Headquarters U.S. Air Force

Integrity - Service - Excellence

AFCEE QAPP 4.0

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Outline of Briefing

- Planning for quality
- Purpose of AFCEE QAPP
- Why revise
- What’s new in QAPP 4.0
Project Specific QAPPs

- Use systematic planning process (e.g. DQO)
  - Develop project quality objectives (PQOs)
  - Develop measurement performance criteria for data quality indicators (PARCCS)
- Project specific requirements take precedence
- Variations from approved project QAPP require AFCEE approval
- Data objective:
  - Scientifically sound
  - Known and documented quality
  - Suitable to meet project goals
AFCEE QAPP - What It Is

- Is a guidance document
- Designed to facilitate preparation of project specific QAPPs
  - Serves as a template for project QAPPs
  - Facilitates review of project QAPPs
  - Provides a benchmark
- Uses established methods, NELAC requirements, and best laboratory practices as sources for QA/QC procedures and acceptance criteria
Version 4.0 – Why?

- AFCEE’s implementation of DoD QSM
- Includes contributions from prime contractors and laboratories
- Includes new and updated methods

IT WAS TIME
What’s New
Planning

- Distinguishes between planning process (e.g. DQO process) and data quality objectives (PQOs)
  - Project QAPP developed by contractor with input from stakeholders
  - Develop measurement performance criteria
    - Facilitates data quality assessment
    - Identifies needs for corrective actions

Planning is a participatory process!
What’s New
Data Types

- Screening data
  - Supports intermediate decision
  - Must be supported by definitive data
- Definitive data
  - Suitable for final decision making
  - Unrestricted use unless data quality issues
- Comparability criteria between screening and definitive data established in project QAPP
What’s New
Performance Checks

- Added MDL check
  - Spike ~ 2X MDL
  - Analyte detected and identified
  - Can use in place of annual update
- Added LCS marginal exceedance allowance and LCS failure criteria
  - Random event
  - Not for project-specific analytes of concern
- Eliminated grand mean for calibration acceptance
What’s New
Manual Integrations

- Increased requirements and documentation for manual integrations
  - Lab SOP for manual integrations
  - Raw data audit trail
    - Before and after chromatograms
    - Reason
    - Analyst signature and date
  - Review and approval
    - Section supervisor and/or QA officer
  - Identify in case narrative
Organized by technology
  - Individual Method Reporting Limits and LCS QC Acceptance Criteria tables
    - e.g. Method 8082
  - Combined Summary of Calibration and QC Procedures table
    - e.g. Methods 8011, 8015B, 8021B, 8070A, 8081A, 8082, 8141A, 8151A, RSK-175

Added nonstandard methods
  - 8270 SIM - PAHs
  - 8321 Mod – Explosives
  - 8321 Mod - Perchlorate
What’s New
Section 8 – Data Management and evaluation

- Laboratory performs data verification
  - Case narrative includes:
    - Discussion of qualified data
    - Definition of qualifying flags
    - Recommendations regarding data usability

- Prime contractor performs data verification and validation
  - Verification: completeness and compliance with requirements
  - Validation: determination of data usability

- Include blank evaluation and field duplicate/replicate evaluation guidance
What’s New
AFCEE Forms

- Inorganic forms
  - ICP/MS tune
  - Serial dilutions (ICP, ICP/MS, GFAA, CVAA)
  - Post digestion spike (ICP, ICP/MS, GFAA, CVAA)

- Organic forms
  - Second column/detector confirmation (GC/HPLC)

- MDL study report
  - As needed
Questions and Comments

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