

# Florida Department of Environmental Protection



## Office of Air Monitoring

# Recordkeeping & Chain of Custody Best Practices

Cadedra Hodge

**April 14, 2015**





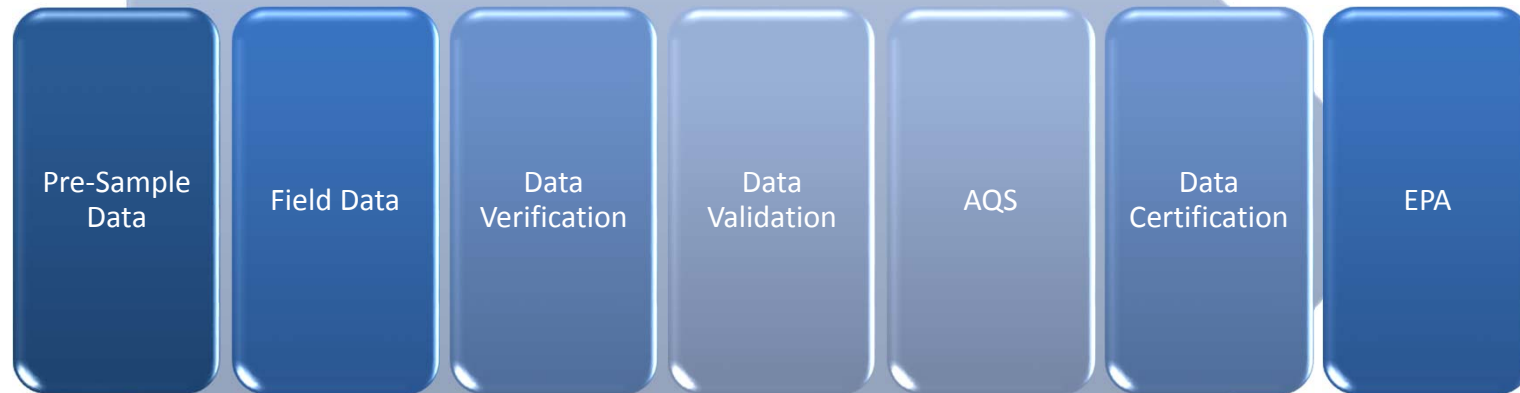
# Introduction

A critical element of housekeeping involves good recordkeeping practices!





# Data Flow



Each point within the data flow is influenced by many people and processes. Documentation is integral to ensure accurate data validation.



# Air Monitoring Records

## Types of Records

- Logbooks
  - Precision/QC Checks
  - Calibrations
  - Maintenance
- Electronic and/or Paper Charts
  - Minute Data
- Chain-of-Custody Forms
- Databases





# Where are your records?

- Are they in one central location or spread out across many offices?
- Is there a shared network drive for important files?
- Is the location secure (whether electronic or paper)?
- Are official files write-protected, so they cannot be modified after upload without permission?
- Are the files backed-up? If so, how frequently? Are you confirming this?





# Keep in mind...



- Are records organized?
- If asked to retrieve a record from several years ago, could you easily find it? Could someone from outside your agency easily find it?
- Do your records have detail?
  - Will you remember several years from now exactly what the “malfunction” was?
  - Will someone besides you be able to recall what happened based upon the written information?
  - Avoid “etc.” and “misc.”
  - Be specific!



# Keep in mind...

- Can you recreate your data?
  - QA/QC checks, missing data, flags, raw data
- If asked to pull records from several years ago to explain an unusual event, would the entries provided paint the complete picture?
  - If multiple staff have to converse in attempt to remember what happened, there is not enough documentation!





# Always remember...

If it's not documented, it did not happen!





# Documentation Pointers

- **Who** is performing the work?
  - All data records should be signed and dated.
- **What** pollutant, procedure, analyzer, calibrator?
  - Equipment IDs, makes, and models
- **When** is the activity occurring?
  - Time and date
- **Where** is the data being collected?
  - Identify the location of the site/data acquisition
- **Why** is the activity needed?
  - Is it time for an annual recalibration or has an instrument malfunctioned?



# Logbooks

- Bound
- Page numbered
- Entries should be written in ink, signed, and dated
- Corrections should be:
  - Made with a single line through the incorrect entry
  - Initialed by the site operator
  - Date corrected
- Do not leave large blank spaces in logbooks.
- Place an “X” or line in space that is unused.
- Do not back-fill!
  - You can enter past information, but enter it with today’s date and an explanation



# Electronic Files

## Implement “pen and ink” procedures with electronic files!

- Make corrections similar to a paper file! Avoid deleting and correct!
- Place an “X” or line in space that is unused.
- Lock documents!
- Do not back-fill!
  - You can enter past information, but enter it with today’s date and an explanation
- Avoid recording information on paper and transferring to electronic file. The original handwritten paper record is considered the official record and must be retained!
- Avoid having multiple copies of a file (i.e. saving a record on a USB drive at the site and transferring this file to a shared drive when returning to the office).





# Checklists

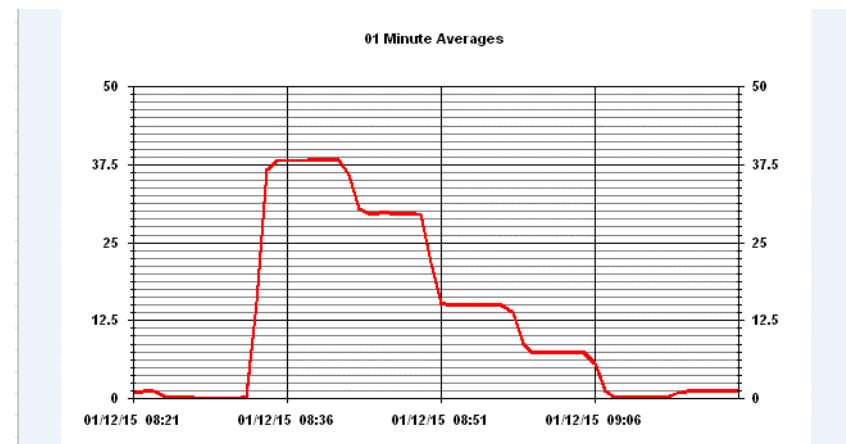
- Help you remember items that need to be examined during QC or QA operations
- However, checking a box doesn't give enough detail!
  - Add significant comments
  - Don't rely on checklists as your sole source of documentation
  - Sign and date checklists



# Strip Charts

A strip chart recorder is used in conjunction with the continuous monitors to record the outputs of the instruments

- Do you use a paper chart or an electronic chart?
- How do you document your strip charts with pertinent information?
  - Write on the paper chart?
  - Electronic memos?
  - Notations on the chart? Then where is the information recorded?





# Remember!

Other data users may ask to look at your charts!

- Charts and other records should be documented in a manner such that any outside data user can make sense of the notations.
- Notations should be such that they could “stand alone” in a court of law, and help the witness recreate events many years down the road....



# Chain-of-Custody

The ability to guarantee the identity and integrity of a sample (or data) from initial collection through reporting of final test results.





# Why is Chain-of-Custody Important?

- A secure chain-of-custody combined with proper analytical techniques is necessary for legally defensible data reporting.
- Tracks the possession, handling, and location of samples and data through their life cycles.
- Documents the integrity of samples and data.
- Good scientific practice.





# Chain-of-Custody Documentation

- Should always be signed and dated by all parties who have retained custody of the sample(s)
- Should be documented in indelible ink
- Corrections should be made with a single line through the incorrect entry, signed, and dated
- Incomplete documentation weakens the defensibility of the data!



## A Few Last Pointers...

- Document in the “now” and avoid documenting days or weeks after events have occurred
- Only the facts! Be aware of the third-party users who may read your entries
- Mistakes happen! Be transparent when making corrections!
- Be thorough and detailed so that future employees can explain what happened, if asked!



# Questions

Cadedra Hodge (850) 717-9014

Email: [cadedra.hodge@dep.state.fl.us](mailto:cadedra.hodge@dep.state.fl.us)

