

Continuing Education from *Plumbing Systems & Design*

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Do you find it difficult to obtain continuing education units (CEUs)? Through this special section in every issue of *PS&D*, ASPE can help you accumulate the CEUs required for maintaining your Certified in Plumbing Design (CPD) status.

Now Online!

Starting with this issue, the technical article you must read to complete the exam will be located at www.psdmagazine.org. The following exam and application form also may be downloaded from the Web site. Reading the article and completing the form will allow you to apply to ASPE for CEU credit. For most people, this process will require approximately one hour. If you earn a grade of 90 percent or higher on the test, you will be notified that you have logged 0.1 CEU, which can be applied toward the CPD renewal requirement or numerous regulatory-agency CE programs. (Please note that it is your responsibility to determine the acceptance policy of a particular agency.) CEU information will be kept on file at the ASPE office for three years.

Note: In determining your answers to the CE questions, use only the material presented in the corresponding continuing education article. Using information from other materials may result in a wrong answer.

About This Issue's Article

The July/August 2006 continuing education article is "Life-Safety Systems," Chapter 8 of *Pharmaceutical Facilities Plumbing Systems* by Michael Frankel. This chapter describes water-based emergency drench equipment and systems commonly used as a first-aid measure to mitigate the effects of such an accident. Also described are the breathing-air systems that supply air to personnel for escape and protection when they are exposed to either a toxic environment resulting from an accident or normal working conditions that make breathing the ambient air hazardous.

You may locate this article at www.psdmagazine.org. Read it, take the following exam, and submit it to the ASPE office to potentially receive 0.1 CEU (comparable to 1.0 PDH).

CE Questions—"Life-Safety Systems" (PSD 134)

- The recommended supply pipe size to an emergency shower is _____.**
a. ¾ inch, b. 1 inch, c. 1¼ inches, d. 1½ inches
- Since oil is a major contaminant in breathing air systems, the maximum allowed is _____.**
a. 5 ppm, b. 5 ppb, c. 10 ppm, d. 10 ppb
- An emergency shower drench hose is used to _____.**
a. wash the floor after a chemical spill
b. irrigate the body under the clothing prior to removal of the clothing
c. provide a means to fill mop bucket
d. none of the above
- A failure-to-shift monitor is _____.**
a. used to control multi-stage compressors
b. used to initiate an alarm if a desiccant dryer fails to shift from the saturated bed to the dry bed when regeneration is required
c. used to coordinate the output signal of the low air pressure monitor and the refrigerated dryer
d. not required on modern systems
- In areas where strong acid or caustic is used, the emergency shower and eyewash equipment should be located within _____ feet of the potential source of the hazard per ANSI code Z-358.1.**
a. 5, b. 10, c. 15, d. 20
- What is the established comfort zone water temperature for emergency drench equipment?**
a. 70–75°F, b. 75–80°F, c. 80–85°F, d. 85–90°F
- As defined by "30 CFR 10," a toxic environment has air that _____.**
a. may produce physical discomfort immediately
b. may cause chronic poisoning after repeated exposure
c. may cause acute adverse physiological symptoms after prolonged exposure
d. all of the above
- The code-required flow rate from an emergency shower is _____ gpm.**
a. 25, b. 30, c. 35, d. 40
- How many cylinders of air are required for an emergency supply of air for eight people using pressure demand respirators needing 15 minutes to escape the area?**
a. 2.3 use 3 cylinders
b. 3.5 use 4 cylinders
c. 4.7 use 5 cylinders
d. cannot be determined
- Refrigerated dryers are used _____.**
a. when money is of no concern
b. when order removal is not required
c. when system pressure is high enough to accommodate them
d. none of the above
- The minimum diameter of the spray pattern from an emergency shower, measured at 60 inches above the surface on which the user stands, is _____ inches.**
a. 18, b. 20, c. 22, d. 24
- An oxygen content below 12.5 percent and/or a pressure of 8.6 psi should be considered _____.**
a. as a Level A hazard as established by the EPA
b. as a Level C hazard as established by the EPA
c. as a Level E hazard as established by the EPA
d. as an immediate danger to life and health

Plumbing Systems & Design Continuing Education Application Form

This form is valid up to one year from date of publication. The *PS&D* Continuing Education program is approved by ASPE for up to one contact hour (0.1 CEU) of credit per article. Participants who earn a passing score (90 percent) on the CE questions will receive a letter or certification within 30 days of ASPE's receipt of the application form. (No special certificates will be issued.) Participants who fail and wish to retake the test should resubmit the form along with an additional fee (if required).

1. Photocopy this form or download it from www.psdmagazine.org.
2. Print or type your name and address. Be sure to place your ASPE membership number in the appropriate space.
3. Answer the multiple-choice continuing education (CE) questions based on the corresponding article found on www.psdmagazine.org and the appraisal questions on this form.
4. Submit this form with payment (\$35 for nonmembers of ASPE) if required by check or money order made payable to ASPE or credit card via mail (ASPE Education Credit, 8614 W. Catalpa Avenue, Suite 1007, Chicago, IL 60656) or fax (773-695-9007).

Please print or type; this information will be used to process your credits.

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I am applying for the following continuing education credits:
 I certify that I have read the article indicated above.

Signature _____
 Expiration date: Continuing education credit will be given for this examination through **July 31, 2007**.
 Applications received after that date will not be processed.

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 Each examination: \$25 Each examination: \$35
Limited Time: No Cost to ASPE Member
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If rebilling of a credit card charge is necessary, a \$25 processing fee will be charged.
 ASPE is hereby authorized to charge my CE examination fee to my credit card.

Account Number _____ Expiration date _____

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PS&D Continuing Education Answer Sheet

Life-Safety Systems (PSD 134)

Questions appear on page 50. Circle the answer to each question.

- | | | | | |
|-------|---|---|---|---|
| Q 1. | A | B | C | D |
| Q 2. | A | B | C | D |
| Q 3. | A | B | C | D |
| Q 4. | A | B | C | D |
| Q 5. | A | B | C | D |
| Q 6. | A | B | C | D |
| Q 7. | A | B | C | D |
| Q 8. | A | B | C | D |
| Q 9. | A | B | C | D |
| Q 10. | A | B | C | D |
| Q 11. | A | B | C | D |
| Q 12. | A | B | C | D |

Appraisal Questions

Life-Safety Systems (PSD 134)

1. Was the material new information for you? Yes No
2. Was the material presented clearly? Yes No
3. Was the material adequately covered? Yes No
4. Did the content help you achieve the stated objectives? Yes No
5. Did the CE questions help you identify specific ways to use ideas presented in the article? Yes No
6. How much time did you need to complete the CE offering (i.e., to read the article and answer the post-test questions)? _____