



# ABC Operator Certification Application

## General Instructions

1. Please read and follow all instructions carefully and **complete all sections** fully and accurately.
2. Application review fee is \$120.00. **All fees are non-refundable.** Make check or money order payable to: Association of Boards of Certification.
3. If you are required to take an exam, additional proctoring fees will be assessed by the proctor.
4. To qualify for ABC Certification without examination (reciprocity), you must meet all of the following criteria:
  - Taken a certification exam equivalent to ABC's Standardized Exam (refer to the enclosed chart).
  - Received a score of 70% or above on your certification exam.
  - An active license which is in good standing in the area of certification for which you are applying.
  - Met the specific class certification standards for which you are applying (see page 2).
5. If you are not certified, you must meet the certification standards listed on page 2 in order to take an ABC exam. You must begin with the Class I Exam.
6. You must complete a separate application for each type of certificate you wish to receive.
7. All ABC certificates are valid for two years. Certificate renewal (after two years) requires a fee of \$110.00 and documentation of completion of 2.4 CEUs (24 contact hours) of continuing education in your area of certification.
8. Please allow four weeks for processing before inquiring about application status.
9. Mail completed application to: ABC • 2805 SW Snyder Blvd., Suite 535 • Ankeny, Iowa • 50023 • Phone (515) 232-3623

### I am applying for certification by: (please check only one)

### Class level: (please check only one)

Reciprocity   
  Exam   
  OIT Fulfillment<sup>1</sup>   
                                 
  OIT<sup>2</sup>   
  I   
  II   
  III   
  IV

### Category: (please check only one)

Water Treatment Operator   
  Wastewater Treatment Operator   
  Very Small Water Systems Operator   
  Collection Operator  
 Distribution Operator   
  Biological Industrial Waste Operator   
  Physical/Chemical Industrial Operator

## General Information

Name \_\_\_\_\_ Work Phone \_\_\_\_\_  
 Address \_\_\_\_\_ Fax \_\_\_\_\_  
 \_\_\_\_\_ Home Phone \_\_\_\_\_  
 City, State/Province \_\_\_\_\_ E-mail Address \_\_\_\_\_  
 Zip/Postal Code \_\_\_\_\_ Birthdate (dd/mm/yyyy)   -   -       
 Country \_\_\_\_\_ Social Security Number (last 4 digits only)<sup>3</sup>

## Current Certification

If you are currently certified, complete this section and enclose a copy of your certificate.

Valid certificate number \_\_\_\_\_  
 Issuing agency \_\_\_\_\_  
 Title of certificate and/or class \_\_\_\_\_  
 Percentage score you received on exam \_\_\_\_\_  
 Month/year you took the exam \_\_\_\_\_

## Operator Experience

Total years of Operator Experience \_\_\_\_\_  
 Total years of Direct Responsible Charge<sup>4</sup> \_\_\_\_\_  
 Are you currently working or seeking certification in order to work at a treatment facility in Indian Country?  Yes  No

<sup>1</sup>In-Training certificates can be upgraded to full certificates upon satisfactory fulfillment of all certification requirements during the effective period of the certificate.  
<sup>2</sup>An applicant may sit for an examination before he/she satisfies the education and/or experience requirements if he/she is fully certified at the next lower certification class (except applicants for Class I are not required to have existing certification). This individual shall be issued an In-Training certificate provided he/she has passed the appropriate exam. In-Training certificates do not qualify an applicant as fully certified.  
<sup>3</sup>For U.S. citizens/residents only. If outside the U.S. provide the last 4 digits of your government issued national identification number in the space provided.  
<sup>4</sup>Direct Responsible Charge (DRC) is active day to day technical direction and supervision or active day to day accountability and/or authority for process control decisions of a facility or major segment of a facility that directly impacts public health and/or the environment.

## Education

High School Diploma or GED  Yes  No

Name of High School \_\_\_\_\_

Graduation Year \_\_\_\_\_

College Graduate

Yes  Some College  No College

If *some college*, number of years completed\*

If yes:  B.A.  B.S.  
 Associate Degree  Masters Degree

Major\* \_\_\_\_\_

Name of College \_\_\_\_\_

\*Attach college transcript listing major.

## Important Checklist

Please use this checklist before mailing your application. Your application will be delayed if the following is not included:\*

- \_\_\_\_\_ 1. Copy of High School Diploma, GED, or equivalent
- \_\_\_\_\_ 2. Copy of all transcripts/documentation of post-secondary education
- \_\_\_\_\_ 3. Contact information and letter from supervisor describing job title, job duties, and dates of employment
- \_\_\_\_\_ 4. Classification worksheets
- \_\_\_\_\_ 5. Copy of current certification (if applicable)
- \_\_\_\_\_ 6. Nonrefundable application fee

\*If supporting documents are not written in English, a certified translation into English must be provided.

## Nondiscrimination

It is the policy of ABC that it shall not discriminate among applicants as to age, sex, race, religion, national origin, disability, sexual orientation, or marital status.

## Acknowledgement

I, the undersigned, certify that I am the above applicant; that all statements made and information contained in this application are true and correct to the best of my knowledge and belief; that I understand that any omissions or misrepresentations may result in ineligibility for certification or revocation of any certificate granted. I understand that the enclosed fee is non-refundable and that an additional processing fee may be charged if the application is completed incorrectly or is unreadable. Further, should I have received the certification under false circumstances, I will immediately surrender the certificate to ABC. I also consent to a thorough investigation of my application for the purpose of verification of my qualifications for certification. I also understand that by signing below I give ABC the authority to use and report this information and my test results. I waive all claims and agree to indemnify and hold harmless ABC for any action taken pursuant to the rules and standards of ABC with regard to my application, the ABC examination(s) and/or my certification except claims based on gross negligence or lack of good faith.

Signature of Applicant \_\_\_\_\_ Date \_\_\_\_\_

## Certification Standards

- Submit a letter from your supervisor or Human Resources department which provides your job title, a description of your job duties, and dates of employment in the position. If applicable, the number of years of direct responsible charge experience (DRC)<sup>2</sup> should be specified. If your position is part-time or DRC is part-time, an estimate of the number of hours spent doing various job duties should also be provided. Finally, the letter should contain contact information for your supervisor (e.g.: telephone, e-mail, mailing address).
- Class III and IV applicants must complete the enclosed plant classification worksheet.

### Class I

- High school diploma, GED, or equivalent
- 1 year of acceptable experience directly related to the area of certification being sought

### Class II

- High school diploma, GED, or equivalent
- 3 years of acceptable experience directly related to the area of certification being sought

### Class III

- High school diploma, GED, or equivalent
- 90 CEUs<sup>1</sup> of post high school education in the environmental control field, engineering, or related science
- 4 years of acceptable experience in a Class II or higher utility, including 2 years in DRC<sup>2</sup>

### Class IV

- High school diploma, GED, or equivalent
- 180 CEUs<sup>1</sup> of post high school education in the environmental control field, engineering, or related science
- 4 years of acceptable experience in a Class III or higher utility, including 2 years in DRC<sup>2</sup>

### VSWS

- 0.6 CEU<sup>1</sup> of VSWS education
- 6 months of acceptable experience directly related to the area of certification being sought

<sup>1</sup>1 CEU = 10 contact hours, 1 semester credit = 1.5 CEU, 1 quarter credit = 1.0 CEU

<sup>2</sup>Direct Responsible Charge (DRC) is active day to day technical direction and supervision or active day to day accountability and/or authority for process control decisions of a facility or major segment of a facility that directly impacts public health and/or the environment.

## Exam Arrangements

- ABC exams are computerized. If your application is approved, arrangements will be made with Applied Measurement Professionals (AMP) to administer the certification exam to you. Your exam must be completed within six months of application approval. AMP charges a proctoring fee of \$64.00 in the U.S. and \$150.00 outside the U.S. These fees are subject to change without notice. Paper and pencil exams may be available in some locations. Please inquire about the availability of this option if needed.
- If you require special accommodation due to a disability that may impair your ability to take the examination, ABC will endeavor to meet those special needs. You are responsible for submitting the Request for Accommodation Form with this application and providing documentation of the need for a special accommodation. A letter from a physician or a medical specialist knowledgeable of your disability must accompany the completed application. Please contact ABC to request a copy of the Request for Accommodation Form.

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## Substitutions

The Association permits substitution of the education and experience requirements. Substitutions may not exceed 50% of any requirement except as noted. Related experience may not be substituted for education. Decisions on the acceptance of substitutions will be made on a case-by-case basis.

## Experience for Education

Experience used to meet the experience requirement may not be reused as substitution for the education requirement.

- For all classes, instruction of environmental control courses may be substituted for the education requirement on the basis of: 10 contact hours = 1 CEU. Credit will be given only once for each course instructed.
- For VSWS, no substitution of education shall be permitted.
- For Class I - IV, experience can be substituted for education without limit as follows:  
1 year experience = 1 year high school education
- For Class III operators, a maximum of 1 year of DRC experience in a Class II or higher position may be substituted for 45.0 CEUs of post-high school education.
- For Class IV operators, a maximum of 2 years of DRC experience in a Class III or higher position may be substituted for 90.0 CEUs of post-high school education.

## Education for Experience

Education used as substitution for experience must be formal post-high school education in the environmental control field, engineering or related science. Education used as substitution for experience may not be reused to meet the education requirement.

- For VSWS and Class I, no substitution of education for experience is allowed.
- For Class II, a maximum of 67.5 CEUs of post-high school education may be substituted for 1.5 years of operating experience.
- For Class III and IV operators, a maximum of 90.0 CEUs of post-high school education may be substituted for 2 years of experience; however, the applicant must still have 1 year of DRC<sup>1</sup> experience.

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## Classifying Your Plant/System

A separate worksheet must be completed for each system/treatment plant needed to fulfill the experience requirement of the class for which you are applying. If the worksheet is missing, please call the ABC office. To calculate the point rating of your plant(s), please complete the appropriate plant classification worksheet(s). The values are listed next to each category. Enter these values in the blanks provided and add to determine the total point rating of your plant(s). A separate sheet must be used for each system.

Distribution and Collection Systems classification is based on population as follows:

Class I.....1,500 or less  
Class II.....1,501 to 15,000  
Class III.....15,001 to 50,000  
Class IV.....50,001 and greater

Very Small Water Systems<sup>1</sup> (VSWS), Water Treatment, Wastewater Treatment, and Industrial Waste classification is based on the following point system:

VSWS<sup>1</sup>.....30 points or less and a maximum population of 500 persons  
Class I.....30 points or less  
Class II.....31 - 55 points  
Class III.....56 - 75 points  
Class IV.....76 points and greater

<sup>1</sup>VSWS means a community public water system that serves 500 persons or less or a noncommunity public water system and has no treatment other than disinfection or has only treatment which does not require any chemical treatment, process adjustment, backwashing or media regeneration by an operator (e.g. calcium carbonate filters, granular activated carbon filters, cartridge filters, ion exchangers).

# Wastewater Treatment Plant Point Rating System (Non-Industrial/Municipal)

A wastewater system with only collection, lift stations, and chlorination is considered a collection system and not a wastewater treatment plant. Each unit process should have points assigned only once.

Name and Title
Company Name
Address
City/State/Zip
Phone and Fax
Employment dates, start to end
Dates of DRC experience

Item	Points	Your Plant
<b>Size (2 point minimum to 20 point maximum)</b>		
Maximum population equivalent (PE) or part served, peak day (1 point minimum to 10 point maximum)	1 pt per 10,000 or part	
Design flow average day or peak month's part flow average day, whichever is larger (1 point minimum to 10 point maximum)	1 pt per MGD or part	
<b>Variation in raw waste (0 point minimum to 6 point maximum)<sup>1</sup></b>		
Variations do not exceed those normally or typically expected	0	
Recurring deviations or excessive variations of 100 to 200% in strength and/or flow	2	
Recurring deviations or excessive variations of more than 200% in strength and/or flow	4	
Raw wastes subject to toxic waste discharges	6	
Impact of septage or truck-hauled waste (0 point minimum to 4 point maximum)		
<b>Preliminary treatment</b>		
Plant pumping of main flow	3	
Screening, comminution	3	
Grit removal	3	
Equalization	1	
<b>Primary Treatment</b>		
Clarifiers	5	
Imhoff tanks or similar	5	
<b>Secondary Treatment</b>		
Fixed-film reactor	10	
Activated sludge	15	
Stabilization ponds without aeration	5	
Stabilization ponds with aeration	8	
<b>Tertiary Treatment</b>		
Polishing ponds for advanced waste treatment	2	
Chemical/physical advanced waste treatment w/o secondary	15	
Chemical/physical advanced waste treatment following secondary	10	
Biological or chemical/biological advanced waste treatment	12	
Nitrification by designed extended aeration only	2	
Ion exchange for advanced waste treatment	10	
Reverse osmosis, electrodialysis and other membrane filtration techniques	15	
Advanced waste treatment chemical recovery, carbon regeneration	4	
Media filtration	5	

<b>Additional Treatment Processes</b>		
Chemical additions (2 points each for a maximum of 6 points)	6	
Dissolved air flotation (for other than sludge thickening)	8	
Intermittent sand filter	2	
Recirculating intermittent sand filter	3	
Microscreens	5	
Generation of oxygen	5	
<b>Solids Handling</b>		
Solids stabilization	5	
Gravity thickening	2	
Mechanical dewatering	8	
Anaerobic digestion of solids	10	
Utilization of digester gas for heating or cogeneration	5	
Aerobic digestion of solids	6	
Evaporative sludge drying	2	
Solids reduction (including incineration, wet oxidation)	12	
On-site landfill for solids	2	
Solids composting	10	
Land application of biosolids by contractor	2	
Land application of biosolids under direction of facility operator in direct responsible charge	10	
<b>Disinfection (0 point minimum to 10 point maximum)</b>		
Chlorination or ultraviolet irradiation	5	
Ozonation	10	
<b>Effluent discharge (0 point minimum to 10 point maximum)</b>		
Mechanical post aeration	2	
• Direct recycle and reuse	6	
• Land treatment and disposal (surface or subsurface)	4	
<b>Instrumentation (0 point minimum to 6 point maximum)</b>		
Use of SCADA or similar instrumentation systems to provide data w/ no process operation	0	
Use of SCADA or similar instrumentation systems to provide data w/ limited process operation	2	
Use of SCADA or similar instrumentation systems to provide data w/ moderate process operation	4	
Use of SCADA or similar instrumentation systems to provide data w/ extensive or total process operation	6	
<b>Laboratory control (0 point minimum to 15 point maximum)<sup>2</sup></b>		
<b>Bacteriological/biological (0 point minimum to 5 point maximum)</b>		
• Lab work done outside the plant	0	
• Membrane filter procedures	3	
• Use of fermentation tubes or any dilution method; fecal coliform determination	5	
<b>Chemical/physical (0 point minimum to 10 point maximum)</b>		
• Lab work done outside the plant	0	
• Push-button or visual methods for simple tests such as pH, settleable solids	3	
• Additional procedures such as DO, COD, BOD, gas analysis, titrations, solids, volatile content	5	
• More advanced determinations such as specific constituents; nutrients, total oils, phenols	7	
• Highly sophisticated instrumentation such as atomic absorption, gas chromatography	10	
	Total Points	

- 1 The key concept is frequency and/or intensity of deviation or excessive variation from normal or typical fluctuations; such deviation can be in terms of strength, toxicity, shock loads, I/I, with points from 0 to 6.
- 2 The key concept is to credit laboratory analyses done on-site by plant personnel under the direction of the operator in direct responsible charge with points from 0 to 15.

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## **Wastewater Treatment Definitions**

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### **Activated sludge**

Wastewater treatment by aeration of suspended organisms followed by clarification, including extended aeration, Intermittent Cycle Extended Aeration System (ICEAS), and other similar processes. A sequencing batch reactor with the purpose of providing this form of treatment would be rated under this category.

### **Biological or chemical/biological advanced waste treatment**

The advanced treatment of wastewater for nutrient removal including nitrification, denitrification, or phosphorous removal utilizing biological or chemical processes or a combination. If the facility is designed to nitrify based solely on detention time in an extended aeration system, only the points for nitrification by designed extended aeration should be given.

### **Chemical addition**

The addition of a chemical to wastewater at an application point for the purposes of adjusting pH or alkalinity, improving solids removal, dechlorinating, removing odors, providing nutrients, or otherwise enhancing treatment, excluding chlorination for disinfection of effluent and the addition of enzymes or any process included in the Tertiary Chemical/Physical Processes. The capability to add a chemical at different application points for the same purpose should be rated as one application; the capability to add a chemical(s) to dual units should be rated as one application; and the capability to add a chemical at different application points for different purposes should be rated as separate applications.

### **Chemical/physical advanced treatment following secondary**

The use of chemical or physical advanced treatment processes following (or in conjunction with) a secondary treatment process. This would include processes such as carbon adsorption, air stripping, chemical coagulation and precipitation, etc.

### **Chemical/physical advanced treatment without secondary**

The use of chemical or physical advanced treatment processes without the use of a secondary treatment process. This would include processes such as carbon adsorption, air stripping, chemical coagulation and precipitation, etc.

### **Direct Responsible Charge**

Direct Responsible Charge (DRC) is active day to day technical direction and supervision or active day to day accountability and/or authority for process control decisions of a facility or major segment of a facility that directly impacts public health and/or the environment.

### **Fixed-film reactor**

Biofiltration by trickling filters or rotating biological contactors followed by secondary clarification.

### **Imhoff tanks (or similar)**

Imhoff tanks, septic tanks, spirogester, clarigester, or other single unit for combined sedimentation and digestion.

### **Land application of biosolids by contractor**

The land application or beneficial reuse of biosolids by a contractor outside of the control of the operator in direct responsible charge of the wastewater treatment facility.

### **Land treatment and disposal (surface or subsurface)**

The ultimate treatment and disposal of the effluent onto the surface of the ground by rapid infiltration or rotary distributor or by spray irrigation. Subsurface treatment and disposal would be accomplished by infiltration gallery, injection, or gravity or pressurized drain field.

**Mechanical dewatering**

The removal of water from sludge by any of the following processes and including the addition of polymers in any of the following: vacuum filtration; frame, belt, or plate filter presses; centrifuge; or dissolved air flotation.

**Mechanical post-aeration**

The introduction of air into the effluent by mechanical means such as diffused or mechanical aeration. Cascade aeration would not be assigned points.

**Media filtration**

The advanced treatment of wastewater for removal of solids by sand or other media or mixed media filtration.

**Solids composting**

The biological decomposition process producing carbon dioxide, water, and heat. Typical methods are windrow, forced air-static pile, and mechanical.

**Solids stabilization**

The processes to oxidize or reduce the organic matter in the sludge to a more stable form. These processes reduce pathogens or reduce the volatile organic chemicals and thereby reduce the potential for odor. These processes would include lime (or similar) treatment and thermal conditioning. Other stabilization processes such as aerobic or anaerobic digestion and composting are listed individually.