

Examples of Approved Subject Matter for Continuing Education Requirements

Biological Wastewater Treatment

I. General Knowledge

- A. Sources of Wastewater
- B. Wastewater Characteristics
- C. Basic and Applied Math
- D. Industrial Safety including, but not limited to:
 - 1. Confined Space
 - 2. Trenching & Shoring
 - 3. Personal Protection Equipment
 - 4. Laboratory
 - 5. Electrical
 - 6. Lockout/Tag out
 - 7. Blood Borne Pathogen
 - 8. Personal Hygiene
 - 9. Traffic
 - 10. Chemical
 - 11. Fire
 - 12. Workplace Violence
 - 13. Plant Housekeeping
- E. Laboratory Skills
- F. Common Parameters
- G. Basic Electrical Concepts
- H. Basic Hydraulic Concepts
- I. Goals of Wastewater Treatment
- J. Regulatory Issues
- K. Industrial Pretreatment
- L. Backflow Prevention

II. Support Systems

- A. Electrical/Mechanical Equipment
- B. Engines
- C. Plumbing
- D. Measuring Systems
- E. Control Systems
- F. Chemical Feeders
- G. HVAC
- H. Pumps

III. Unit Process/Process Control

- A. Flow Equalization
- B. Screening
- C. Grinding
- D. Grit Removal
- E. Preaeration
- F. Chemical Pretreatment
- G. Primary Clarifiers
- H. Imhoff Tanks
- I. Septic Tanks
- J. Trickling Filters
- K. Activated Sludge
- L. Waste Stabilization Ponds
- M. RBC's

- N. Activated Biofilters
- O. Disinfection
- P. Effluent Disposal
- Q. Sludge Conditioning
- R. Sludge Thickening
- S. Aerobic Sludge Digestion
- T. Anaerobic Sludge Digestion
- U. Sludge Drying Beds
- V. Solids Disposal
- W. Flow Measurement
- X. Advanced Treatment
 - 1. intermittent filter
 - 2. biological
 - 3. rapid sand filter
 - 4. multimedia filter
 - 5. pressure filter
 - 6. micro screen
 - 7. ammonia stripping
 - 8. nutrient removal
- Y. Sludge Vacuum Filter
- Z. Sludge Press
- AA. Sludge Centrifuge
- BB. Solids Incineration
- CC. Biosolids Reuse
- DD. Sludge Disposal
- EE. Water Reuse

IV. Laboratory Sampling and Analysis (all parameters)

V. Technical Supervision/Management

- A. Planning
- B. Personnel Systems
- C. Financial Systems
- D. Maintenance Management Systems
- E. Management Information Systems
- F. Emergency Response Systems
- G. Public Relation Systems
- H. Plant Security Systems
- I. Safety Systems
- J. Process Management Systems