**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)