



WE029: Best Practice in Sewage & Industrial Waste Water Treatment & Environmental Protection



Training Description:

The quality of groundwater used cannot be compromised any longer and the servicing requirements of on-site sewage disposal systems cannot be ignored. With limited funds available, the task of on-site sewage treatment and disposal is becoming very difficult.

Industrial wastewater dischargers face a variety of enforcement actions if they are not in compliance with the national and the international rules and regulations. This is the case if the discharger is a direct industrial discharger or is an indirect discharger into a Publicly Owned Treatment Works (POTW). This course covers the regulations that affect the management of industrial wastewater permitting, effluent guidelines, and associated issues.

This intensive training course will cover all aspects of sewage and industrial waste treatment process. It will cover planning, design, construction, operations and maintenance of the modern sewage and effluent treatment plants. Further, this course will cover all aspects of Environmental Protection in Industrial Plants. Participants will learn numerous tips and tricks throughout the course to make it very practical and relevant to your applications.

Training Objectives:

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

- ✓ Apply best practices of waste water treatment for Industrial applications
- ✓ Maintain and troubleshoot industrial waste water treatment systems
- ✓ Identify the different waste water treatment systems available
- ✓ Implement the rules and regulations that affect the management of industrial waste water permitting, effluent guidelines, and associated issues
- ✓ Interpret the environmental protection standards and applications

Training Designed for:

This course is intended for those who are involved in making decisions about the discharge of any industrial pollutants into the environment. This includes industrial waste water compliance managers, supervisors, engineers, inspectors, plant managers and HSE staff as well as operations, inspection, maintenance and design engineers and technical staff including laboratories.

Training Program:

DAY ONE:

- ❖ PRE-TEST
- ❖ Introduction
- ❖ Planning Considerations
 - Economic, Social and Environmental Goals of Planning
 - Environmental Assessment
 - Need for Health and Safety
 - Factors in Preparing Municipal Plans

❖ **Waste Water Fundamentals**

- Basic Terminology
- Contaminant Considerations
- Biological, Phosphorous, Ammonia
- Pathogens
- Effluent and Oily Waste Water Objectives
- Alternate Discharge Options
- Receiving Water Capacity-Provincial Water Quality Objectives
- Surface Discharge
- Subsurface Discharge

❖ **Design Considerations**

- Collection of Sewage
- Aerobic and Anaerobic Treatments
- Critical Design Parameters for Communal Sewage
- Industrial Waste Water Treatment Systems

DAY TWO:

❖ **Treatment Technologies**

- Suspended Solids Removal
- BOD Removal
- Nitrification and Denitrification
- Phosphorous Reduction
- Fat Oils & Grease Removal

❖ **Treatment Systems**

- Conventional Septic Tank as the Treatment System
- Enhanced Septic Tanks as a Primary for Other Bioreactors
- Bioreactors
- Fixed Film
- Rotating
- Suspended
- Batch
- Filters-Sand, Peat, Stone, Synthetics
- New Technologies Targeting Specific Contaminants

❖ **Re-Circulating Sand Filters Year-Round Treatment**

- History Experimental Design
- Construction
- Operation

DAY THREE:

❖ **Subsurface Discharge**

- Filter Bed
- Shallow Trench
- Leaching Bed
- "Constructed Wetland"

- Recycle, Reuse
- ❖ **Direct Discharge**
 - Stream Assimilative Capacity
 - Mixing Zone
 - Disinfection
- ❖ **Biosolids Disposal**
 - Hauled Waste
 - Compost
 - Lime Stabilization

DAY FOUR:

- ❖ **Management of Industrial Waste Water Systems**
 - Regular Monitoring
 - Long Term Satisfactory Performance
- ❖ **Financial and Legal Issues**
 - Funding Sources
 - Approval Process
 - Regulatory Compliance
 - Municipal and Owner Liability
- ❖ **Industrial Water Standards & Regulations**
 - Overview of The USA Clean Water Act
 - Water Quality Standards
 - Effluent Guidelines and Standards
 - National Pollutant Discharge Elimination System – NPDES Permitting
 - Spill Prevention Control and Countermeasure Plans (SPCC Plans)
- ❖ **Practical Sessions**
 - This hands-on and includes real-life case studies and exercises

DAY FIVE:

- ❖ **Environmental Protection**
- ❖ **Design & Installation of Your Own System**
 - Simple Design Rules
 - Implementation of Your System
 - Tips and Tricks
 - The Thirteen Golden Rules of Working with Waste Water Systems
- ❖ **Case Studies**
 - Municipality
 - Private Rondavel in a Pristine Inaccessible Area
 - In the Middle of Suburbia
- ❖ **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, Gamification, 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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