



is pleased to invite you to a special

Advanced Lubricant Analysis Training Course

December 14-17, 2020 – Tuition is \$1,495 per person

The course will also cover the fees for, and qualify students for, **ICML MLA3®** certification.

This live web-based Advanced Lubricant Analysis Course is designed to provide advanced lubricant analysis instruction as well as live demonstrations of laboratory instrumentation, sample preparation, and results diagnosis.

The course will be delivered by recognized subject matter experts Michael Holloway and Rich Wurzbach, and is intended for engineers, technicians and managers that have responsibility for providing and using lubricant based condition monitoring information for industrial production equipment.

The 4-day (36 hour) course is also designed to prepare participants to qualify for and take the Machine Lubricant Analyst Level III (MLA III®) certification exam. The course is preparation compliant with ISO 18436-4. As per ISO 18436-4, certification candidates must have achieved and have standing qualification to MLA II® prior to registering for the MLA III® exam.

Course Topics:

1. Maintenance Strategies
2. Lubrication Theory/Fundamentals
3. Lubricant Selection
4. Lubricant Application
5. Lube Storage and Management
6. Lube Condition Control
7. Oil Sampling
8. Lubricant Health Monitoring
9. Wear Debris Monitoring and Analysis
10. Lubricant Roles and Functions (Strong Emphasis)
11. Oil Analysis Maintenance Strategies (Strong Emphasis)
12. Lubricant Contamination Measurement and Control (Strong Emphasis)



Class Instructor – Michael D. Holloway

Michael D. Holloway is President and Owner of 5th Order Industry, a recognized world leader for competency development and certification preparation.

Holloway earned 4 university degrees, published 8 books, and started 5th Order Industry to provide an exceptional learning experience for students and professionals of industry offering on site and online competency development in lubrication and reliability for specific applications as well as ICML and STLE certification preparation.

Holloway has 35+ years of experience in the machine lubrication field including application and analysis of lubricants used in Heavy Industrial Equipment, Military, Mining and Construction, Fleet, Marine and has trained and conducted Plant Surveys, Reliability Proposals, On-site Seminars, Case Studies and Cost Savings Studies, Spend Analysis and Value Recognition Reports, Reliability Audits.

Michael D. Holloway holds all of the ICML certifications including MLE, MLA (I, II, III), LLA (I, II), MLT (I, II), the STLE certifications CLS and OMA I as well as a CRL certification.

CERTIFICATION EXAM:

The cost of the course also includes the ICML web-based exam fee. Exams are offered online through ICML.

The MLA 3[®] certification exam is offered via on-line test methodology, and it is the responsibility of the student to prove eligibility and arrange for a qualified web-based testing environment. The exam and certification are offered through the International Council for Machinery Lubrication (ICML). Students may register for the certification exam through the ICML. The website is <http://lubecouncil.org>. This offer to cover the exam fee is a one-time only offer.

Additional Class Information:

<https://amrri.com/advanced-lubricant-analysis-and-lubricant-based-condition-monitoring-training/>.

For a detailed class schedule, click here:

To contact ICML, click here: LubeCouncil.org

To Contact AMRRI, call: 615.771.6030, and ask for Steve

Recent feedback from an AMRRI training:

We put three of our folks through your MLTI training course a couple of months ago. Among the many things they are doing with their new knowledge, they have been taking oil samples for analysis, and reviewing the results. The team immediately found over a million dollars' worth of gearboxes were at risk with low viscosity oil. The class paid for itself, in days, with just that one facet of your training – thank you!

---Justin, Maintenance & Reliability Leader, Port Operations



Class Instructor Rich Wurzbach

Rich Wurzbach has 25+ years of experience in the development of Condition Based Maintenance programs and the applications of diagnostic technologies for industrial equipment.

Wurzbach is a subject matter expert in Infrared Thermography, Lubricant Analysis, Airborne Ultrasound and the integration of various diagnostic technologies for equipment assessment.

His experience includes work at the Three Mile Island, Limerick, and Peach Bottom Nuclear Plants.

Wurzbach has been a featured speaker at the American Wind Energy Association and Wind Energy Update conferences in the US. He has served on two research teams in Denmark studying lubrication and sampling practices for off-shore wind turbine components, and worked alongside employees of Vattenfall, DONG Energy, Statkraft, and Aalborg University to research, publish and present main and pitch bearing sampling best-practice procedures at international conferences in Europe.

He was responsible for the design and development of the Peach Bottom Oil Analysis Laboratory, and designed numerous innovative products to improve the practice of oil sampling and analysis.

He helped to advance the following:

- ASTM Standard Practice for Obtaining In-Service Samples of Lubricating Grease (D7718)
- EPRI "Effective Grease Practices" standard
- EPRI "Lube Oil PdM, Handling, & Quality Assurance Guideline"
- AWEA CBM Recommended Practice guidelines (RP-812 through 815) for Wind Turbine Operations and Maintenance
- 50+ additional scientific papers and policies

Wurzbach holds a B.S., Chemistry and the following certification LLA2, MLA3, MLE, MLT2, ASNT Level 3 (Thermography)