the submission of a confirmatory biological sample from the identified offender.

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*Approved by Director: Dr. Guy Vallaro***Offender Hit Notification Form**

To: PD:

SAO:

CSAO:

Date:

Offender Hit #

CODIS Match #

Recent DNA analyses have generated an association between DNA case work and the State or National Offender DNA Databases. Please find below the case related information and offender identifying information. A formal laboratory report will be issued upon the submission and processing of a confirmatory biological sample from the listed individual. This information is provided only as an investigative lead, and any possible connection or involvement of the individual to the case must be determined by further investigation. **When the offender's known is submitted to the Laboratory, it should be clearly identified as a confirmatory sample for a database hit.** Please, do not hesitate to call the laboratory if you wish to discuss this matter further.

Name

CODIS State Administrator

Date of hit:

Lab Case #	Submitting Agency & Case #	Type & Date of Incident	Item with Matching Profile	Date of CODIS Entry

*Note: The profile entered into the DNA databases was deduced from a mixture.

Offender Name:

DOB:

Database #:

Inmate #:

SPBI #:

Incarcerated:

Location:

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- 15.6.2.2 Complete the Forensic Hit Notification Form template providing the appropriate case data and investigators' contact information.

Forensic Hit Notification Form

To: PD:

SAO:

CSAO:

Date:

Forensic Hit #

CODIS Match #

Recent DNA analyses have generated an association between DNA profiles from forensic samples in the State or National DNA Databases. Please find below the hit summary, case related information and the investigator's contact information. This information is provided only as an investigative lead, and any possible connection between cases must be determined by further investigation. Please, do not hesitate to call the laboratory if you wish to discuss this matter further.

Name

CODIS State Administrator

Date of Match:

Lab Case #	Submitting Agency & Case #	Type & Date of Incident	Item with Matching Profile	Investigator Contact	Date of CODIS Entry

*Note: The profile entered into the DNA databases was deduced from a mixture.

15.6.2.3 Additional Relevant Information:

15.6.2.3.1 The hit notification shall include any additional relevant information taken into consideration during the evaluation and confirmation of the match.

15.6.2.3.2 The hit notification shall include information that may be useful to the investigation and/or help expedite the acquisition of a confirmatory biological sample. Such information may include, but is not limited to, the following:

- The Offender profile previously matched other forensic samples;
- A confirmatory known from the Offender has already been submitted to the laboratory.

15.6.2.3.3 Sample phrases for including additional relevant information:

NOTE: The forensic DNA profile entered into CODIS was a partial profile. (If a match can be evaluated by a probabilistic genotyping method (STRmix), this statement is not required.)

NOTE: The forensic DNA profile entered into CODIS was deduced from a mixture. (If a match can be evaluated by a probabilistic genotyping method (STRmix), this statement is not required.)

NOTE: Additional Xxxx STR DNA amplification kit testing was conducted to evaluate this match.

NOTE: The DNA profiles from lab cases IDXX-XXXXXXX and IDXX-XXXXXXX previously hit (see CODIS Hit #XX). A suspect, J. Smith, has been identified and linked to these specimens through DNA analysis (see DNA reports dated XX-XX-XX). In order to make the direct comparison between the known sample from J. Smith and the forensic profile from lab case IDXX-XXXXXXX, the Laboratory must receive a letter from a State's Attorney permitting this action.

NOTE: The above Offender has been linked to forensic samples from cases submitted by Windsor PD (IDXX-XXXXXXX and IDXX-XXXXXXX) and Enfield PD (IDXX-XXXXXXX). A known sample from J. Smith has been submitted under IDXX-XXXXXXX. In order to make a direct comparison between this known sample and the forensic profile from IDXX-XXXXXXX, the Laboratory must receive a letter from the State's Attorney permitting this action.

NOTE: The above Offender has been linked to a forensic sample from a case submitted by Orange PD (agency case # XX-XXXX /lab case # IDXX-XXXXXXX). The Laboratory must receive a letter from a State's Attorney authorizing the use of a single confirmatory sample from the Offender for comparison to both cases.

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- 15.6.3 The individual who completes the Hit Notification Form will initial the bottom left corner of this page.
- 15.6.3.1 A qualified DNA analyst shall conduct an administrative review of the Hit Notification.
- 15.6.3.1.1 The administrative review shall include:
- Evaluating the match;
 - Reviewing the supporting administrative documentation;
 - Proofreading the Hit Notification for clerical errors and accuracy of information;
 - Confirming the adherence to SOPs;
 - Reviewing the listed individual's biographical data and qualifying offense;
 - Reviewing the DNA profiles generated during the hit confirmation process.
- 15.6.3.1.2 The requirements of the administrative review will be documented on DNA-QR-19 or DNA-QR-19A. Additionally, the administrative reviewer will initial the bottom left corner of the final copy of the Hit Notification.
- 15.6.4 The CODIS Administrator or designee will review and sign the finalized version of the Hit Notification Forms.
- 15.6.5 The Hit Notification Forms will be faxed or emailed to the listed agencies.
- 15.6.5.1 If a Hit Notification form is to be sent by email, it must be sent using the state email system and as a PDF file.
- 15.6.6 Total Hit Counting Spreadsheet will be updated.
- 15.6.7 The original copy of the Hit Notification Form, and as applicable, the copy of the Offender information card, and any correspondences with other CODIS laboratories will be retained in the case jacket. The case jacket will be returned to the analyst for the appropriate review.

15.7 Missing Persons Matches

Wherever possible, the confirmation of matches involving missing person or unidentified human remains (UHR) samples should follow procedures similar to matches involving forensic samples. Unidentified human remains with a source ID of "No" are functionally equivalent to an unsolved forensic case while unidentified human remains with a source ID of "Yes" and missing person/deduced missing person samples are treated in the same manner as solved forensic cases. A Candidate Match matching any loci at less than high stringency shall be reviewed and evaluated by a qualified casework DNA analyst.

- 15.7.1 For each match generated from a search:
- Print a copy of the Match Detail report.
 - Pull the appropriate case jacket(s).
 - Check that the disposition has been automatically changed from **Candidate Match** to **ID Pending** in Match Manager or Rank Manager.
- 15.7.2 Compare the reference sample DNA profile to the UHR DNA profile. In the case of moderate stringency matches, mixtures and partial profiles, this evaluation should include a direct comparison to the electropherograms of the UHR sample.
- 15.7.3 If the profiles are determined not to be a match, a second qualified DNA examiner shall review the profiles. If both examiners concur, write **No Match** on the Match Detail Report, initial and date the report and have second examiner initial also. Change the disposition for the match in Match Manager or Rank Manager from **ID Pending** to **No Match**. Place the Match Detail Report in the case jacket, add the appropriate case ID # and initials, and refile appropriately. In the event that the examiners are unable to agree, consult with the CODIS Administrator and if necessary, the Technical Leader.
- 15.7.3.1 If the profiles are determined to be a match, begin collaborating with the other Missing Person laboratory to verify the match and exchange information including available metadata and applicable kinship statistics. Both laboratories are responsible for ensuring communication occurs. If the available information is not enough to verify or refute the possibility of relationship, additional family references should be collected and a Pedigree Tree constructed/enhanced, uploaded and searched. If meta data for one or both of the samples is missing or incomplete, contact the submitting agencies to request additional information. The disposition can be changed to **Waiting for More Metadata** until the issue is resolved.
- 15.7.3.2 If following comparison of the DNA profiles and the meta data the samples are still determined to match, contact the respective submitting agency(s) to determine if the case(s) have been solved. Assign the next available Association # and update the Missing Persons Match Count. Add this Association # to the comments section of the disposition window in Analyst Workbench.
- 15.7.4 Once the laboratories have confirmed the putative identification, the laboratory responsible for the relative's profile provides the information to the laboratory responsible for the UHR regarding a potential biological relationship between the sample donor and the UHR. The laboratories will exchange enough information so the respective submitting agencies can contact each other. Both laboratories will document the final confirmed match.
- 15.7.5 Upon completion of the confirmation process, notify the outside agencies including the OCME and the submitting agency. The OCME is the legal authority regarding the

identification of human remains. The laboratory will provide supporting documents to the OCME to aid in their decision. Place the Match Detail Report in the case jacket, add the appropriate case ID# and initials and refile appropriately.

15.7.6 Upon receipt of a death certificate, change the disposition in Match Manager or Rank Manager from **ID Pending** to **ID Confirmed**. Change the Source ID to “Yes” where appropriate (typically the UHR profile). Document this change on the specimen detail report in the case jacket. Update the Match Detail Report in the case jacket and refile appropriately.

15.7.7 The confirmation process is tracked on DNA-QR-19b.

15.8 Confirming Partial Matches

15.8.1 A partial match is a moderate stringency candidate match between two single source profiles (one forensic and one offender) having at each locus (at ≥ 12 of 15 loci) at least one allele in common. This match indicates that a familial relationship may exist between the offender and the putative source of the sample. A partial match is seen as a fortuitous event as the Division of Scientific Services does not conduct familial searches (refer to DNA SOP 13.7.4).

15.8.2 Typically, a partial candidate match may be considered for further review if 15 or more alleles are shared between the forensic and offender profiles.

15.8.3 Additional testing will be performed on both samples to confirm the match. Testing may include Y-STR, Mitochondrial, or additional autosomal STR loci, including mini-STRs.

15.8.4 If a partial match is confirmed, a COLLECT search will be performed to ensure that the offender identified has a qualifying offense. If a qualifying conviction cannot be readily identified from the COLLECT search, contact DOC Health or the Chair of the DNA Databank Oversight Committee to assist with verification. If the offender has not been convicted of a qualifying offense, the offender profile will be moved to a non-searching category within CODIS and this match will be referred to the DNA Database Oversight Panel for evaluation.

15.8.5 A meeting will be held with the interested parties (submitting agency and State’s Attorney) to discuss the nature of the match and what the significance of the match is. The identifying information for the identified offender will be release at this meeting. A copy of the forensic case information and the offender’s identifying information will be faxed or emailed to the Chair of the DNA Databank Oversight Committee.

15.8.6 The Division of Scientific Services does not pursue possible NDIS partial matches. The Laboratory will, however, honor requests for the confirmation of partial matches from other NDIS participating laboratories provided the casework laboratory makes a written request.

- 15.8.6.1 The written request shall be on agency letterhead and include the documented concurrence of the prosecutor.
- 15.8.6.2 The casework profile must be a single source forensic profile with a minimum of 13 core loci.
- 15.8.6.3 The written request shall include the statistical analysis used to conclude that there may be a potential familial relationship between the CT offender profile and the forensic profile. The statistical analysis shall include the Individual Expected Match Ratios (EMR) and Expected Kinship Ratios (EKR) which have been calculated according to the “SWGDM recommendations to the FBI Director in the Interim Plan for the Release of Information in the Event of a ‘Partial Match’ at NDIS.” The EMR and the EKR will satisfy the thresholds recommended by SWGDAM.
- 15.8.7 Whenever an offender’s identifying information is released to another NDIS participating laboratory it will be done in written form on Division letterhead. A copy of the correspondence will be provided to the NDIS Custodian with the offender’s personally identifying information redacted.
- 15.8.8 If the laboratory determines the release of the offender information is not permissible, the requesting laboratory shall be given written notification of such determination and a copy of that correspondence will be provided to the NDIS custodian.
- 15.9 Document Retention**
- 15.9.1 All documentation pertaining to CODIS hits will be retained at the laboratory indefinitely. The CODIS State Administrator is responsible for the retention of CODIS hit documentation.
- 15.9.2 For State of CT hits, the offender confirmation records will be kept in the respective laboratory case file and in an area at the laboratory designated by CODIS State Administrator.
- 15.9.3 For out of state hits, the offender confirmation records will be kept in an area at the laboratory designated by the CODIS State Administrator.
- 15.10 Policy for Reinterpretation of Legacy Data**
- 15.10.1 Determination of the need for Reinterpretation
- 15.10.1.1 High stringency match in CODIS or comparison of two (2) single source profiles in which at least one (1) DNA profile was generated by a legacy amplification kit: This is not considered reinterpretation of the data, therefore any qualified DNA analyst may conduct the

comparison, render a conclusion and provide statistical evaluation using the Random Match Probability (RMP) calculation.

- 15.10.1.2 Moderate stringency match in CODIS or comparison of a single source profile to a mixture casework DNA profile generated by a legacy amplification kit where there is previous documentation of interpretation of possible genotypes for contributors: This is not considered reinterpretation of the data, therefore a qualified DNA analyst may conduct the comparison, render a conclusion and provide statistical evaluation using the RMP calculation.
- 15.10.1.3 Moderate stringency match or comparison of a mixture DNA profile where at least one (1) DNA profile was generated by a legacy amplification kit and involves the use of the electropherogram(s) to evaluate the match. This is considered reinterpretation, therefore the procedures described in section II will be followed.
- 15.10.1.4 Evaluation of a DNA profile generated by a legacy amplification kit that requires assessment of allele calls, genotype calls, potential for dropout, the removal of alleles and/or loci from statistical calculations. This is considered reinterpretation, therefore the procedures described in section II will be followed.
- 15.10.2 Procedure in the event that Reinterpretation is Required
- 15.10.2.1 The existing data will be reviewed and reinterpreted by an analyst who has been satisfactorily trained in the appropriate analytical procedures associated with the legacy amplification kit.
- 15.10.3 Satisfactorily Trained Analyst
- 15.10.3.1 An analyst will be deemed satisfactorily trained to be able to review and reinterpret legacy data by meeting all of the requirements listed in one (1) of the options described below.
- i. The analyst is currently qualified through training and proficiency testing in the legacy amplification kit.
 - ii. The analyst is 1) currently qualified in an amplification kit through training and proficiency testing and 2) previously qualified in the legacy amplification kit through training and proficiency testing within the last two (2) calendar years.

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- iii. The analyst is 1) currently qualified in an amplification kit through training and proficiency testing, 2) previously qualified in the legacy amplification kit through training and proficiency testing, but more than two (2) years has elapsed since the last successfully completed proficiency test and 3) the Technical Leader has documented and approved that the analyst has completed a review of the validation studies and the SOPs for the legacy amplification kit within the last two (2) years. Documentation of the analyst's review and qualifications will be recorded on DNA QR-305 and maintained in the analyst's training binder.

Note: In the event there is no analyst previously qualified in the legacy amplification kit to conduct the training, the current qualified analyst and Technical Leader may train in the legacy kit protocols, review validation data and SOPs together. The analyst will complete a competency test and the Technical Leader will sufficiently document the training to ensure the qualifications of the analyst.

15.10.4 Reserved Options

15.10.4.1 The DSS reserves the following options in the event a sufficiently trained analyst is not available to reinterpret data.

- i. Deem the data uninterpretable and not make any comparisons and/or conclusions.
- ii. Develop new interpretation protocols from legacy validation data with sufficient documentation for the basis of these new protocols.