**PQAO Training 2019 Presentation Categories and Ideas**

* Keynote Address
  + Monitoring wildfires
    - What the future looks like, health impacts, and all the other associated areas that revolve around wildfires
  + Paradigm shift in monitoring: regulatory, high-dollar equipment to community, low-cost sensors
* PQAO/General
  + High-level overview/refresher of PQAO
  + Updates from a PQAO perspective:
    - New/updated SOPs
    - QAPP
    - New webpage tour
    - Updated Criteria in the Handbook
    - New TSA Questionnaire/Process
  + Highlight accomplished goals and identify goals for the future
    - 2017 Annual DQ Report on 2016 data best they have seen in terms of data quality indicators
  + Take a look at how agencies use/leverage the PQAO as a tool for credibility and generating quality data for new non-federal programs
    - e.g. AB617, toxics, SNAPS, pesticides
  + SOPs and addendums
    - What we’re looking for
    - How we review them
    - Common issues
  + Data from an End User Perspective
  + 5-Year Network Assessment
    - Could be a joint presentation
  + AB617
* Network Design and Changes
  + Importance of design in balancing resources with what agencies need to do and what they are able to do (in terms of regulatory, public outreach, maintenance, etc.)
  + Reinforce minimum monitoring
  + How a local district’s network fits into the PQAO overall
    - How they contextually fit in the larger picture
  + Non-regulatory monitoring—modifying the network not only to meet minimum monitoring requirements with local needs
    - other inputs that need to be considered from a local perspective
  + Exceptional Events Process
* Training
  + Session to help provide guidance to districts on formatting/developing their training program
    - putting a training program in place, how to provide continual training, how to onboard new staff
    - Provide available resources
    - Make it a collaborative effort and see what different agencies’ practices are
      * State perspective
      * Local perspective
  + Long-term possibility for some form of certification given to a monitoring tech
    - Similar to current training certifications given to enforcement
    - Identify certain classes you have to take as a new operator to be certified
* Station Operations
  + How station operators are changing their operations to meet new levels for 1-pt QC checks
    - Share best practices on how they achieve the tighter levels
  + Mid-level overview, i.e. level of detail that is between the very detailed presentation from Module 1 (how to calc. res. time, perform specific checks) and the very high-level presentation from 2017 (Eric’s presentation)
    - Give overview of why you do what you do
    - Understanding your data system
    - Importance of flagging data
    - Data from collection through certification (previous EPA presentation)
      * “As a site operator, how does my documentation affect the steps that are taken for the data after I collect it?”
      * Exercise: what happens when you miss a sampling day (determining impact)
  + Best field practices for BAM 1020, O3, NO2, etc.
    - Discussion of best practices, common issues, corrective actions
      * Survey operators throughout the state to determine what the current issues are and then set up the session in a discussion format
    - Present from perspective of field operators/users (as opposed to vendors)
    - Good housekeeping practices in the field (e.g. spray bottles for cleaning inlets—one with DI H20 and detergent and one with just H2O, keeping regular maint. on AC unit, etc.)
* ARB Laboratory Programs
  + Combine all of the previous modules on this topic and make more of a general session
    - Link between COC document—what information needs to be filled out in the field that needs to be available to the lab folks
    - Common filter handling and sample handling issues
      * e.g. lack of refrigeration during transport of filters
    - Status of the robot
  + South Coast
    - Share lessons learned in their lab practices and filter handling after the problem a few years ago when the filters were being shipped off without correct protocols being followed
    - EQuIS sample handling system (if South Coast is ready to share)
      * “Here’s where we’re at, here’s our challenges, and here’s our ultimate goal.”
* Data Management
  + Address post-processing/correcting (e.g. correcting to zero) of data is no longer allowed
  + Discussion of consistent use of AQS data codes throughout the PQAO
    - Potential for interactive activity
  + Data Validation templates (critical, operational, systematic)
    - Discussion on which critical criteria automatically invalidates data and which don’t
    - What is considered “compelling evidence”
      * How should compelling evidence be documented?
  + Met Data: validation methods people use and the QA requirements
* Quality Control
  + Electronic logbooks and commercial availability
    - Summary of what everyone is doing and understanding the pros/cons of each
    - What is acceptable by EPA
    - How agencies have overcome common issues (e.g. security issues, logging into wi-fi)
  + Chain of custody forms
  + Nomenclature spreadsheet: highlight QC terms that may be used interchangeably (e.g. different checks and audits)
  + Monitoring perspective
    - How 1-pt QC checks are calculated
    - How different agencies are implementing the new changes (e.g. tighter control limits, validation tables, etc.) or how the new changes are affecting their data quality and resources
  + Data management perspective
    - How QC program is critical when data are questionable—QC is what we rely on to save data
  + Bare necessities that people should be recording
  + EPA modification of using an external scrubber on a zero air generator
    - Might be something that can be applied more universally instead of using the cylinder (cylinders are not the standard they used to be, so may no longer be a good source of zero air)
    - Zero air generator with the modification may suffice for both
    - Test from auditing side (i.e. checking with and without the scrubber)
* Quality Assessment
  + CANs/AQDAs
    - General overview, can be presented in summary (i.e. “This is how many have been issued, these are the common findings)
      * Can be presented relative to time (i.e. early on, we saw a lot of these types of findings, later after this training, these went away, but we saw these other types crop up…can be due to a new requirement, tighter tolerances, new staff)
    - “What would you do in this situation?” interactive session on CANs/AQDAs (similar to the session at the EPA conference)
      * Discuss when one should issue a CAN vs. when is it a situation that you should just talk to the person instead
        + Can roll this into the interactive discussion: “Would you issue a CAN?”
    - Poll different districts for scenarios they’ve encountered that required a CAN (or similar) and how they handled it
      * Can be phrased as “consistency of operations”
      * Walk through a root/cause analysis—not just discuss how it was fixed, but why it occurred and what impact it may have on data
      * Interactive option: “What else could’ve been done? What would you have done to investigate/evaluate the issue?”
    - Feedback on the standards lab CANs
  + Status of the audit program at the new lower levels
  + Recap of all of the common TSA findings and have an open discussion
    - Since we’re now on Round 2 for TSAs of the districts
* Calibration/Certification
  + Standards labs
    - Key ideas from standards lab training
    - Importance of standards lab
    - Can partnership be developed with another PQAO that have their own certification process to share best practices?
  + Recent changes
    - Scott Merrin has been acquired by Prax Air: how that’s going to affect the quality of their gas
    - New flow sensors/calibration devices
    - Low-level standards:
      * Purchase of new field equipment like gas calibration standards with tighter tolerances
  + Feedback from others on what they’ve done on calibration side or certification side to meet the tighter requirements
  + TAPI 640 Vendor, hands-on experience calibrating the unit with fine particulate powder (SpanDust for performance check and adjustment of PMT)
* Databases
  + AQMIS, iADAM, and AQS as tools to help station operators in their data management activities (e.g. to help evaluate data)
    - AirNow as a real-time agency tool to help evaluate data
      * Data audits: Set up a simple query for all the sites you are responsible for and have it show the hourly data for a specified timeframe
      * Review and see trends, anomalies, etc.
      * Possible hands-on activity where we have laptops available and we can walk through with districts how to do this process and sign them up for AirNow if they’re not already
    - Automatic filter placed in AirNow that districts may not be aware of and how to remove those filters if they want
  + STI: do what they would do during a webinar
* Emerging Technologies
  + Teledyne API T640
  + Met One E-BAM Plus
  + Met One BC 1054
  + Teledyne API 602
  + New instrument issues
    - Considerations when purchasing new equipment (SOPs, acceptance criteria, training, standards lab etc.)
  + Auto GCs
    - Preliminary results/evaluations
* Project Updates
  + South Coast’s use of FluxSense, used to determine whether or not emissions data are accurate
  + CARB’s purchase and use of an airpointer, an all-in-one unit to validate some of the AB617 monitoring campaigns
  + Various CARB monitoring campaigns
    - The Board will decide in September which monitoring campaigns are undertaken for 2018/2019
  + Update on wildfire smoke and how our networks are all interacting together to help inform the public
  + Analysis of Purple Air sensors
* Vendors
  + Fluke
  + EQuIS
  + Agilaire (AirVision)
  + Alicat Scientific
  + American EcoTech
  + APIS
  + BGI/Mesa Labs
  + Met One
  + Purple Air
  + RM Young
  + Sabio
  + STI
  + Teledyne/API
  + Thermo (+ parking lot demo)