
William Ray Consulting, LLC

411 Roanoke Dr.
Martinez, CA 94553

Telephone: 925 300 3350
Mobile: 925 352 5205

E-mail bill_ray@williamrayllc.com
Website: williamrayllc.com

William Ray Consulting backs its training with over 40 years combined laboratory and assessment experience. This experience includes over 20 years of bench and management experience in both commercial and publicly-owned laboratories. Assessment experience also spans over 20 years and includes assessment for laboratory certification, data quality reviews, and investigations.

William Ray Consulting has provided almost 400 hours of training on topics including quality systems, laboratory procedures, and regulatory compliance. Training has been to both laboratory and operating staff.

William Ray Consulting is prepared to handle your specific needs. Please contact us for consultation on how best to meet your training needs

Training services include:

WRC will provide all materials and handouts, laptops for projecting Power Point slides, and a projector (if not provided at the location). Location and any refreshments/meals are to be provided by the host.

William Ray Consulting fees for training:

Fees for training include an hourly charge for the actual training event and any travel charges for travel beyond a 100 mile radius of WRC's offices. Training sessions can include students from multiple facilities without incurring additional charges. WRC encourages prospective hosts to consider inviting other students as a means of cost sharing.

All fees will be negotiated in advance with a written quotation. Please contact WRC for a specific quotation.

WILLIAM RAY CONSULTING, LLC

411 Roanoke Dr.
Martinez, CA 94553

E-mail: bill_ray@williamrayllc.com

WILLIAM RAY CONSULTING, LLC

Assisting the laboratory community

Available Training for Classroom and Onsite



Training our Specialty

Website: williamrayllc.com

E-mail: bill_ray@williamrayllc.com

Laboratory Operations

QUALITY SYSTEM DEVELOPMENT

Quality Systems are a key component of any analytical system helping to establish both the competency of the test and its inherent quality. Quality Systems seem complex, but they can be explained and simplified if you know some basics.

Courses range from Quality System Basics covering concepts and purposes for Quality Systems, Quality Systems Requirements as found in current regulations, to Quality System components for specific analytical methods or technologies.

Courses are 2 to 7 hours depending on scope. Please contact WRC for a course tailored to your needs

CURRENT REGULATORY REQUIREMENTS FOR LABORATORIES

Whether directly or indirectly, laboratories are the subject of federal and state statutes and regulations. Many are not aware of the extent to which they are subject, the actual requirements, and their rights under the law.

The course covers applicable federal and state law governing laboratories including

the Safe Drinking Water Act and Clean Water Act (and their California equivalents) as well as laboratory certification.

Courses covering only those requirements specific to laboratories are 2 hours. Courses covering all aspects of federal and state environmental law related to laboratory operations are 7 hours.

ANALYTICAL METHODS

Many laboratories invest in the procedure portion of analytical methods or as it can be called, the “recipe section”. Just knowing the equipment, reagents, and step-by-step procedures is not sufficient and can mean missing out on useful options or key elements of a method.

Courses cover method basics and fundamentals but also can be tailored to fit your current Standard Operating Procedures. Don't forget that refresher training is critical to combat “method drift”.

OTHER TOPICS OF INTEREST

These are only the most common topics of interest to laboratories. WRC is also capable of providing training on a wide variety of topics. Please contact WRC to discuss your topic and what resources can be provided.

WILLIAM RAY CONSULTING, LLC

E-mail: bill_ray@williamrayllc.com

Field and Hands-On

FIELD MEASUREMENTS

Several key parameters have required hold times of no more than 15 minutes making them subjects of field or in-situ measurements. Difficulties can arise when field staff are insufficiently trained not only in the procedures, but in the need for adequate quality system practices. Field measurements are not, in some areas, exempt from the same requirements placed on laboratories.

Training using your own equipment and at your site is the best. Topics include proper procedures, care and maintenance of materials, and simple and effective quality assurance practices.

TEST KIT MEASUREMENTS

Like field measurements, there is a need to use simple test kits in order to make measurements of some key parameters such as chlorine residual. However, there is a tendency to forget that there may be more procedures that must be followed.

Like field measurements, training is best using your own equipment and at your own site. Topics covered are the same as for field measurements.