Training Evaluation Request
Oregon Environmental Services Advisory Council
Watura
Inspection and Maintenance of Centrifugal Pumps

Course title: Inspection and Maintenance of Centrifugal Pumps

Drinking Water CEUs: 1.5 h

Wastewater CEUs: 1.5 h

Instructor bio: With a background in electromechanical engineering, **Christian CALON** began his career as an operator in a water and wastewater utility. He then became a professional trainer in water and wastewater systems, specializing in pumping. Later, he joined the Compagnie des Eaux et de l'Ozone (Water and Ozone Company), starting as a Regional Technical Director before advancing to lead the national research unit. After the company merged with Veolia, he was appointed as the leading expert in pumping systems.

Course description: The regular monitoring of a pumping system is very important. It enables failures to be identified, breakdowns to be avoided and even costs to be reduced. There are several types of monitoring: hydraulic monitoring, electrical monitoring and mechanical monitoring. In this training course, different monitoring methods will also be covered: vibration monitoring, thermography and misalignment.

Learning goals:

- Perform regular inspections on centrifugal pump systems
- Monitor and maintain a pumping system using electrical monitoring, vibration monitoring and mechanical monitoring

Tracking attendance method:

The e-learning platform offers a highly interactive experience designed to engage learners at every stage. It begins with an initial test to assess knowledge and tailor the learning journey. The course includes short, focused videos interspersed with mandatory training quizzes that reinforce key concepts and ensure active participation. Students are required to watch every video entirely and to answer practice questions before advancing to the next course module. Students cannot skip course content. A final quiz at the end of each chapter evaluates overall comprehension and certifies the learner's mastery of the material. Students must obtain a minimum score of 70% for every chapter's final quiz to successfully complete the course and obtain the certificate of attendance. The platform automatically tracks each learner's learning time. The real learning time is indicated alongside the delivered credits in the course completion certificate.

Course outline: Inspection and Maintenance of Centrifugal Pumps

Initial Test		10 min
1. Inspection and Maintenance of Centrifugal Pumps	1.1. Course Overview	1 min
	1.1. Common Hydraulic Parameters to be Monitored	5 min
	1.2. The Operating Point of Centrifugal Pumps	6 min
	1.3. Electrical Inspection of the Centrifugal Pump Motor	6 min
	1.4. Mechanical Monitoring: Vibration Monitoring	8 min
	1.5. Mechanical Monitoring: Misalignment in Pumping Systems	7 min
	1.6. Mechanical Monitoring: Thermography and Oil Analysis	6 min
	1.7. Thermography	6 min
	1.8. Performance Monitoring and Analysis of Pumping Systems	6 min
	1.9. Course Glossary	4 min
	1.10. Chapter 1 - Fact Sheets	7 min
	Chapter final test	15 min
Total Learning Time		87 min
Requested Contact Hours		1.5 h