

*Approved by Director: Dr. Guy Vallaro*

A. **PURPOSE:**

The Division of Scientific Services utilizes one domain to run and maintain the LIMS system (Laboratory Information Management). The LIMS system is JUSTICE TRAX LIMS PLUS (JT). The system is used for evidence management from case number assignment to chain of custody tracking and in some disciplines for case reporting.

The Justice Trax system is maintained on one SQL Server running two separate databases, two domain controllers and one file server. ~~In 2014 the two Justice Trax systems were merged; 2 databases are maintained. Controlled Substance and Toxicology cases prior to January 2014 must be searched through the section specific database. All cases received after January 1, 2014, regardless of the section, can be found on the merged database.~~

~~It is anticipated that the two JT systems will merge, with limited change to the overall LIMS procedures.~~

B. **RESPONSIBILITY:**

System Administrator: is responsible for maintaining both servers including the domain and LIMS capabilities.

LIMS Administrator: is responsible for the upkeep to the Justice Trax system and to aid users of the system as issues arise. The LIMS and System Administrators act as backup to each other.

All Laboratory Employees: are responsible to use the LIMS system as appropriate for the work assigned and to use the LAN and Internet features as appropriate to the job, adhering to state of CT computer/internet use guidelines.

C. **PROCEDURE:**

1. LIMS/LAN General Information:

- a. The LIMS system is served by two central server units, located in a secure room, the servers are maintained by the system administrator. The room conditions are those to provide proper environmental conditions for the servers.
- b. To protect the overall systems, only the designated System Administrator or "backup" administrator will have authorization and the necessary passwords to work on the server unit or conduct system administrator functions.
  - i. The "back-up administrator" will be provided with the necessary passwords to act when a critical situation arises in the system administrator's absence.
  - ii. Network and LIMS passwords will be issued by the system administrator.

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- iii. Security classifications will be issued by the system administrator and will be commensurate with an individual's responsibilities, as determined by the Director or their designee.
  - iv. **Addition, deletion, or modification of any software contained on a networked computer is prohibited without prior authorization from the system administrator.**
  - c. To protect the records within the LIMS system, the system is set up to back-up to a tape system daily. These tapes are transferred to Building 3 of the complex monthly. The system administrator is responsible to maintain this system.
  - d. All problems and questions concerning the LAN and LIMS systems should be directed to the System Administrator or LIMS Administrator.
  - e. Thumb drives, discs or other storage devices should be scanned for viruses if they have been used on a computer not belonging to the laboratory before opening any documents or programs.
2. Security of the LAN and LIMS systems: the DSS laboratories protect the systems from unauthorized access through the use of assigned user names and secure passwords. Only laboratory employees have access to these systems.
- a. The only outside vendor allowed access, per the Director, is the Justice Trax company for product updates. This is only be allowed under supervision by the Laboratory Administrator or their designee.
  - b. LAN Security:
    - i. To access the LAN system individual passwords are used. User names are assigned by the system administrator with a generic password; employees must change this password. It is expected that all passwords will be kept secure so that only the user has access to them.
      - (a) When creating a password it must be at least 9 characters long and contain a mix of letters, numbers. If this is updated the system will direct the user to the needed number of characters.
      - (b) Employees should periodically update their passwords.
    - ii. Users with access to the LAN can access documents and create documents using the various features; users can individually secure files/documents with passwords.
  - c. LIMS Security:
    - i. To access the LIMS system individual user names and passwords are used. User names are assigned by the System administrator or LIMS administrator with a generic password; employees must change this password. LIMS passwords must be securely maintained.

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- ii. PIN (Personal Identification Numbers) are assigned by the system administrator. These must be changed by each employee and kept secure, PINs must not be shared.
    - (a) All evidence transfers (either of complete cases or sub-items) amongst employees are tracked using PIN, it is essential that employees do not share these numbers. The PIN is the basis for secure transfers. **Both persons involved in a person to person transfer will use their PINs.**
    - (b) Evidence transfers from an individual to a storage location require the individual to enter their secure PIN.
  - iii. The System/LIMS administrator assigns "Roles" in Justice Trax. The "Roles" designate the areas in Justice Trax that can be utilized by the employee. The assignment of specific "Roles" is as designated by the Director.
    - (a) Along with the "role" assignments, case results can only be added and changed by the analyst assigned to the case.
  - iv. **Currently,** data is not transferred electronically via the LIMS outside of the DSS laboratories.
3. LAN Features: the LAN systems are set up to provide access to employees based on the needs of their job. There are shared drives and private drives allowing employees to create and access documents that are required.
- a. The internet is set up on a limited number of computers throughout the facility. All employees have assigned user names and secure passwords to access these terminals.
    - i. Internet use is limited to job-related purposes. Employees must remember to follow state of CT guidelines for internet use.
4. LIMS Features: Each laboratory discipline uses the features of JT to different extents, to best suit the needs of the section. Individual laboratory SOPs will designate how JT is used within the section. All sections use the case numbering, and evidence transfer features of the system, including those for sub-itemization tracking as needed. Additionally all sections use the case milestone tracking features.
- a. Case Numbering: cases received by the Division are assigned unique case identifiers by the JT system. This number is the identification system for the evidence for the time it remains in the laboratory. The case number to identify paperwork and case files associated with the case. Both JT systems are set up in a similar matter, the number has the following format:
    - i. XXX-YY-ZZZZZ
    - (a) The first three digits are DSS.

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- (i) Cases entered between 2010 and December 31, 2013 were entered into two separate Justice Trax systems. For these cases the first two digits are "TX" for the Controlled Substance and Toxicology Laboratories and "ID" for all other sections.
- (ii) Controlled Substance and Toxicology cases entered into Justice Trax (under a separate server) from 1999 to 2010 have "ID" as the two letter designation.
- (b) The second two digits indicate the year of the submission.
- (c) The last series of numbers is a sequential number assigned by JT. Example: The first case opened for the laboratory for the year 2011 would be numbered ID-11-000001, the second case would be ID-11-000002 (TX-11-00001 for the CS or Toxicology sections, until which time the two systems are merged).
- ii. For older cases (pre-1998) the case number is represented as IDXXLNNNNDN.
  - (a) "ID" for the Forensic Laboratory.
  - (b) XX indicates the year the case was submitted.
  - (c) L (letter) indicates the month that the case was submitted to the laboratory with (A= January, B= February, C=March, D=April, and so on).
  - (d) NNNN is the sequential case number.
  - (e) D indicates the alphabetic designation of the lab sections as referred in the 2007 Laboratory Quality Manual, section 3, revision 4 (04/2007).
  - (f) The final N- number represents the submitting agency designation as referred in the 2007 Laboratory Quality Manual, section 3, revision 4 (04/2007).
- iii. Once a case number is assigned bar code labels can be generated for the case these are attached to the evidence and any paperwork submitted.
- iv. Sub-itemization: Justice Trax allows for sub-itemizing case materials with the COC tracking of those items. Specific sections which use this function will designate this in their section specific SOPs. In general, if the sub-item is taking a separate path than the parent item it must be sub-itemed to allow for the Chain of Custody to be accurately represented. Note: this does not relate to substances designated as "work product" or "Aliquots" (see sections v.b and v.c below).
- v. Once items are separated from a submission and packaged separately, an item number must be designated. Entry of the item number into LIMS should be done at the earliest appropriate and convenient time.

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vi. The item number should be assigned as follows: [submission number] – letter designation [listed below]- [sequential number for each item, if not batched].

- (a) Sub-items from a single submission can be batched if the items are not to be immediately analyzed or transferred to another section. Batched items can be given the same item designation.
- (b) Sub-items that are designated as aliquots (example: a small portion of powder substance isolated from a larger portion for analysis in the CS laboratory) need not be transferred in JT if aliquot remains in the custody of the analyst **performing the testing**.
- (c) Extracted items designated as “Work Product” are not considered evidence in the FB/DNA section and do not require chain of custody transfers in JT.
  - (i) Item numbers assigned to the sub-items should be issued according to the following letter designation scheme, which *indicates the Section generating evidence & the item number*:

1. Letter Designation

<u>Letter Designation</u>	<u>Section</u>
A	Arson
D	Questioned Documents
E	Explosives
F	Firearms
S	Forensic Biology NOT DNA ONLY
G	DNA ONLY
Y	Gunshot residue
Z	Trace (Hair, fiber, glass, soil, paint, etc.)
I	Imprints
L	Latent Prints
<b>P</b>	<b>Photography</b>
R	Reconstruction
T	Tool marks
M	Video
C	Computer Crimes Unit of DSS
<b>X</b>	<b>Controlled Substances</b>
<b>V</b>	<b>Toxicology</b>
<b>RPT</b>	<b>All sections Report designation</b>

Note: **The above listed scheme is used when evidence is to be transferred between sections.** See CS and Toxicology SOPs for case itemization within those sections. Additionally see Forensic Biology SOPs for the itemization of sexual assault kits.

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Examples: #3-Z2 indicates that the sample contained material that was removed by the Trace Section from submission #0003 and is the second sample taken by Trace from that submission.

#3-L indicates the Latent Fingerprint Section removed one or more samples from submission #0003 and these samples were batched for computer record purposes, since no transfer to another Section or individual examination of the items took place.

Note: Sections may choose to eliminate the hyphens so #3Z2 is the equivalent of #3-Z2; this does not represent a deviation.

- b. Evidence Tracking: cases entered into the LIMS system are tracked from person to person or person to/from storage locations using JT. Each transaction is listed in the Chain of Custody section for the case. This tracks who/where the case came from at what date and time and to whom/where it went. Any individual involved in a transfer will use their PIN to secure the transfer, an X next to a name on a transfer indicates that a PIN was used. The COC can be printed at any time from JT.
  - i. JT allows for the generation of evidence receipts when a case is first submitted to the laboratory and when it is returned to the submitting agency. These receipts are signed by the ECO and the submitting agent. A copy of the receipt goes to the submitting agent and the original goes into the case file maintained in the Evidence Control section. Note that the CS and Toxicology laboratories are given copies of the evidence receipts for their case files.
    - (a) Samples received by mail will have a receipt generated however there will be no signature under the submitting agency.
- c. Case Assignment: cases are assigned to a specific laboratory by choosing the various analytical modules. Once assigned to a laboratory the case can be assigned to a specific analyst within the section, this is generally done by the supervisor or their designee.
  - i. Once a case is assigned to an analyst only that analyst can enter results for the case.
- d. Case Reporting: some laboratory sections use templates which are set within JT for case reports, other sections generate laboratory reports using templates created as word documents. The JT reporting features, include evidence description, and results. The current crystal reports are set to download demographics for the case into the report format. Sections using word reports will save all reports in an electronic read only format in a secure accessible location on the server once the report is administratively reviewed. Whenever possible case reports will be linked to Justice Trax.
- e. All case reports will be sub-itemized in Justice Trax and a bar code will be generated for the report (see GL-11).

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- f. Milestones: this section allows for the tracking of the progression of a case, cases can be called up and using this function a supervisor or other analyst can determine what stage of analysis the case is in.. The milestones are:
- i. Assigned
  - ii. Findings entered
  - iii. Draft complete
  - iv. Technical review
  - v. Administrative review.

These include the assignment of, and completion of, the milestones. Milestones are to be updated in real time in Justice Trax.

- g. Case Synopsis: allows for special in-house notations to be added to the case.
- h. Activity Tracking: JT allows work related activities to be tracked. Analysts can use this to account for time not performing case work, such as court testimony, giving or attending lectures, working on proficiency tests, attending a crime scene, or other activity. The notes section can be used to describe the event and the time attended.
- i. All employees should utilized this tool to allow for monthly productivity reports to be reviewed.
  - i. Training records: this section allows for recording training events attended.
  - j. Other tools are available within JT, these may be used as needed based on the needed task.
5. If a component of a case must be edited in Justice Trax a note must be added to Justice Trax. Additionally the same information will be added to the main case jacket and the section case jacket. The person making the edit must assure that if the edit affects multiple sections that they inform all affected sections.
- a. If the case on a whole or multiple submissions of the case is affected, the note is to be placed in the case synopsis with the initials of the person making the edit, and date the edit was made.
  - b. If only a portion of the case was affected (say one submission only) the note may be added to the notes section on the Evidence tab in Justice Trax.
  - c. In general only the JT administrator or their designee are authorized to make edits to specific fields in JT. This authorization is defined based on user designations in JT. (i.e. edits to chain of custodies).

## 6. REFERENCES:

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**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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- a. Justice Trax Users Guide

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