Headquarters U.S. Air Force

Integrity - Service - Excellence

AFCEE QAPP 4.0

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William H. Batschelet, PhD
AFCEE/TDE
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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?

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

IT WAS TIME

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- **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!

- **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**

- **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**

- **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

- **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**

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- **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

William Batschelet
AFCEE/TDE
3300 Sidney Brooks
Brooks City-Base, TX 78235
(210) 536-5658
william.batschelet@brooks.af.mil