A. **PURPOSE**:

These are general guidelines that are important in maintaining the integrity and forensic defensibility of the work performed in the Controlled Substance Unit. These are basic guidelines used for the majority of cases analyzed in the unit.

B. **RESPONSIBILITY**:

Analysts assigned to the Controlled Substance Unit.

C. **DEFINITIONS**:

CS: Controlled Substance

ECO: Evidence Control Officer

JT: JusticeTrax laboratory information management system (LIMS)

DPS-997c: the form completed by submitting agencies when they submit evidence to the Evidence Receiving Unit.

TX Bag/TX Container: a bag or container used by the laboratory for convenience. These are labeled as "TX" to demonstrate that they were added to the case by the laboratory.

FTIR: Fourier-Transform Infrared Spectrophotometry

GC/MS: Gas Chromatography/Mass Spectrometry

PPE: Personal Protective Equipment

QA: Quality Assurance

Reference standard: standards that are purchased as pure. These will state the chemical and will have their purity on the container. These are sometimes referred to as Pure Standards.

DEA Exempt Standard: Chemicals purchased or made in a concentration of 1mg/mL or less.

"Like" items: evidence within a case that have similar physical appearance, including packaging and contents.

Sample Selection: A process wherein evidentiary items, or portions of items, are analyzed and their results unofficially represent the entire contents based on the submission's packaging and based on the knowledge, training, and experience of the analyst. There is no assumption of homogeneity and any reported analytical results will apply only to the items that were actually tested. Reported results are only related to the whole population when all of the submitted items have been analyzed.

Sampling Plan: A process wherein evidentiary items are analyzed and their results represent the entire contents based on a statistical plan. This plan is used with multiple unit populations and is used to determine the number of samples needed to analyze in order to make an inference about the whole

submission (population). *The CS Unit does not currently use a sampling plan. However, in the event that a customer requires a result which represents the entire submission's population, a Bayesian statistical approach will be used (e.g., SWGDRUG Sampling Plan) and use of the plan will be documented in the case.*

Case Analyst: a competent scientist who has been approved to handle and analyze evidence in a particular discipline or Unit. The case analyst is responsible for the security of the evidence, analytical work performed on evidentiary material, and the reporting of results.

Witness: An employee of the Laboratory that can act as a verifier. Although the witness is not responsible for the analytical work, they are responsible for ensuring the integrity of the evidence.

D. **SAFETY**:

Proper PPE must be worn whenever handling drug evidence. At a minimum, gloves and a laboratory coat should be worn. Eye protection (e.g., safety glasses) must be worn when there is a potential for eye injury. It will be the responsibility of the employee to determine when proper eye protection will be used.

E. **GENERAL INFORMATION**:

1. All analysts must work in a manner that provides safe working conditions for themselves and their co-workers.
2. Analysts must wear lab coats and disposable gloves while working on case materials.
3. All evidence transfers are documented in JT at the time they occur, personal identification numbers (PINs) are used, when applicable.
    a. In the rare event that an aliquot is split and transferred to a second analyst, a sub-item will be created in Justice Trax and the chain of custody will be maintained for the aliquot.
    b. If an error is found in a chain of custody that will be brought to the attention of the unit Lead (or higher) and action will be taken to correct and document the issue.
4. All cases are opened, inventoried, and closed by the assigned analyst with the assistance of a witness.
5. A witness will verify the contents of the submission both during initial inventory and during the closing of the case.

6. Only one case should be opened by an analyst at a time. This practice is in place to avoid mixing-up case materials.
7. All evidence sampling and transfers will include appropriate labeling (e.g., laboratory number and item identifiers)
8. Photographs may be taken of evidence, as appropriate. Photographs can be used to supplement case notes and allow analysts to minimize written notes.
9. Ink will be used for all casework documentation (Blue pens are preferred).
10. Case materials should be opened on a surface using a barrier (e.g. brown paper)or equivalent underlayment in order to prevent contamination.
11. All evidence lockers are assigned to individual analysts. These can be used to contain aliquots of evidence, extractions, and cases that are actively being worked. All evidentiary material will be kept locked when the assigned analyst is not actively working on said evidence. All evidence within these lockers should be placed under proper evidence seal.
12. All non-common abbreviations used on worksheets and case notes will be maintained in a master list of abbreviations stored in CS Unit documentation.
13. Analysts will follow laboratory SOPs for case analysis, when appropriate. Significant deviations are changes in procedures which could adversely affect the results of experiments. If significant deviations from an SOP are required, the analyst must discuss the issue with the section supervisor, or their designee, and obtain written approval (such approval can be contained in the case notes). If the significant deviation is approved then the submitting agency must be consulted and must accept the deviation (see SOP GL-11 for guidance). Minor deviations are changes in a procedure which do not adversely affect the results of an experiment. The analyst must document deviations in the case documents within the file.
14. Laboratory areas will be kept clean to avoid case contamination and any accidental exposure to chemicals, drugs, and/or biological materials.
15. All consumable supplies will be stored in a manner so as to ensure that they are suitable for use in case analyses. This includes prevention of laboratory contamination.
16. Consumable materials will be ordered to meet the needs of the laboratory testing that is performed. When orders are placed for items that can affect the quality of the testing, the ordered items must meet the needs of the test. When receiving items from a vendor, the receiver must verify the contents of what was received.
17. All reagents must be properly labeled and stored in a manner so as to ensure that they are suitable for use in case analyses. Analysts must ensure that any reagent with special handling requirements is stored to meet that requirement. Manufacturer's guidelines (e.g., MSDS, SDS) should be consulted when analysts are unsure of storage (e.g., refrigerator, solvent cabinet).

18. All reagents used in case analyses must be validated before use in casework. In general, a reagent is deemed as acceptable if the reagent gives results as expected for both positive and negative control samples(See SOP CS-3).
19. All standards must be stored to maintain their integrity. Manufacturer's guidelines should be followed.
20. Standards used for comparison purposes are usually evaluated/validated at the same time that evidence is analyzed (See SOP CS-3).
21. All instruments should be operated per specific SOP.
22. Instruments should be maintained per specific SOP.
23. Instruments that do not meet daily set-up requirements will be marked as out of service or not acceptable for use until the problem is fixed and the daily QA requirements are met (See SOPs CS-7, CS-8 & CS-9).

F. **PROCEDURE**:

General Case Flow in the CS Laboratory:

- Cases are transferred from the Evidence Receiving Unit to the CS Unit's storage area.. Evidence must be under proper seal during all transfers between sections.
- A case file and paperwork is prepared for each case (barcode and milestone labels attached).
- Case(s) are assigned to an analyst by the section supervisor or designee. The analyst usually transfers the evidence from the storage location to themselves using JT.
- The analyst, with a witness, must ensure that the evidence is under proper seal and has not been tampered since being transferred from ER.
- The analyst will open the case with a witness.
- The inventorying of the case is documented, on either of the two, Controlled Substance – Evidence Summary Case Forms (Forms CS1:1).
- If a discrepancy is found the analyst will note the problem and, depending on its nature, may halt the analysis until the issue can be resolved. If the issue jeopardizes the quality of the evidence, work will be halted on the case and the section supervisor, or designee, will be informed. Case management should be involved if administrative discrepancies exist. When an analyst contacts a submitting agency concerning a discrepancy, they will document this communication and its resolution (e.g., case notes, entry in JT).
- Once the inventory is acceptable the analyst can work independently.

- The analyst can make labels for the case and perform appropriate administrative duties. Appropriate analyses will be conducted according to established procedures.
- Weights are taken based on the case and following the guidance in SOP CS-5. Aliquots are taken based on case needs and following the guidance in SOP CS-4. Aliquots not actively being worked will be stored in the analyst's locker.
- Case paperwork is compiled (e.g., notes, instrument data sheets, worksheets) Case notes describe the evidence and need not be overly detailed. However, the notes should be detailed enough so that the analyst can be able to recall details of the case if reviewed at a future date. Pictures can be used to supplement case notes and it is acceptable to annotate case pictures. Case notes must be legible and can be written on the Controlled Substance – 'Evidence Summary Case' (CS 1-1) form. However, for larger cases, a 'Case Notes' (CS-1.3) form may be required.
- Identifications are generally made when at least two results are in agreement. This usually occurs when either two portions or two samples both concur as to the detected chemicals. Findings should be recorded on the Controlled Substance –Evidence Summary Case form.
- Upon completing the analysis of a case conclusions are made based on the data, the analyst's findings are entered into JT, and the case is marked, 'draft complete.' The draft report should be placed in the case jacket and will be reviewed after a technical reviewer is assigned.
- The case is re-inventoried and closed (sealed) by the analyst in the presence of a witness.
- The evidence is transferred into storage in the "Cases in Review" location by the analyst. The case is forwarded for administrative review. Upon administrative review approval, the final report is printed and both the analyst and technical reviewer sign the report. The original report is maintained in the case file.
- The analyst makes three of copies of the original report. These, along with the evidence, get transferred back to the Evidence Receiving Unit. The analyst creates a sub-item in JT for one of the case report copies which is tracked when transferred to ER and when transferred to the submitting agency.
- A supplemental report may need to be issued when additional evidence or additional work on evidence is performed at the request of the submitting agency. This report will be completed and issued having the same level of technical and administrative reviews as was done with the original report. It will be clearly marked as being a supplemental report and reference will be made to the original report (e.g., date of original report). Only supplemental results should be included in the supplemental report. It is not necessary to include results from the original report.

- A revised report is used when corrections are needed within the original report. This report will be completed and issued having the same level of technical and administrative reviews as was done with the original report. It will be clearly marked as being a revised report and reference will be made to the original report (e.g., date of the original report). The before and after changes will be included within the revised report so that the reader will adequately know what was changed from the original report.
- The report case file may be filed in the CS administrative area.

Revision #	History
6	**Added guidance under section E.3, added a and b concerning itemization of aliquots and addressing chain of custody issues.**