

# On Being a QA Officer



Delia Ivanoff  
South FL Water Management District  
Cathy Katsikis  
LDC FL, Inc.

October 27-28, 2010  
Florida Society of Environmental Analysts



# Agenda

QA and QC Concepts

Quality Culture

Roles and Responsibilities of a QAO

Challenges on Being a QAO

The Rewards

Qualifications and Qualities

QA Career Path

Lessons Learned

Words of Wisdom

Resources



# QA/QC Concepts

- **Quality Assurance:**
  - An integrated system of management activities involving planning, implementation, assessment, reporting, and quality improvement to ensure that a process, item, or service is of the type and quality needed and expected by the client.
- **Quality Control:**
  - The overall system of technical activities that measures the attributes and performance of a process, item, or service against defined standards to verify that they meet the stated requirements established by the customer
  - Operational techniques and activities that are used to fulfill requirements for quality
  - The system of activities and checks used to ensure that measurement systems are maintained within prescribed limits, providing protection against “out of control” conditions and ensuring that the results are of acceptable quality.



- **Quality System:**

- A structured and documented management system describing the policies, objectives, principles, organizational authority, responsibilities, accountability, and implementation plan of an organization for ensuring quality in its work processes, products (items), and services.
- Provides the framework for planning, implementing, and assessing work performed by the organization and for carrying out required quality assurance (QA) and quality control (QC) activities.



# Quality Culture

“Quality beyond compliance”

- Vision-oriented
- Values-based
- Customer-focused
- Focus on process as well as results
- Prevention versus Inspection
- Tapping on and enhancing workforce expertise
- Senior management commitment and involvement
- Fact-based analysis and decisions
- Feedback loop



# Quality Culture

- Quality is everyone's responsibility
- Quality achievement is verified or validated
- Quality is "built in" by providing:
  - Proper training, resources, and motivation
  - Focus to do the job right the first time
- Assessors of work are:
  - Technically knowledgeable and performance oriented
  - Focused on improving quality

# Roles and Responsibilities of a QAO

- Serve as the focal point for QA/QC and be responsible for the oversight and/or review of quality control data
- Responsible for maintaining the currency of the quality manual
- Be able to evaluate data objectively and perform assessments without outside (e.g., managerial) influence
- Arrange for or conduct internal audits
- Notify laboratory management of deficiencies in the Quality System
- Monitor corrective actions
- Where staffing is limited, the Quality Manager may also be the Technical Manager

Source: TNI Standard EL-V1-2011 Vol. 1





# Roles and Responsibilities of a QAO

- Understanding and training staff on requirements of each project
- Taking actions on quality-related customer issues
- Being a role model of commitment to quality, ethics, data integrity, and customer service



# Qualifications

- Have documented training and/or experience in QA/QC procedures and the laboratory's quality system
- Have a general knowledge of the analytical methods for which data review is performed
- Be able to evaluate data objectively and perform assessments without outside (e.g., managerial) influence
- Be well acquainted with associated regulatory and accreditation requirements



# Qualities and Skills

- Supervisory and leadership skills
- Communication skills – verbal and written
- Training skills
- Strategic planning
- Auditing skills
- Interpersonal skills
- Document control and recordkeeping skills
- Organizational skills
- Teamwork and team leadership skills
- Analytical, observational, and problem-solving skills
- Detail-oriented



# QAO as a Leader

- Believes in QA and quality culture
- Commendable and Exemplary
- Trustworthy, demonstrates honesty and integrity
- Ethical
- Always enthusiastic about the task at hand and the people around him/her
- Follows an orderly manner and routine but still is also tolerant.
- Has excellent logical and analytical skills. Bases decisions on facts.
- Stays calm and stays positive even in difficult situations.
- Proactive and committed to excellence.
- A role model
- Inspirational and motivational
- Represents the people and organization
- Takes accountability
- Confident and decisive



# Challenges

- Lack of or weak support from upper management
- Negotiating and influencing management on QA issues
- Different levels of QA awareness from top to bottom of the organization
- No direct access to top management
- “We’ve always done it that way”



# Challenges

- Staff resistance to change
- Isolation from the outside – not knowing much about industry standards
- Dealing with difficult personalities
- Communicating with various levels in the organization and externally
- Convincing others as to why corrective actions need to be taken
- It's not all black and white –many interpretations are needed
- Understanding the different tools, such as statistics



# Challenges

- Different certification requirements among different states
- Conducting internal audit in a positive manner
- Challenging external audit findings
- Tracking and verifying deficiencies and implementation of corrective actions
- Keeping internal documents current
- Following and implementing changes in state and EPA requirements
- Limitations of LIMS



# Challenges

- Getting others to understand that laboratory certification does not automatically equate to reliable data
- Getting others to understand the need for data of known quality
- Getting others to understand how to interpret data with less than perfect quality



# The Rewards

- The pride of leadership
- Knowing you are making a difference in the quality of your product
- Rising to the challenge and succeeding
- Being able to drive continuous improvement
- New learning experiences and opportunities



# QA Career Path

- Background in chemistry or natural sciences
- Laboratory bench experience
- Trainings and workshops – technical, QA-related, and personal development
- Networking – learning from others
- On-the job training
- Self-study – plenty of available resources online and in published literature
- Professional organizations – e.g. TNI, FSEA, ASQ
- Certification programs – e.g. ASQ

**It's a continuous learning process!**



# Lessons Learned

- It is not all black and white. There are many interpretations to consider to questions raised on methods and data. Do your homework, have your own opinion.
- Be respectful of the analysts and everyone you deal with. Never burn a bridge if you have the opportunity to work things out.
- It is not always going to go your way. There may be several ways to present a problem and a fix.
- Stay as positive as you can in order to get people to respect you for your reporting on their work.



# Lessons Learned

- Make sure you believe in Quality yourself and find a company that will give management support and backing.
- You must be a “jack of all trades” to be able to help everyone (including management); be accountable, and be ready to face the “firing squad” when things go wrong.
- Educate yourself with the requirements of your profession, certifications, state, etc. Keep learning.
- Listen....Listen...Listen.... listen to all the facts. Don't dictate.
- Document...Document....Document



# Lessons Learned

- Learn all the methods, not necessarily perform them, but know the methods and the instruments that are used for analysis. Do not be intimidated by instrumentation and quantification software.
- Know the relevant regulations, such as the Federal Register. Keep current on these.
- Be proactive, not reactive.
- Build a strong case for quality by stressing the negative impacts of making decisions on data of unknown quality.
- Delegate to the individual who is closest to the generation of a datum or to a process.
- Don't automatically assume the worst in individuals or organizations over which you have oversight.



# Lessons Learned

- To be successful, you can't operate in a vacuum. You have to network. You have to research. Learn as much as you can. Share your knowledge with others. Learn from your mistakes and everyone else's. It's a continuous learning process!



## Words of Wisdom

“Quality assurance is more than a program; it is a philosophy, a way of life. As a program that is mechanically followed, quality assurance is doomed to failure. As a philosophy, there is a chance for success. When it is approached as both a program and a philosophy, the changes for producing high quality data are excellent”

*John Keenan Taylor*



## Words of Wisdom

“COA – you know what that spells: document your thoughts, everyone’s comments, all approaches taken to solve a problem real time...to save it from having to be re-created later. The worse thing is to have to answer to an auditor that corrective action was taken, but you didn’t document it.” *June Flowers, Flowers Analytical Labs*



# Words of Wisdom

- “Seek the knowledge, aim for continuous improvement. The reward is fun and satisfactory.” *Z. Kolasinski, SFWMD*
- “Make sure you believe that QA has value to the process and implement value added processes, not just paperwork.” *Rich Amano, LDC*
- “Do the right thing the right way the first time!” *S. Baldonado, Metropolitan Water District*
- “Treat everyone with respect and make them accountable for their actions. The lowest level technician should be as responsible as upper management. All actions are interconnected. If one fails the system eventually collapses.” *Cathy Katsikis, LDC Florida*



- Your success as a QA Officer should not be fully based on your meeting accreditation requirements or on the number of findings in your audits. Rather, it should be measured in terms of the difference you have made in setting and improving a quality culture that leads to your organization's excellence and customer satisfaction on a continuing basis.

*Delia Ivanoff*



# Useful References

- [www.nelac-institute.org](http://www.nelac-institute.org) - NELAC and TNI standards
- [www.epa.gov/quality](http://www.epa.gov/quality) - various information relevant to quality assurance, quality control, data validation, assessment, DQOs, etc.
- <http://www.doh.state.fl.us/lab/EnvLabCert/WaterCert.htm> - FDOH 64-E1 and a searchable list of Florida accredited labs
- <http://www.dep.state.fl.us/labs/bars/sas/qa/index.htm> - FDEP QA rule
- <http://www.dep.state.fl.us/labs/bars/sas/sop/index.htm> - FDEP SOPs
- <http://www.navylabs.navy.mil/ManualsDocs.htm> - Navy's QA program info
- <http://nwql.usgs.gov/quality.shtml> - USGS' water quality program QA implementation
- <http://www.gpoaccess.gov/cfr/index.html> - Code of Federal Regulations
- <http://water.epa.gov/learn/training/> - various training info on topics such as the CWA, SDWA, water quality standards, etc.
- [www.epa.gov](http://www.epa.gov) – various information about other programs such as CERCLA, RCRA, etc.
- [www.nemi.gov](http://www.nemi.gov) – National Environmental Methods Index, a free web-based compilation of analytical methods (regulatory, consensus, others)
- <http://asq.org/> - American Society for Quality
- [www.acil.org](http://www.acil.org) – American Council of Independent Laboratories; training information, including online training classes.



# Acknowledgement

- Silky Labie, ELCAT
- Cathy Katsikis, LDCFL
- Z. Kolasinski, SFWMD
- June Flowers, Flowers Analytical
- Rich Amano, Lab Data Consultants, Inc.
- Betsy Kent,
- Socorro Baldonado, Metropolitan Water District, California