



WE018: Production & Injection Water Treatment



Training Description:

Water is increasingly becoming a scarce resource. Large- and small-scale users need to take action to conserve it not only because it is prudent practice to do so for their own benefit, but also because it is an active demonstration of their concern about the global pollution and environmental problems. Large industries in particular are required to employ environmental specialists to assist them to identify potential savings, to prepare for audits, to need strict standards etc. Engineers need to be conversant with water treatment technology so that themselves can identify opportunities for saving water, and can communicate better with the specialists.

The course will go through the basic principles of water conservation and reuse and establish a common way of approach to water use issues. It will examine the various techniques and technologies, which can be used to achieve what, can sometimes be enormous savings through the implementation of solutions. The course covers industry in general but will be customized to the chemical, petrochemical and oil industries.

A key part of the course is detailed case studies presented in a fashion, which demonstrates the total system approach to pollution control.

Training Objectives:

By the end of the training, participants will be able to:

- ✓ Have a very good understanding of the broad field of wastewater treatment, the technologies offered and the reuse options available so that they can focus better on their specific industries best approach to water conservation
- ✓ Undertake the water associated with crude oil and gas during early production, how to treat and dispose
- ✓ Learn and understand the preamble and injectivity of enhanced oil recovery

Training Designed for:

This course is intended for all Engineers and Technical staff whose responsibilities include the safe and cost-effective operation of water injection systems. Management will also benefit by increasing their awareness of the cost-effective use of treatment chemicals and by developing their skills in analysis of water quality data. Also, this course is suitable for corrosion personnel, W. I. personnel, lab personnel, chemists and chemical engineers.

Training Program:

DAY ONE:

- ❖ PRE-TEST
- ❖ Introduction
- ❖ **Basic Chemistry**
 - Fundamentals of chemistry
 - Atoms, ions and molecules
 - Molecules and molecular weight
 - Acids, bases and salts
 - Methods of expressing concentrations





❖ **Graphical Presentation of Water**

- Stiff & Davies Pattern
- Water contaminants (Oil and grease)
- Organic and inorganic contaminants
- Suspended and dissolved contaminants
- Water Quality, Particle count distribution, membrane filter and Turbidity

DAY TWO:

❖ **Water Sampling and Analysis**

- Physical, Chemical and bacteriological properties of water
- Water sampling, analysis and sample volume
- Qualitative and Quantitative analysis
- Analysis techniques

DAY THREE:

❖ **Water Scales and Corrosion**

- Types of scales
- Scale deposition conditions
- Corrosion and monitoring
- Corrosion control and inhibitors

DAY FOUR:

❖ **Water Processing Technology**

- Dissolved gas removal systems
- Water filtration and purification systems
- Oil removing mechanical systems

DAY FIVE:

❖ **Water Injection and Disposal systems**

- Types of treating systems
- Water injection system

❖ **Course Conclusion**

❖ **POST-TEST and EVALUATION**

Training Requirement:

“Hand’s on practical sessions, equipment and software will be applied during the course if required and as per the client’s request”.

Please note that the above topics can be amended as per client’s learning needs and objectives. Further, it should be forwarded to us a month prior to the course dates.

Training Methodology:

This interactive training course includes the following training methodologies as a percentage of the total tuition hours:-

- 30% Lectures, Concepts, Role Play
- 70% Workshops & Work Presentations, Techniques, Based on Case Studies & Practical Exercises, Software & General Discussions
- Pre and Post Test





Training Certificate(s):

Internationally recognized certificate(s) will be issued to each participant who completed the course.

Training Fees:

As per the course location - This rate includes participant's manual, hand-outs, buffet lunch, coffee/tea on arrival, morning & afternoon of each day.

Note: The 5% VAT (Value Added Tax), will be effective starting 01st of January 2018 as per the new regulation from the UAE Government. The VAT applies for all quotation both for local and abroad.

Training Timings:

Daily Timings:

07:45 - 08:00	Morning Coffee / Tea
08:00 - 10:00	First Session
10:00 - 10:20	Recess (Coffee/Tea/Snacks)
10:20 - 12:20	Second Session
12:20 - 13:30	Recess (Prayer Break & Lunch)
13:30 - 15:00	Last Session

For training registrations or in-house enquiries, please contact:

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Training & Career Development Department

