



# NEED-TO-KNOW CRITERIA

## Physical/Chemical Industrial Waste Treatment Operator

A Need-to-Know Guide when preparing for the:

**ABC Physical/Chemical Industrial Waste Treatment Operator Certification Exam**



The Associated Boards  
of Certification

*Superior Water Starts Here™*

# Before You Dive In...

## **What is the Need-to-Know Criteria?**

This **ABC Physical/Chemical Industrial Waste Treatment Operator** Need-to-Know Criteria was developed to assist operators in understanding the content that will be covered in the ABC Physical/Chemical Industrial Waste Treatment Operator exam. A methodical and comprehensive international investigation was conducted to determine the most significant job tasks performed by biological industrial waste treatment operators. The content covered on the exam represents the job tasks identified through this research as essential operator competencies, and is not limited to the practices of your system/facility. The following pages organize these job tasks into Core Competency Job Areas, and identify how much of the test is devoted to each area.

## **Is this Need-to-Know Criteria relevant to MY exam?**

WPI offers a variety of standardized and customized exam services. This document is reflective only of the ABC Physical/Chemical Industrial Waste Treatment Operator exam; older editions of the standardized exam and various customized exams are also administered by various certification programs. Please contact your certifying authority to determine whether they have implemented this exam for your program.

## **Exam Preparation Resources**

Visit **gowpi.org** to access the formula/conversion table administered with this exam, a list of approved references, information on purchasing study guides available from partner organizations, and more.

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# ABC Physical/Chemical Industrial Waste Treatment Operator

## Introduction

As part of the development of its certification exams, Water Professionals International (WPI) conducted a job analysis of industrial waste treatment operators during 2001 and 2002. The purpose of the job analysis was to identify the essential job tasks performed by industrial waste treatment operators and the capabilities required to competently perform these job tasks. The results of this job analysis provided WPI with the foundation for the development of new industrial waste treatment certification exams.

The **ABC Physical/Chemical Industrial Waste Treatment Operator** *Need-to-Know Criteria* was developed from the results of WPI's industrial waste treatment operator job analysis. The information in this document reflects the essential job tasks performed by operators, and their requisite capabilities. This document is intended to be used by certification programs and trainers to help prepare operators for certification.

## How the Job Analysis was Conducted

### *Subject Matter Expert Committee*

A Subject Matter Expert (SME) Committee was formed to provide technical assistance in the development of the industrial waste treatment operator job analysis. The SME committee developed a list of the important job tasks performed by both physical/chemical and biological industrial waste treatment operators. The SMEs verified the technical accuracy, clarity, and comprehensiveness of the job tasks, and identified the capabilities (e.g., knowledge, skills, and abilities) required to perform them. Identification of capabilities was done on a task-by-task basis, so that a link was established between each task statement and requisite capability.

### *Task Inventory*

A task inventory was developed from the data collected during the committee meeting. The inventory included 8-point rating scales for frequency of performance and seriousness of inadequate or incorrect performance. These two rating scales were used because they provide useful information (i.e., how critical each task is, and how frequently each task is performed) pertaining to certification. The task inventory also included a background information section where demographic data such as gender, age, ethnic origin, educational level, work experience, and certification level were collected. Space was provided at the end of the inventory for operators to list any important tasks performed on their jobs that were not included on the inventory, and to make general comments.

The task inventory was sent to 381 industrial waste treatment operators throughout the United States and Canada—83 out of the 381 inventories mailed were returned, for a response rate of 21.8%. Of the respondents, 44.3% worked at physical/chemical industrial waste treatment plants, 34.4% worked at biological industrial waste treatment plants, and 21.3% worked at both physical/chemical and biological industrial waste treatment plants.

# ABC Physical/Chemical Industrial Waste Treatment Operator

## Results


The mean, standard deviation and the percentage of respondents performing each task statement were computed. The mean was used to determine the importance of items, and the standard deviation was used to identify items with a wide variation in responses. The percentage of respondents performing each task statement was used to identify tasks and capabilities commonly performed by operators throughout the United States and Canada. The analysis was run separately for physical/chemical and biological industrial waste treatment operators in order to accurately determine what tasks would be covered on each exam.


A criticality value of 2 (mean seriousness rating) + mean frequency rating was calculated for each item on the inventory. This formula gives extra weight to the seriousness rating in determining critical items and was appropriate because it emphasized the purpose of certification—to provide competent operators.

## CORE COMPETENCY JOB AREAS

The SME committee reviewed the results of the operator survey to identify the most important and commonly performed job tasks and capabilities for biological industrial waste treatment operators. The essential tasks and capabilities that were identified through this process are called the core competencies. The core competencies are clustered into six job areas:


 **Physical/Chemical Treatment Processes** – monitor, evaluate, and adjust treatment processes

 **Laboratory Analysis** – collect samples, perform laboratory analysis, and interpret analysis

 **Operate Support Equipment** – operate equipment such as chemical feeders and pumps

 **Evaluate and Maintain Support Equipment** – evaluate operation of equipment, perform diagnostic, preventive, and corrective maintenance

 **Administrative Duties** – perform administrative duties, establish recordkeeping system, and record information

 **Safety and Emergency Preparedness** – establish safety programs and emergency plans, perform safety procedures, and respond to emergencies

Because the results reflect only those tasks with a high criticality value, some frequently performed tasks will be missing from the results. For example, a task may be performed every day, but if the potential seriousness of inadequate or incorrect performance is negligible, the task will not appear in the results. Because the purpose of certification is to protect the public, it was not reasonable to include tasks of negligible seriousness.







# Physical/Chemical Industrial Waste Treatment Operator Certification *Need-to-Know Criteria*

## ABC Physical/Chemical Industrial Waste Treatment Operator Certification Exams

The ABC Physical/Chemical Industrial Waste Treatment Operator Certification exams evaluate an operator’s knowledge of tasks related to the operation of biological industrial waste treatment plants. The content of each exam was determined by the Subject Matter Expert committee, based on the results of the job analysis. To successfully pass a WPI exam, an operator must demonstrate knowledge of the core competencies in this document. Because certificates may be used to work in various-sized treatment plants, the exams may include technologies that are not used in each treatment plant, but are commonly used in many treatment plants.

Four levels of certification exams are offered by WPI, with Class I being the lowest level and Class IV the highest level. Each exam consists of 100 multiple-choice questions. Each exam’s specifications are based on a weighting of the job analysis results so that they reflect the criticality of tasks performed on the job. The specifications list the percentage of questions on the exam that fall under each job duty. For example, the ABC Class I Physical/Chemical Industrial Waste Treatment Operator exam consists of 47 questions relating to the job duty “Physical/Chemical Treatment Processes” and its associated tasks and capabilities. The list of core competencies for each job area are on the following pages.

### EXAM SPECIFICATIONS

CORE COMPETENCY JOB AREA	CLASS I	CLASS II	CLASS III	CLASS IV
 PHYSICAL/CHEMICAL TREATMENT PROCESSES	47%	48%	47%	52%
 LABORATORY ANALYSIS	5%	5%	7%	8%
 OPERATE SUPPORT EQUIPMENT	15%	14%	13%	7%
 EVALUATE AND MAINTAIN SUPPORT EQUIPMENT	15%	15%	15%	15%
 ADMINISTRATIVE DUTIES	8%	8%	8%	8%
 SAFETY AND EMERGENCY PREPAREDNESS	10%	10%	10%	10%



## Physical/Chemical Treatment Processes

<b>Monitor Treatment Processes</b> (check process, record data)	<b>Class I</b>	<b>Class II</b>	<b>Class III</b>	<b>Class IV</b>
Grease removal	X	X	X	X
Plant pumping of main flow	X	X	X	X
Screening	X	X	X	X
Flow equalization	X	X	X	X
Sedimentation/clarification	X	X	X	X
Dissolved air flotation	X	X	X	X
Coagulation/flocculation	X	X	X	X
Microscreens			X	X
Ion exchange for advanced waste treatment		X	X	X
Reverse osmosis		X	X	X
Electrodialysis		X	X	X
Electrolytic recovery		X	X	X
Carbon adsorption	X	X	X	X
Bag filtration	X	X	X	X
Granular media filtration	X	X	X	X
Air stripping	X	X	X	X
Chromium reduction	X	X	X	X
Cyanide destruction	X	X	X	X
Metal hydroxide precipitation	X	X	X	X
Metal reduction recovery	X	X	X	X
Metal sulfide precipitation	X	X	X	X
Microfiltration	X	X	X	X
Oil recovery	X	X	X	X
Oil removal	X	X	X	X
Oil separation	X	X	X	X
pH adjustment	X	X	X	X
Ultrafiltration	X	X	X	X
Solids thickening	X	X	X	X
Sludge drying	X	X	X	X
Mechanical dewatering	X	X	X	X
SCADA systems	X	X	X	X
<b>Evaluate Treatment Processes</b> (review data, make decision)	<b>Class I</b>	<b>Class II</b>	<b>Class III</b>	<b>Class IV</b>
Grease removal	X	X	X	X
Plant pumping of main flow	X	X	X	X
Screening	X	X	X	X
Flow equalization	X	X	X	X
Sedimentation/clarification	X	X	X	X
Dissolved air flotation	X	X	X	X
Coagulation/flocculation	X	X	X	X
Microscreens			X	X
Ion exchange for advanced waste treatment		X	X	X
Reverse osmosis		X	X	X
Electrodialysis		X	X	X
Electrolytic recovery		X	X	X



## Physical/Chemical Treatment Processes

<b>Evaluate Treatment Processes</b> (review data, make decision)	<b>Class I</b>	<b>Class II</b>	<b>Class III</b>	<b>Class IV</b>
Carbon adsorption	X	X	X	X
Bag filtration	X	X	X	X
Granular media filtration	X	X	X	X
Air stripping		X	X	X
Chromium reduction		X	X	X
Cyanide destruction		X	X	X
Metal hydroxide precipitation		X	X	X
Metal reduction recovery		X	X	X
Metal sulfide precipitation		X	X	X
Microfiltration		X	X	X
Oil recovery	X	X	X	X
Oil removal	X	X	X	X
Oil separation	X	X	X	X
pH adjustment	X	X	X	X
Ultrafiltration		X	X	X
Solids thickening	X	X	X	X
Sludge drying	X	X	X	X
Mechanical dewatering		X	X	X
SCADA systems		X	X	X
<b>Adjust Treatment Processes</b> (make correction)	<b>Class I</b>	<b>Class II</b>	<b>Class III</b>	<b>Class IV</b>
Grease removal	X	X	X	X
Plant pumping of main flow	X	X	X	X
Screening	X	X	X	X
Flow equalization	X	X	X	X
Sedimentation/clarification	X	X	X	X
Dissolved air flotation	X	X	X	X
Coagulation/flocculation	X	X	X	X
Microscreens			X	X
Ion exchange for advanced waste treatment		X	X	X
Reverse osmosis		X	X	X
Electrodialysis		X	X	X
Electrolytic recovery		X	X	X
Carbon adsorption	X	X	X	X
Bag filtration	X	X	X	X
Granular media filtration	X	X	X	X
Air stripping		X	X	X
Chromium reduction		X	X	X
Cyanide destruction		X	X	X
Metal hydroxide precipitation		X	X	X
Metal reduction recovery		X	X	X
Metal sulfide precipitation		X	X	X
Microfiltration		X	X	X
Oil removal	X	X	X	X
Oil recovery		X	X	X
Oil separation	X	X	X	X



## Physical/Chemical Treatment Processes

<b>Adjust Treatment Processes</b> (make correction)	<b>Class I</b>	<b>Class II</b>	<b>Class III</b>	<b>Class IV</b>
pH adjustment	X	X	X	X
Ultrafiltration		X	X	X
Solids thickening		X	X	X
Sludge drying	X	X	X	X
Mechanical dewatering		X	X	X
SCADA systems		X	X	X
<b>Chemical Addition</b>	<b>Class I</b>	<b>Class II</b>	<b>Class III</b>	<b>Class IV</b>
Add dry chemicals	X	X	X	X
Add liquid chemicals	X	X	X	X
Add gaseous chemicals	X	X	X	X

### REQUIRED CAPABILITIES:

Knowledge of amphoteric material  
 Knowledge of chemical properties  
 Knowledge of computer operation  
 Knowledge of general chemistry and biology  
 Knowledge of general electrical and mechanical principles  
 Knowledge of hydraulic principles  
 Knowledge of normal characteristics of wastewater (e.g., color, flow pattern)  
 Knowledge of normal chemical range  
 Knowledge of Personal Protective Equipment  
 Knowledge of physical science  
 Knowledge of primary and secondary treatment processes  
 Knowledge of principles of measurement  
 Knowledge of programmable logic controllers  
 Knowledge of proper application, handling, and storage of chemicals  
 Knowledge of proper lifting procedures  
 Knowledge of regulations

Knowledge of safety issues related to specific processes  
 Knowledge of wastewater treatment concepts and design parameters  
 Ability to adjust chemical feed rates and flow patterns  
 Ability to calculate dosage rates  
 Ability to calibrate equipment  
 Ability to communicate verbally and in writing  
 Ability to confirm chemical strength  
 Ability to diagnose/troubleshoot process units  
 Ability to discriminate between normal and abnormal conditions  
 Ability to evaluate and adjust process units  
 Ability to interpret Safety Data Sheets (SDSs)  
 Ability to maintain processes in normal operating conditions  
 Ability to perform basic math and process control calculations  
 Ability to perform physical measurements  
 Ability to prepare and measure chemicals





# Laboratory Analysis

Collect Samples	Class I	Class II	Class III	Class IV
Alkalinity	X	X	X	X
Ammonia		X	X	X
Arsenic	X	X	X	X
Barium	X	X	X	X
Cadmium	X	X	X	X
Calcium		X	X	X
Chemical oxygen demand		X	X	X
Chloride		X	X	X
Chlorinated organics		X	X	X
Chlorine residual	X	X	X	X
Chromium	X	X	X	X
Color		X	X	X
Conductivity		X	X	X
Copper	X	X	X	X
Cyanide		X	X	X
Fluoride		X	X	X
Iron	X	X	X	X
Lead	X	X	X	X
Manganese	X	X	X	X
Mercury	X	X	X	X
Nickel	X	X	X	X
Nitrate		X	X	X
Nitrite		X	X	X
Oil and grease	X	X	X	X
Oxidation-reduction potential	X	X	X	X
pH	X	X	X	X
Phenol		X	X	X
Phosphorus	X	X	X	X
Priority pollutants	X	X	X	X
Selenium	X	X	X	X
Settleable solids	X	X	X	X
Silver	X	X	X	X
Sulfide		X	X	X
Temperature	X	X	X	X
Total dissolved solids		X	X	X
Total organic carbon		X	X	X
Total suspended solids	X	X	X	X
Toxicity	X	X	X	X
Turbidity	X	X	X	X
Zinc	X	X	X	X



# Laboratory Analysis

<b>Perform Laboratory Analysis</b>	<b>Class I</b>	<b>Class II</b>	<b>Class III</b>	<b>Class IV</b>
Alkalinity	X	X	X	X
Chemical oxygen demand			X	X
Chlorine residual	X	X	X	X
Color		X	X	X
Conductivity		X	X	X
Oxidation-reduction potential	X	X	X	X
pH	X	X	X	X
Settleable solids	X	X	X	X
Temperature	X	X	X	X
Total dissolved solids		X	X	X
Total suspended solids		X	X	X
Turbidity	X	X	X	X
<b>Interpret Analysis</b>	<b>Class I</b>	<b>Class II</b>	<b>Class III</b>	<b>Class IV</b>
Alkalinity		X	X	X
Arsenic		X	X	X
Barium		X	X	X
Cadmium		X	X	X
Chemical oxygen demand		X	X	X
Chlorine residual		X	X	X
Chromium		X	X	X
Color	X	X	X	X
Conductivity		X	X	X
Copper		X	X	X
Cyanide		X	X	X
Iron		X	X	X
Lead		X	X	X
Manganese		X	X	X
Mercury		X	X	X
Nickel		X	X	X
Nitrate		X	X	X
Nitrite		X	X	X
Oil and grease		X	X	X
Oxidation-reduction potential		X	X	X
pH	X	X	X	X
Phenol		X	X	X
Phosphorus		X	X	X
Priority pollutants		X	X	X
Selenium		X	X	X
Settleable solids	X	X	X	X
Silver		X	X	X
Sulfide		X	X	X
Temperature	X	X	X	X



## Laboratory Analysis

Interpret Analysis	Class I	Class II	Class III	Class IV
Total dissolved solids		X	X	X
Total organic carbon		X	X	X
Total suspended solids	X	X	X	X
Toxicity		X	X	X
Turbidity		X	X	X
Zinc		X	X	X

### REQUIRED CAPABILITIES:

Knowledge of amphoteric material

Knowledge of chain of custody procedures

Knowledge of chemical properties

Knowledge of EPA approved analytical methods

Knowledge of general chemistry and biology

Knowledge of laboratory equipment and procedures

Knowledge of normal characteristics of wastewater

Knowledge of physical science

Knowledge of principles of measurement

Knowledge of proper chemical handling and storage

Knowledge of quality control/quality assurance practices

Knowledge of safety regulations

Knowledge of sample preservation

Knowledge of sampling procedures

Ability to calibrate instruments

Ability to collect representative samples

Ability to follow written procedures

Ability to interpret Safety Data Sheets (SDSs)

Ability to operate automatic samplers

Ability to perform laboratory calculations

Ability to recognize abnormal analytical results



## Operate Support Equipment

Support Equipment	Class I	Class II	Class III	Class IV
Blowers and compressors	X	X	X	X
Chemical feeders	X	X	X	X
Computers	X	X	X	X
Drives	X	X	X	X
Electronic testing equipment (e.g., volt meters)		X	X	X
Flow measurement devices	X	X	X	X
Generators		X	X	X
Hand tools	X	X	X	X
Instrumentation	X	X	X	X
Measuring and control systems	X	X	X	X
Motors	X	X	X	X
Pneumatic equipment	X	X	X	X
Power tools	X	X	X	X
Pumps	X	X	X	X
Valves	X	X	X	X

### REQUIRED CAPABILITIES:

- Knowledge of backflow prevention devices
- Knowledge of function of tools
- Knowledge of general electrical & mechanical principles
- Knowledge of hydraulic principles
- Knowledge of pipes
- Knowledge of plumbing
- Knowledge of pneumatics
- Knowledge of regulations
- Knowledge of safety regulations
- Knowledge of startup and shutdown procedures
- Knowledge of wastewater treatment concepts
- Ability to evaluate and adjust equipment



## Evaluate and Maintain Support Equipment

Required Evaluations	Class I	Class II	Class III	Class IV
Check speed of equipment	X	X	X	X
Inspect equipment for abnormal conditions	X	X	X	X
Measure head loss	X	X	X	X
Measure temperature of equipment	X	X	X	X
Read charts	X	X	X	X
Read meters	X	X	X	X
Read pressure gauges	X	X	X	X
Perform diagnostic and preventive maintenance on:	Class I	Class II	Class III	Class IV
Blowers and compressors	X	X	X	X
Chemical feeders	X	X	X	X
Drives	X	X	X	X
Instrumentation	X	X	X	X
Motors	X	X	X	X
Pumps	X	X	X	X
Valves	X	X	X	X
Perform corrective maintenance on:	Class I	Class II	Class III	Class IV
Chemical feeders	X	X	X	X
Drives	X	X	X	X
Instrumentation	X	X	X	X
Motors	X	X	X	X
Pumps	X	X	X	X
Valves	X	X	X	X

### REQUIRED CAPABILITIES:

Knowledge of facility operation and maintenance

Knowledge of general electrical and mechanical principles

Knowledge of hydraulic principles

Knowledge of internal combustion engines

Knowledge of lubricant and fluid characteristics

Knowledge of pneumatics

Knowledge of predictive maintenance

Knowledge of process control instrumentation

Knowledge of safety regulations

Knowledge of startup and shutdown procedures

Ability to adjust equipment

Ability to calibrate equipment

Ability to differentiate between preventive and corrective maintenance

Ability to discriminate between normal and abnormal conditions

Ability to record information and report findings

Ability to troubleshoot and perform general maintenance



## Administrative Duties

<b>Perform Administrative Duties</b>	<b>Class I</b>	<b>Class II</b>	<b>Class III</b>	<b>Class IV</b>
Administer compliance, safety, and security program	X	X	X	X
Develop budget	X	X	X	X
Develop operation and maintenance plan	X	X	X	X
Evaluate employee performance	X	X	X	X
Evaluate laboratory data for quality control/quality assurance	X	X	X	X
Hire and discharge employees	X	X	X	X
Maintain records	X	X	X	X
Perform workplace safety evaluation	X	X	X	X
Plan and organize work activities	X	X	X	X
Record and evaluate data	X	X	X	X
Report noncompliance	X	X	X	X
Respond to public complaints	X	X	X	X
Supervise employee work activities	X	X	X	X
Write reports (e.g., federal, internal, state)	X	X	X	X
<b>Establish recordkeeping system and record information:</b>	<b>Class I</b>	<b>Class II</b>	<b>Class III</b>	<b>Class IV</b>
Facility operation	X	X	X	X
Financial	X	X	X	X
Laboratory	X	X	X	X
Maintenance	X	X	X	X
Permit compliance	X	X	X	X
Personnel	X	X	X	X

### REQUIRED CAPABILITIES:

- Knowledge of computer operation
- Knowledge of facility operation and maintenance
- Knowledge of function of recordkeeping system
- Knowledge of legal liability
- Knowledge of local codes and ordinances
- Knowledge of monitoring and reporting requirements
- Knowledge of principles of general communication
- Knowledge of recordkeeping policies
- Knowledge of regulations for direct and indirect dischargers
- Ability to accurately transcribe data
- Ability to communicate verbally and in writing
- Ability to determine what information needs to be recorded
- Ability to evaluate facility performance
- Ability to follow written procedures
- Ability to interpret data
- Ability to organize information
- Ability to perform basic math
- Ability to review reports



## Safety and Emergency Preparedness

<b>Establish safety programs and perform safety procedures for:</b>	<b>Class I</b>	<b>Class II</b>	<b>Class III</b>	<b>Class IV</b>
Blood borne pathogens	X	X	X	X
Chemical hazard communication	X	X	X	X
Confined space entry	X	X	X	X
Electrical grounding	X	X	X	X
Fire	X	X	X	X
First aid	X	X	X	X
Infectious diseases	X	X	X	X
Lifting	X	X	X	X
Lock-out/tag-out	X	X	X	X
Personal hygiene	X	X	X	X
Personal Protective Equipment	X	X	X	X
Respiratory protection	X	X	X	X
Slips, trips, and falls	X	X	X	X
<b>Establish emergency plans and respond to emergencies for:</b>	<b>Class I</b>	<b>Class II</b>	<b>Class III</b>	<b>Class IV</b>
Civil disorder	X	X	X	X
Facility upset	X	X	X	X
Hazardous waste	X	X	X	X
Natural disasters	X	X	X	X
Power disruption	X	X	X	X
Spill response	X	X	X	X

### REQUIRED CAPABILITIES:

- Knowledge of emergency plans
- Knowledge of potential causes & impact of disasters on facility
- Knowledge of safety regulations
- Ability to assess likelihood of disaster occurring
- Ability to communicate verbally and in writing
- Ability to coordinate emergency response with organizations
- Ability to follow written procedures
- Ability to identify potential safety hazards
- Ability to recognize unsafe work conditions
- Ability to select and operate safety equipment

# References

The following are approved as reference sources for the ABC Physical/Chemical Industrial Waste Treatment Operator examinations. Operators should use the latest editions of these reference sources to prepare for the exam.

## **California State University, Sacramento (CSUS) Foundation, Office of Water Programs**

- *Industrial Waste Treatment, Volumes I and II*
- *Operation of Wastewater Treatment Plants, Volumes I and II*
- *Manage for Success*
- *Advanced Waste Treatment*
- *Treatment of Metal Wastestreams*
- *Pretreatment Facility Inspection*

To order, contact: **Office of Water Programs**  
**California State University, Sacramento**  
**6000 J Street**  
**Sacramento, CA 95819-6025**  
Website: [www.owp.csus.edu](http://www.owp.csus.edu)  
Phone: (916) 278-6142  
Fax: (916) 278-5959  
E-mail: [wateroffice@csus.edu](mailto:wateroffice@csus.edu)

## **Water Environment Federation**

- *Operation of Municipal Wastewater Treatment Plants, Manual of Practice No. 11*
- *Industrial Wastewater Management, Treatment, and Disposal, Manual of Practice FD-3*

To order, contact: **Water Environment Federation**  
**601 Wythe Street**  
**Alexandria, VA 22314-1994**  
Website: [www.wef.org](http://www.wef.org)  
Phone: (800) 666-0206  
Fax: (703) 684-2492  
E-mail: [pubs@wef.org](mailto:pubs@wef.org)

Operators must also be knowledgeable about federal and state/provincial regulations that apply to industrial dischargers. Most of the US federal regulations that apply to industrial dischargers are found in the *Code of Federal Regulations*, Title 40.



# ABC Testing A **WPI** SERVICE



The Associated Boards  
of Certification

*Superior Water Starts Here™*

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