

What do I need to know to pass a Basic Industrial Wastewater License Test?

[car washes, sedimentation, clarification, oil & grease separation, pH adjustment, pretreatment industries] 12 hour class

Industrial Waste Treatment Vol 1, Third Edition:

The role of the industrial wastewater operator- Chapter 1

- What does an industrial plant operator do?
- How has pollution to our water increased?
- What are some of the advantages of adequately treating wastes?
- Who is a water quality protector?
- Define POTW.
- Who are downstream water users?

Effects of waste discharges – Chapter 2 (2.3)

Reasons to treat industrial wastes – Chapter 2 (2.61)

- Types of discharge
- Effects of waste discharge
- Types of solids
-

Operator's responsibilities – 2.90

- What is an operator's responsibility?
- What does the IWTS include?
- Understanding the IWTS is necessary for what?

Regulations – Chapter 3

EPA – 3.01

- When was the EPA established?
- What are EPA's responsibilities?
- What gave EPA its authority?
- What types of discharges are regulated?
- What are point sources?
- How is the pretreatment program different?
- Why is EPA delegation an advantage?
- What is the difference between direct and indirect discharges?

NPDES program – 3.1

- What is the objective of the program?
- What kinds of discharges are regulated?
- What are the major components of a permit?

- What are the two types of monitoring and who performs them?
- Where may an inspection be conducted?
- What kinds of inspections may be conducted?

Local ordinances – 3.4

Clean Water Act (stormwater) – 3.55

AR Regulation 3

- When is the license renewed?
- How many hours of training are needed to renew?
- What are the requirements for the different levels of licenses?
- What is the exam application process?

Flow Measurement – Chapter 6

Basics of flow measurement – 6.0 – 6.2

- What is an essential task of a wastewater operator?
- What is the difference between concentration-based and mass-based limits?
- What is composite sample?
- What is flow and what are the units of measure?
- What are the two basic types of flow systems?
- Define a “weir”.
- Give examples of sharp-crested weirs.
- A flume is a specially shaped what?
- When are flumes generally used?
- What is the most popular type of flume?
- What are the three different sections of a flume?

Preliminary Treatment – Chapter 7

Equalization of industrial wastewater flows – Lesson 1, 7.1

- What does flow equalization do?
- Describe the two common methods of flow equalization.
- Which method is more effective?
- What is the result of flow equalization?
- Why is the equalization of flows to a biological IWTS important?
- Recycle streams can help prevent what?

pH adjustment – Lesson 3, 7.6

- What is one of the most commonly used treatment processes?
- What is the purpose of pH adjustment?
- On a pH scale, what is neutral, what is acidic, and what is caustic (basic)?

- What is important in corrosion control?
- What is one of the most difficult chemical reactions to control?

Dissolved Air Flotation (DAF)- Chapter 8, 8.55

- What is the objective of flotation thickening?
- What are the four general methods of flotation?
- What is the most commonly used flotation thickening?
- What are types of dissolved air systems?
- What are key components of DAF units?
- What are some problems with thickening primary sludges?
- What are the results of decrease of air pressure after inlet assembly?
- What causes solids to rise to the surface?
- Where are the effluent baffle located?
- What is the purpose of the effluent baffles?

Safety – Chapter 13 Lesson 1, 13.0 – 13.2

- What are some of the hazards that an industrial wastewater operator may be exposed to?
- What is the best protection against infections and infectious diseases?
- What are some of the diseases found in wastewater?
- What is the major concern of confined spaces?

Wastewater Math

- volume
- pounds formula
- BOD/COD
- pumps and flow rates
- conversion problems
- loading problems