

# Operator Certification E-NEWS

Spring/Summer 2005



**Announcing . . .** We are proud to introduce the first edition of "Operator Certification E-News", an electronic newsletter published by the State Water Resources Control Board, Office of Operator Certification (OOC). Future issues will introduce staff, publish articles of interest to the operator community and highlight enforcement actions taken throughout the State. You can sign up to receive future issues via email by going to [http://www.waterboards.ca.gov/lyrisforms/swrcb\\_subscribe.html](http://www.waterboards.ca.gov/lyrisforms/swrcb_subscribe.html). To

submit comments or suggestions, please call (916) 341-5672 or email [scfong@waterboards.ca.gov](mailto:scfong@waterboards.ca.gov). Feel free to copy E-News issues and post them on employee bulletin boards for those who do not have Internet access.

## Operators Are Key to Security

Terrorism. The word brings to mind senseless acts of destruction and loss of life. Our homeland security is constantly in the news and we are all aware of it. What does homeland security have to do with the wastewater treatment plant (WWTP) operator? A thought or two will make an operator realize just how important a WWTP is to the health of the community. As an operator, your community's health and security may well depend on you.

The United States Environmental Protection Agency (US/EPA) considers security of both WWTPs and drinking water treatment plants critical. US/EPA gave a grant to the Association of Boards of Certification (ABC) to develop security questions for inclusion in each state's certification exams. ABC wrote questions using information from numerous publications. Sources that ABC used as references are included at the end of this article. These questions have been reviewed by the OOC and will soon be incorporated into our California exams for Grades I-V.

Beginning with the October 2005 exams, the OOC will expect operators to have a working knowledge of security as it pertains to their job. Our main focus will continue to be knowledge of operations and process control. However, understanding of WWTP security is expected and we will test for it.

Some of the publications are general in nature. Others are more directly applicable to a WWTP. The Emergency Response Plan Guide assists the reader by pointing out eight core elements and describes how to put your plan together. The following publications can be used to review security topics. To many operators, security may be something that is normally common sense. However, a review of one, or possibly all, of the listed publications is strongly suggested. Click on the blue link to go to the appropriate website.

- [Asset Based Vulnerability Checklist for Wastewater Utilities](#) - Association of Metropolitan Sewerage Agencies (AMSA)
- [Emergency Planning Interactive Guide](#) - Illinois Section American Water Works Association & Midwest Technology Assistance Center (click on Emergency Planning CD)
- [Emergency Response Plan Guidance for Small and Medium](#) - Community Water Systems to Comply with the Public Health Security and Bioterrorism Preparedness and Response Act of 2002 – US/EPA, April 7, 2004
- [Guarding Against Terrorist and Security Threats](#) - Suggested Measures for Drinking Water and Wastewater Utilities is **Appendix B** of the linked document (US EPA's Emergency Response Plan Guidance)
- [Guidance for Water Utility Response, Recovery](#) - & Remediation Actions for Man-made and/or Technological Emergencies – US/EPA, EPA 810-R-02-001, April 2002
- [Instructions to Assist Community Water Systems](#) - in complying with the Public Health Security and Bioterrorism Preparedness and Response Act of 2002 – US/EPA
- [Addendum to the above Instructions](#)
- [Protecting Your Community's Assets](#); - A Guide for Small Wastewater Systems - National Environmental Training Center for Small Communities (NETCSC), Nov. 2002
- [Public Health Security and Bioterrorism Preparedness](#) - and Response Act of 2002, H.R. 3448 (Title IV is Drinking Water Security and Safety)
- [Vulnerability Self Assessment Tool](#) - AMSA, PA Consulting Group, SCIENTECH, Inc., Countermeasure Library, 2004

## Qualifying for Examinations Education Is Critical

In California, all prospective wastewater treatment plant operators must demonstrate to the OOC that they have successfully taken technical training. In fact, before an applicant is allowed to take an examination, they must document their training by sending college transcripts or training certificates to the OOC. Exam applications that are missing proof of education will be rejected. However, once an operator submits proof of education, it is kept in their file and does not need to be re-submitted.

Depending on grade level, prospective operators must have specific levels of training. In some cases, this means college classes; in others it means seminars or in-house programs. Several grades have more than one possible path to satisfy the requirements.

Please refer to page 5 of E-News for a list of education and experience requirements for Grades I through V. **NOTE:** **These requirements are in addition to passing the appropriate Grade level examination.**

### Educational Points/Semester Units

You may have noticed that sometimes we specify educational points and sometimes semester units. The difference is important. Applicants may convert semester units to educational points, but not the reverse. Where the regulations specify semester units, they must be completed in an accredited college or university. College and university courses completed

on a quarter system are prorated as are semester courses that earn more or less than three units.

Section 3685, Title 23, of the California Code of Regulations (CCRs) authorizes the OOC to grant educational points as follows:

- (1) One three-unit semester course, which is directly related to wastewater treatment, is equal to eight educational points.
- (2) All other courses will be assigned educational points at the rate of one educational point per 10 hours of completed classroom instruction. Subjects directly related to wastewater treatment receive full credit for educational points. Subjects which are indirectly related are given one half credit. Water courses are considered indirectly related.
- (3) One Continuing Education Unit directly related to wastewater treatment is equal to one educational point.

### Basic Science Courses

Sometimes the education path specifies “units of basic science”. Basic science is defined in Section 3671(c) of the CCRs as college-level courses in the combined fields of mathematics, physics, chemistry and biology. We are unable to accept other types of science courses, such as botany, geology, and ecology.

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## THE WHO, WHAT, WHY OF APPROVED TRAINING

Water Code Section 13629 authorizes the OOC to approve courses of instruction at higher educational institutions. The section also gives us authority to approve courses of instruction given by professional associations, or other nonprofit private or public agencies, if they are equivalent to courses of instruction given by higher educational institutions. Typically, this includes wastewater-related seminars, conferences and topic-specific short courses. Upon request, we will review training materials and assign educational points to approved courses. The request must be submitted to the OOC in writing prior to the class. We will review the course outline and notify the sponsoring entity whether educational points will be assigned. We ask the entity to provide each student with a certificate of completion. The student should send us a copy of the certificate when they need to document education in application. Based on Section 13629, we may not assign educational points to private, for-profit companies. However, cities, counties, special districts and other public or private nonprofit agencies may sponsor these types of companies to provide training. In those cases, the request for educational points should come from the sponsoring agency. We will review the curriculum and, if appropriate, assign educational points in such instances.

## Administrative Actions by the State Water Board

Administrative penalties include fines, reprimand, or denial, suspension, probation or revocation of an operator certificate or certificate of registration. These sanctions may be taken against any person, agency, district or other entity found in violation of sections of the Operator Certification Regulations or Water Code. Copies of regulations and relevant sections of the Water Code are available at [www.waterboards.ca.gov](http://www.waterboards.ca.gov) or by calling the OOC at (916) 341-5985. To file a Complaint, call the OOC at (916) 341-5698.

### Robert Doyle

**Misconduct:** Failure to renew operator certificate and allowing operation by an uncertified individual

**Discipline:** Restriction to Grade I for one year and Reprimand

Mr. Doyle failed to renew his Grade I certificate for 41 months after the expiration of the grace period. Mr. Doyle also failed to insure that his subordinate obtained an operator-in-training certificate for a period of two years. The subordinate operator, therefore, failed to accumulate credit toward his certification due to Mr. Doyle's negligence.

### William Perley

**Misconduct:** Allowing false chlorine residual data to be submitted to the San Francisco Regional Water Quality Control Board and allowing operation by an uncertified individual

**Discipline:** Suspend Grade V for One Year

From the early 1990s until mid-1998, Mr. Perley was the Chief Plant Operator (CPO) for the Crockett-Valona Sanitary District. From 1995 through 1999, approximately 50 chlorine discharge violations were not reported to the San Francisco Water Board. Mr. Perley was aware of the violations, but failed to ensure there was a system in place to record and report the violations to the San Francisco Water Board. Mr. Perley also knowingly allowed an uncertified individual to act as an operator for 78 days.

### Lowell Wilds

**Misconduct:** Negligently allowing violation of waste discharge requirements and using fraud and deception in the course of employment as an operator

**Discipline:** Reprimand (first offense) & Suspend Grade III for one year (second offense)

Mr. Wilds did not arm the SCADA system at the beginning of his shift on July 16, 2001 as required by the plant's checklist. Later that morning the SO<sub>2</sub> supply ran out, and the plant discharged approximately 350,000 gallons of under chlorinated effluent before the problem was discovered. OOC reprimanded Mr. Wilds for his negligence on July 16, 2001. On September 15, 2002, Mr. Wilds failed to restart the trickling filter recirculation pump that had stopped due to a power failure. Mr. Wilds recorded in the plant's logbook that he checked the trickling filter four times during his shift. Mr. Wilds' negligence caused three BOD violations for the facility. On February 17, 2003, Mr. Wilds failed to correctly put an SO<sub>2</sub> cylinder into service. Mr. Wilds failed to act on a low SO<sub>2</sub> alarm, and the plant's SO<sub>2</sub> residual level reached 0.1 mg/l. Mr. Wilds failed to document the alarm or notify his supervisor. OOC suspended Mr. Wilds Grade III certificate for one year for his actions on September 15, 2002 and February 17, 2003. Mr. Wilds was also permanently removed from his operator duties by his employer.

### Evert Jacobson

**Misconduct:** Failure to submit monthly monitoring reports for two years and failure to report seven effluent violations

**Discipline:** Paid \$2,800 Administrative Civil Liability (ACL)

Mr. Jacobson received a Notice of Violation from the North Coast Regional Water Quality Control Board on behalf of his employer for not submitting monitoring reports for the first year of the two-year period, but continued to neglect his responsibility to submit the reports for another year. As a result of Mr. Jacobson's continued negligence, the North Coast Water Board issued an ACL complaint against his employer. The State Water Board's Executive Director issued a separate

ACL complaint against Mr. Jacobson; Mr. Jacobson paid \$2,800 in ACL.

### Diego Martinez

**Misconduct:** Negligently allowing sludge to overflow a sludge drying area

**Discipline:** Reprimand

Mr. Martinez was suspended by his employer for 40 working hours for negligently allowing sludge to overflow a sludge drying area in June 2002. Mr. Martinez was responsible also for a similar incident about six months earlier. Mr. Martinez was aware of the overflow in June 2002. He tried unsuccessfully to correct it, but left work without reporting the incident to his supervisor. The overflow was discovered the next day.

### Douglas Jensen

**Misconduct:** Not reporting spills of partially treated effluent, falsifying plant records, and using poor care and judgment

**Discipline:** Revoke Grade IV; cannot reapply for one year

Mr. Jensen, the CPO for two Air Force Base wastewater treatment plants, failed to ensure that operators made daily checks at a remote facility even though he knew that the facility's effluent pumps were increasingly having problems. The pump problems ultimately resulted in four spills in July 2002. Mr. Jensen only reported two of these spills. In addition, Mr. Jensen falsified the plant's logbook to make it appear that he made regular inspections of the plant. While responding to the spills, Mr. Jensen directed one of his employees to place untreated wastewater into the final effluent ponds. At the time of the incident Mr. Jensen was on probation for allowing uncertified operators to operate a wastewater treatment plant in California.

**William Marcum**

**Misconduct:** Providing false information on an application

**Discipline:** Reprimand

Mr. Marcum signed an application for a Grade I certificate for a subordinate operator. The application stated that the operator had worked full time for one year. OOC's investigation concluded that the operator had worked part time as an operator and that Mr. Marcum provided false and misleading information to OOC.

**Dale Fordham**

**Misconduct:** Unreported spills, negligently allowing violation of waste discharge requirements, and using fraud and deception in the course of employment as an operator

**Discipline:** Downgrade Grade III to Grade I for two years and cannot reapply for higher certification for two

years; must retake and pass Grade III exam to regain Grade III certificate

Mr. Fordham was the CPO for a Department of Forestry facility. In October 2001, an activated sludge plant replaced the pond type plant at the facility. Immediately the new plant started to experience operational problems. Mr. Fordham failed to notify the Central Valley Regional Water Quality Control Board of several overflows, permit violations, and operational problems. Instead he sent a letter to the Central Valley Water Board that stated there were no operational problems or violations. Mr. Fordham also failed to submit, or submitted incomplete, monitoring reports. Mr. Fordham was also terminated by his employer.

**Rick Smith**

**Misconduct:** Failure to notify the Central Valley Water Board in advance

of a bypass of the plant's filtration system for scheduled maintenance

**Discipline:** Reprimand

Mr. Smith failed to notify the Central Valley Water Board in advance of the bypass of the plant's filtration system for scheduled maintenance as required by the plant's NPDES permit.

**Frank Chernicki**

**Misconduct:** Using fraud or deception in the course of employment as an operator

**Discipline:** Reprimand

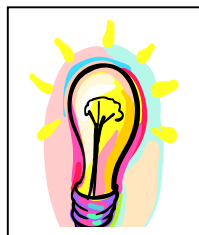
Mr. Chernicki was the lone operator the weekend of December 6, 2003. He failed to take eight pH and conductivity readings during his shift required by the discharge permit. He falsified the laboratory notebook to make it appear that he had done the tests. Laboratory staff discovered the deception before the results were reported to the Central Valley Water Board.

## Wastewater Examination Passing Rates

The following table shows for the last two years the number of operators who took an exam, the number who passed and the percent who were successful.

|       | April 5, 2003 |        |        | October 4, 2003 |        |        | April 3, 2004 |        |        | October 2, 2004 |        |        |
|-------|---------------|--------|--------|-----------------|--------|--------|---------------|--------|--------|-----------------|--------|--------|
| Grade | Tested        | Passed | % Pass | Tested          | Passed | % Pass | Tested        | Passed | % Pass | Tested          | Passed | % Pass |
| I     | 162           | 100    | 61.73  | 141             | 94     | 66.67  | 149           | 111    | 74.5   | 114             | 83     | 72.81  |
| II    | 147           | 75     | 51.02  | 156             | 98     | 62.82  | 137           | 71     | 51.82  | 143             | 75     | 52.45  |
| III   | 111           | 45     | 40.54  | 109             | 50     | 45.87  | 125           | 72     | 57.6   | 93              | 37     | 39.78  |
| IV    | 51            | 10     | 19.61  | 31              | 17     | 54.84  | 37            | 16     | 43.24  | 32              | 13     | 40.63  |
| V     | 40            | 13     | 32.50  | 35              | 16     | 45.71  | 35            | 17     | 48.57  | 48              | 26     | 54.17  |

## We're a 24/7 Operation . . .



Our website serves as a virtual staff person to answer questions when our offices are closed. You can access information on each aspect of the certification program by clicking on the subject tab. Our "Links" section will take you to several related websites including the Department of Health Services Drinking Water Program and the Office of Water at California State University, Sacramento. All our forms are posted in a PDF format that enables you to type online and print the completed form for mailing. Soon, we will list certified operators, their grade level and expiration date. This will be a useful tool for employers wanting to verify certification. It will also be handy if supervisors need to confirm expiration dates of their operators' certificates. **Private information such as addresses and telephone numbers will not be included.** However, a separate list will include addresses of operators who have give us specific written permission so they can receive notice of job openings and training announcements.

## Paths to Certification

Please refer to Sections 3670.1, 3671 and 3683, Title 23, of the California Code of Regulations for more information. Contact the Office of Operator Certification at (916) 341-5639 or [scfong@waterboards.ca.gov](mailto:scfong@waterboards.ca.gov) if you have questions on qualifying duties and education.

### Grade I

|        |                      |     |                                                                  |
|--------|----------------------|-----|------------------------------------------------------------------|
| Path 1 | 6 educational points | and | 1 year performing duties of operator while holding a certificate |
|--------|----------------------|-----|------------------------------------------------------------------|

### Grade II

|        |                                                    |     |                                                                   |
|--------|----------------------------------------------------|-----|-------------------------------------------------------------------|
| Path 1 | High School or equivalent and 6 educational points | and | 2 years performing duties of operator while holding a certificate |
|--------|----------------------------------------------------|-----|-------------------------------------------------------------------|

|        |  |  |                        |
|--------|--|--|------------------------|
| Path 2 |  |  | 1 1/2 years as Grade I |
|--------|--|--|------------------------|

### Grade III

|        |                                                                                                    |     |                                                                   |
|--------|----------------------------------------------------------------------------------------------------|-----|-------------------------------------------------------------------|
| Path 1 | Associate degree or 60 college semester units including 15 semester units of basic science courses | and | 2 years performing duties of operator while holding a certificate |
|--------|----------------------------------------------------------------------------------------------------|-----|-------------------------------------------------------------------|

|        |                                                     |     |                                                                   |
|--------|-----------------------------------------------------|-----|-------------------------------------------------------------------|
| Path 2 | High School or equivalent and 16 educational points | and | 4 years performing duties of operator while holding a certificate |
|--------|-----------------------------------------------------|-----|-------------------------------------------------------------------|

|        |  |  |                     |
|--------|--|--|---------------------|
| Path 3 |  |  | 3 years as Grade II |
|--------|--|--|---------------------|

### Grade IV

|        |                                                                                                                     |     |                                                                   |
|--------|---------------------------------------------------------------------------------------------------------------------|-----|-------------------------------------------------------------------|
| Path 1 | Bachelor's degree with a major related to wastewater treatment including 30 semester units of basic science courses | and | 2 years performing duties of operator while holding a certificate |
|--------|---------------------------------------------------------------------------------------------------------------------|-----|-------------------------------------------------------------------|

|        |                                                                                                    |     |                                                                   |
|--------|----------------------------------------------------------------------------------------------------|-----|-------------------------------------------------------------------|
| Path 2 | Associate degree or 60 college semester units including 15 semester units of basic science courses | and | 4 years performing duties of operator while holding a certificate |
|--------|----------------------------------------------------------------------------------------------------|-----|-------------------------------------------------------------------|

|        |                                                     |     |                                                                   |
|--------|-----------------------------------------------------|-----|-------------------------------------------------------------------|
| Path 3 | High School or equivalent and 32 educational points | and | 6 years performing duties of operator while holding a certificate |
|--------|-----------------------------------------------------|-----|-------------------------------------------------------------------|

|        |  |  |                      |
|--------|--|--|----------------------|
| Path 4 |  |  | 3 years as Grade III |
|--------|--|--|----------------------|

### Grade V

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|--------|--------------------------------------------------------------------------------------------------------------------------------------------|-----|-------------------------------------------------------------------|
| Path 1 | Valid license as a civil or chemical engineer issued by the California Board of Registration for Professional Engineers and Land Surveyors | and | 4 years performing duties of operator while holding a certificate |
|--------|--------------------------------------------------------------------------------------------------------------------------------------------|-----|-------------------------------------------------------------------|

|        |                                                                                                                     |     |                                                                   |
|--------|---------------------------------------------------------------------------------------------------------------------|-----|-------------------------------------------------------------------|
| Path 2 | Bachelor's degree with a major related to wastewater treatment including 30 semester units of basic science courses | and | 5 years performing duties of operator while holding a certificate |
|--------|---------------------------------------------------------------------------------------------------------------------|-----|-------------------------------------------------------------------|

|        |                                                                                                    |     |                                                                   |
|--------|----------------------------------------------------------------------------------------------------|-----|-------------------------------------------------------------------|
| Path 3 | Associate degree or 60 college semester units including 15 semester units of basic science courses | and | 6 years performing duties of operator while holding a certificate |
|--------|----------------------------------------------------------------------------------------------------|-----|-------------------------------------------------------------------|

|        |                                                     |     |                                                                    |
|--------|-----------------------------------------------------|-----|--------------------------------------------------------------------|
| Path 4 | High School or equivalent and 48 educational points | and | 10 years performing duties of operator while holding a certificate |
|--------|-----------------------------------------------------|-----|--------------------------------------------------------------------|

|        |  |  |                     |
|--------|--|--|---------------------|
| Path 5 |  |  | 6 years as Grade IV |
|--------|--|--|---------------------|