

Registration Form

**Stormwater Monitoring CEU Training Course \$100.00**  
**48 HOUR RUSH ORDER PROCESSING FEE ADDITIONAL \$50.00**

Start and Finish Dates: \_\_\_\_\_  
*You will have 90 days from this date in order to complete this course*

List number of hours worked on assignment must match State Requirement. \_\_\_\_\_

Name \_\_\_\_\_ Signature \_\_\_\_\_  
*I have read and understood the disclaimer notice on page 2. Digitally sign XXX*

Address \_\_\_\_\_

City \_\_\_\_\_ State \_\_\_\_\_ Zip \_\_\_\_\_

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Phone:  
Home (\_\_\_\_) \_\_\_\_\_ Work (\_\_\_\_) \_\_\_\_\_

Operator ID # \_\_\_\_\_ Exp. Date \_\_\_\_\_

Class/Grade \_\_\_\_\_

**Please circle/check which certification you are applying the course CEU's.**

Pretreatment \_\_\_ Collection \_\_\_ Wastewater Treatment \_\_\_

Other \_\_\_\_\_

Technical Learning College TLC PO Box 3060, Chino Valley, AZ 86323  
Toll Free (866) 557-1746 Fax (928) 272-0747 [info@tlch2o.com](mailto:info@tlch2o.com)

If you've paid on the Internet, please write your Customer# \_\_\_\_\_

Please invoice me, my PO# \_\_\_\_\_

**We will stop mailing the certificate of completion so we need either your fax number or e-mail address. We will e-mail the certificate to you, if no e-mail address; we will fax it to you.**

## **DISCLAIMER NOTICE**

I understand that it is my responsibility to ensure that this CEU course is either approved or accepted in my State for CEU credit. I understand State laws and rules change on a frequent basis and I believe this course is currently accepted in my State for CEU or contact hour credit, if it is not, I will not hold Technical Learning College responsible. I also understand that this type of study program deals with dangerous conditions and that I will not hold Technical Learning College, Technical Learning Consultants, Inc. (TLC) liable for any errors or omissions or advice contained in this CEU education training course or for any violation or injury caused by this CEU education training course material. I will call or contact TLC if I need help or assistance and double-check to ensure my registration page and assignment has been received and graded.

**Professional Engineers;** Most states will accept our courses for credit but we do not officially list the States or Agencies. Please check your State for approval.

*You can obtain a printed version of the course manual from TLC for an additional \$169.95 plus shipping charges.*

## **AFFIDAVIT OF EXAM COMPLETION**

I affirm that I personally completed the entire text of the course. I also affirm that I completed the exam without assistance from any outside source. I understand that it is my responsibility to file or maintain my certificate of completion as required by the state or by the designation organization.

## **Grading Information**

In order to maintain the integrity of our courses we do not distribute test scores, percentages or questions missed. Our exams are based upon pass/fail criteria with the benchmark for successful completion set at 70%. Once you pass the exam, your record will reflect a successful completion and a certificate will be issued to you.

For security purposes, please fax or e-mail a copy of your driver's license and always call us to confirm we've received your assignment and to confirm your identity.

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# Texas Students Only

## Acknowledgement of Notice of Potential Ineligibility for License

*You are required to sign and return to TLC or your credit will not be reported.*

Name: \_\_\_\_\_

Date of Birth: \_\_\_\_\_

Email Address: \_\_\_\_\_

By signing this form, I acknowledge that Technical Learning College notified me of the following:

- the potential ineligibility of an individual who has been convicted of an offense to be issued an occupational license by the Texas Commission on Environmental Quality (TCEQ) upon completion of the educational program;
- the current TCEQ Criminal Conviction Guidelines for Occupational Licensing, which describes the process by which the TCEQ's Executive Director determines whether a criminal conviction:
  - renders a prospective applicant an unsuitable candidate for an occupational license;
  - warrants the denial of a renewal application for an existing license; or
  - warrants revocation or suspension of a license previously granted.
- the right to request a criminal history evaluation from the TCEQ under Texas Occupations Code Section 53.102; and
- that the TCEQ may consider an individual to have been convicted of an offense for the purpose of denying, suspending or revoking a license under circumstances described in Title 30 Texas Administrative Code Section 30.33.

Enrollee Signature: \_\_\_\_\_ Date: \_\_\_\_\_

Name of Training Provider/Organization: Technical Learning College

Contact Person: Melissa Durbin      Role/Title: Dean



# For Texas TCEQ Wastewater Licensed Operators Important Information

## Wastewater/Collections Rule Changes (Texas Only)

### Rule Changes and Updates for Domestic Wastewater Systems

On Nov. 4, 2014, TCEQ commissioners adopted revisions to 30 Texas Administrative Code (TAC), Chapter 217, Design Criteria for Domestic Wastewater Systems, and “re-adopted” previously repealed rules in 30 TAC, Chapter 317, Design Criteria Prior to 2008.

#### *Some of the changes to Chapter 217 include:*

- Adding new definitions and clarifying existing definitions;
- Adding design criteria and approval requirements for rehabilitation of existing infrastructure;
- Adding design criteria for new technologies, including cloth filters and air lift pumps;
- Making changes to reflect modern practices, standards and trends;
- Modifying rule language to improve readability and enforceability; and
- Modifying the design organic loadings and flows for a new wastewater treatment facility.

### **SUBCHAPTER A: ADMINISTRATIVE REQUIREMENTS §§217.1 - 217.18**

Effective December 4, 2015 §217.1. Applicability. (a) Applicability. (1) This chapter applies to the design, operation, and maintenance of: (A) domestic wastewater treatment facilities that are constructed with plans and specifications received and approved by the executive director after the effective date of the amendments to this chapter; (B) treatment units that are altered, constructed, or re-rated with plans and specifications received and approved by the executive director after the effective date of the amendments to this chapter; (C) collection systems that are constructed with plans and specifications received and approved by the executive director after the effective date of the amendments to this chapter; (D) collection system units that are altered, constructed, or re-rated with plans and specifications received and approved by the executive director after the effective date of the amendments to this chapter; (E) existing domestic wastewater treatment facilities that do not have a current Texas Pollutant Discharge Elimination System permit or a Texas Land Application Permit and are required to have an active wastewater permit; (F) existing wastewater treatment facilities and collection systems that never received approval for plans and specifications from the executive director; and (G) collection system rehabilitation projects covered in §217.56(c) and §217.69 of this title (relating to Trenchless Pipe Installation; and Maintenance, Inspection, and Rehabilitation of the Collection System). (2) Domestic wastewater treatment facilities, treatment units, collection systems, and collection system units with plans and specifications approved by the executive director that were received on or after August 28, 2008 and before the effective date of this chapter must comply with the rules in this chapter, as they existed immediately before the effective date of the amendments to this chapter.

The rules in Texas Commission on Environmental Quality Page 2 Chapter 217 - Design Criteria for Domestic Wastewater Systems effect immediately before the effective date of the amendments to this chapter are continued in effect for that purpose. (3) This chapter does not apply to: (A) the design, installation, operation, or maintenance of domestic wastewater treatment facilities, treatment units, collection systems, or collection system units with plans

and specifications that were approved by the executive director on or before August 27, 2008, which are governed by Chapter 317 of this title (relating to Design Criteria Prior to 2008) or design criteria that preceded Chapter 317 of this title; and (B) systems regulated by Chapter 285 of this title (relating to On-Site Sewage Facilities); or collection systems or wastewater treatment facilities that collect, transport, treat, or dispose of wastewater that does not have the characteristics of domestic wastewater, although the wastewater may contain domestic wastewater.

(b) The executive director may grant variances from new requirements added by the amendments of this chapter to a person who proposes to construct, alter, or re-rate a collection system or wastewater treatment facility if the plans and specifications for the project are submitted within 180 days after the date the amendments to this chapter are effective, provided the plans and specifications comply with the rules in effect immediately prior to the amendment. Adopted November 4, 2015 Effective December 4, 2015

**The link to the rules is available on the TCEQ website at <https://www.tceq.texas.gov/rules/indxpdf.html>**

***For Texas Students Only....***

Please sign and date this notice

Printed Name

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Signature

Date

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# Stormwater Monitoring Answer Key

Name \_\_\_\_\_ Phone \_\_\_\_\_

*Did you check with your State agency to ensure this course is accepted for credit?*

*Method of Course acceptance confirmation. Please fill this section. No refunds.*

Website \_\_ Telephone Call \_\_ Email \_\_ Spoke to \_\_\_\_\_

Did you receive the approval number, if applicable? \_\_\_\_\_

*You are responsible to ensure that TLC receives the Assignment and Registration Key. Please call us to ensure that we received it.*

*You can electronically complete this assignment in Adobe Acrobat DC.*

Please Circle, Bold, Underline or X, one answer per question. A **felt tipped pen** works best.

- |            |             |             |             |
|------------|-------------|-------------|-------------|
| 1. A B C D | 20. A B     | 39. A B C D | 58. A B     |
| 2. A B C D | 21. A B     | 40. A B C D | 59. A B C D |
| 3. A B C D | 22. A B     | 41. A B C D | 60. A B C D |
| 4. A B     | 23. A B     | 42. A B C D | 61. A B C D |
| 5. A B     | 24. A B     | 43. A B C D | 62. A B C D |
| 6. A B     | 25. A B C D | 44. A B C D | 63. A B C D |
| 7. A B C D | 26. A B C D | 45. A B C D | 64. A B C D |
| 8. A B C D | 27. A B C D | 46. A B C D | 65. A B C D |
| 9. A B     | 28. A B C D | 47. A B C D | 66. A B C D |
| 10. A B    | 29. A B C D | 48. A B C D | 67. A B     |
| 11. A B    | 30. A B C D | 49. A B C D | 68. A B C D |
| 12. A B    | 31. A B C D | 50. A B C D | 69. A B C D |
| 13. A B    | 32. A B     | 51. A B     | 70. A B C D |
| 14. A B    | 33. A B C D | 52. A B     | 71. A B C D |
| 15. A B    | 34. A B C D | 53. A B     | 72. A B C D |
| 16. A B    | 35. A B C D | 54. A B     | 73. A B C D |
| 17. A B    | 36. A B C D | 55. A B     | 74. A B C D |
| 18. A B    | 37. A B C D | 56. A B     | 75. A B C D |
| 19. A B    | 38. A B C D | 57. A B     | 76. A B C D |

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|--------------|--------------|--------------|--------------|
| 77. A B C D  | 108. A B C D | 139. A B C D | 170. A B     |
| 78. A B      | 109. A B C D | 140. A B C D | 171. A B     |
| 79. A B C D  | 110. A B C D | 141. A B C D | 172. A B C D |
| 80. A B C D  | 111. A B C D | 142. A B C D | 173. A B C D |
| 81. A B C D  | 112. A B     | 143. A B C D | 174. A B     |
| 82. A B C D  | 113. A B     | 144. A B C D | 175. A B     |
| 83. A B C D  | 114. A B C D | 145. A B C D | 176. A B     |
| 84. A B C D  | 115. A B C D | 146. A B C D | 177. A B C D |
| 85. A B C D  | 116. A B C D | 147. A B     | 178. A B C D |
| 86. A B C D  | 117. A B C D | 148. A B C D | 179. A B C D |
| 87. A B C D  | 118. A B C D | 149. A B C D | 180. A B C D |
| 88. A B C D  | 119. A B C D | 150. A B C D | 181. A B     |
| 89. A B C D  | 120. A B C D | 151. A B C D | 182. A B C D |
| 90. A B C D  | 121. A B C D | 152. A B     | 183. A B     |
| 91. A B      | 122. A B C D | 153. A B C D | 184. A B     |
| 92. A B      | 123. A B C D | 154. A B     | 185. A B     |
| 93. A B C D  | 124. A B     | 155. A B C D | 186. A B     |
| 94. A B C D  | 125. A B C D | 156. A B C D | 187. A B     |
| 95. A B C D  | 126. A B C D | 157. A B C D | 188. A B C D |
| 96. A B C D  | 127. A B C D | 158. A B C D | 189. A B C D |
| 97. A B C D  | 128. A B C D | 159. A B C D | 190. A B C D |
| 98. A B C D  | 129. A B C D | 160. A B C D | 191. A B C D |
| 99. A B C D  | 130. A B C D | 161. A B C D | 192. A B C D |
| 100. A B C D | 131. A B C D | 162. A B C D | 193. A B C D |
| 101. A B C D | 132. A B C D | 163. A B C D | 194. A B C D |
| 102. A B     | 133. A B C D | 164. A B C D | 195. A B C D |
| 103. A B     | 134. A B C D | 165. A B C D | 196. A B     |
| 104. A B C D | 135. A B C D | 166. A B C D | 197. A B     |
| 105. A B C D | 136. A B C D | 167. A B C D | 198. A B     |
| 106. A B C D | 137. A B C D | 168. A B C D | 199. A B     |
| 107. A B C D | 138. A B C D | 169. A B     | 200. A B C D |

***Please write down any questions or answers that are troublesome or cannot be found.***

Please e-mail or fax this survey along with your final exam

**STORMWATER MONITORING CEU TRAINING COURSE  
CUSTOMER SERVICE RESPONSE CARD**

NAME: \_\_\_\_\_

E-MAIL \_\_\_\_\_ PHONE \_\_\_\_\_

PLEASE COMPLETE THIS FORM BY CIRCLING THE NUMBER OF THE APPROPRIATE ANSWER IN THE AREA BELOW.

1. Please rate the difficulty of your course.  
Very Easy    0    1    2    3    4    5    Very Difficult

2. Please rate the difficulty of the testing process.  
Very Easy    0    1    2    3    4    5    Very Difficult

3. Please rate the subject matter on the exam to your actual field or work.  
Very Similar    0    1    2    3    4    5    Very Different

4. How did you hear about this Course? \_\_\_\_\_

5. What would you do to improve the Course? \_\_\_\_\_

How about the price of the course?

Poor \_\_\_\_\_ Fair \_\_\_\_\_ Average \_\_\_\_\_ Good \_\_\_\_\_ Great \_\_\_\_\_

How was your customer service?

Poor \_\_\_\_\_ Fair \_\_\_\_\_ Average \_\_\_\_\_ Good \_\_\_\_\_ Great \_\_\_\_\_

Any other concerns or comments.

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## **Disclaimer Notice**

I understand that I am 100 percent responsible to ensure that TLC receives the Assignment and Registration Key and that it is accepted for credit by my State or Providence. I understand that TLC has a zero tolerance towards not following their rules, cheating or hostility towards staff or instructors. I need to complete the entire assignment for credit. There is no credit for partial assignment completion. My exam was proctored. I will contact TLC if I do not hear back from them within 2 days of assignment submission. I will forfeit my purchase costs and will not receive credit or a refund if I do not abide with TLC's rules. I will not hold TLC liable for any errors, injury, death or non-compliance with rules. I will abide with all federal and state rules and rules found on page 2.

**Please Sign that you understand and will abide with TLC's Rules.**

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**Signature**

***Please write down any questions you were not able to find the answers or that have errors.***

*This course contains general EPA's CWA federal rule requirements. Please be aware that each state implements wastewater/safety/environmental /building regulations that may be more stringent than EPA's regulations. Check with your state environmental/health agency for more information. These rules change frequently and are often difficult to interpret and follow. Be careful to not be in non-compliance and do not follow this course for proper compliance.*

## Stormwater Monitoring CEU Training Assignment

You will have 90 days from the start of this assignment to finish it. Only one answer per question. Please utilize the Answer Key. Please fax or e-mail your completed answer key and registration form to TLC.

You are expected to circle the correct answer on the enclosed answer key. Please include your name and address on your exam. The answer key is in the front. There are no intentional trick questions. (s) means the answer may be plural or singular in nature.

You can e-mail or fax your Answer Key along with the Registration Form to TLC.

**Please write down any questions that are troublesome or cannot be found.**

### Clean Water Act (Rule) Summary

#### 33 U.S.C. s/s 1251 et seq. (1977)

- Which of the following has clarified and expanded permit requirements under the Clean Water Act for 19,000 municipal sanitary sewer collection systems in order to reduce sanitary sewer overflows?  
A. Clean Water Act or CWA      C. Environmental Protection Agency (EPA)  
B. OSHA      D. None of the above
- The Clean Water Act is a 1977 amendment to the Federal Water Pollution Control Act of \_\_\_\_\_, which set the basic structure for regulating discharges of pollutants to waters of the United States.  
A. 1972      C. 1999  
B. 1977      D. None of the above
- Which of the following gave the authority to set effluent standards on an industry basis and continued the requirements to set water quality standards for all contaminants in surface waters?  
A. EPA      C. OSHA  
B. Congress      D. None of the above
- The requirements will help communities improve some of water quality standards—by requiring facilities to develop and implement new capacity, management, operation, and maintenance programs and public notification programs.  
A. True    B. False
- The SDWA makes it unlawful for any person to discharge any pollutant from a point source into navigable waters unless a permit (NPDES) is obtained under the Act.  
A. True    B. False
- In states with the authority to implement CWA programs, the State retains oversight responsibilities.  
A. True    B. False
- Which of the following is the primary federal law that protects our nation's waters, including lakes, rivers, aquifers, and coastal areas. Lake Erie was dying?  
A. Clean Water Act      C. NPDES  
B. Local limits      D. None of the above
- Which of the following's primary objective is to restore and maintain the integrity of the nation's waters?  
A. Clean Water Act      C. NPDES  
B. Local limits      D. None of the above

## Stormwater Introduction

9. Stormwater problems can contribute to raising of water quality of water sources, this is by decreasing the flow of human pollutants such as oil, fertilizers and pesticides, and the flow of natural elements such as phosphorus, into the water (stormwater quality impacts).  
A. True                    B. False
10. Degradation of lakes, streams and wetlands has economic effects: it reduces property values, raises bills from public water utilities, raises local property tax rates, and reduces tourism and related business income.  
A. True                    B. False
11. The U.S. Environmental Protection Agency (EPA) estimates that 6% of the water quality problems in the nation are caused by nonpoint sources.  
A. True                    B. False
12. Stormwater runoff has no real quantity and quality impacts.  
A. True                    B. False
13. Nonpoint source (NPS) pollution is water pollution that consists of contaminated runoff associated with agricultural, urban, and other sources.  
A. True                    B. False
14. The term “nonpoint source pollution” was created under the federal Clean Water Act to distinguish it from “point source” discharges such as industrial waste water from pipes.  
A. True                    B. False
15. Nonpoint sources include many varied small sources of pollutants from activities.  
A. True                    B. False
16. Every time it rains or the snow melts, pollutants such as dirt, nutrients, bacteria, oils and heavy metals, are swept off from land surfaces and are not carried by runoff water into surface and groundwater.  
A. True                    B. False
17. Stormwater runoff cannot cause flooding, undermine stream banks, and damage property and habitat, as well as carry contaminants that contribute to lower water quality.  
A. True                    B. False
18. When people speak about “stormwater quality control”, they are talking about reducing the pollutants from nonpoint sources that are carried by stormwater into our lakes, streams, groundwater, and coastal areas.  
A. True                    B. False
19. The Clean Water Act of 1776 passed by the United States Congress and amended by the Water Quality Act of 1812, set in motion requirements and policy measures for the Environmental Protection Agency (EPA).  
A. True                    B. False
20. The EPA has established regulatory components for Storm Water Discharges that were levied upon associated industries and municipalities with populations over 1,000,000.  
A. True                    B. False

21. The goal of NPDES, through permits and plans, is to reduce to the maximum extent practical, the amount of pollution discharges from the municipal storm drainage systems.  
A. True                    B. False
22. NPDES municipal permits have several components, one being management programs. A term frequently used in this subject matter is - Best Management Practices (BMP).  
A. True                    B. False
23. RMP's are schedules of activities, prohibition of practices, maintenance procedures, and other recommended management practices that may be employed for a particular purpose - Storm Water Pollution Prevention and Reduction.  
A. True                    B. False
24. Although the OSHA regulations seem complex, their goal is simple - "Improve water quality in waters of the United States".  
A. True                    B. False

**Basic Program Requirements**

25. Which of the following is to obtain a baseline measurement of current water quality, discover and eliminate illicit connections to the system?  
A. In-Stream Monitoring Program                    C. Stormwater Monitoring Program  
B. Illicit Connection Program                    D. None of the above
26. Which of the following eliminates household hazardous waste from contaminating the storm water?  
A. Illicit Connection Program                    C. Household Hazardous Waste Program  
B. Industrial Monitoring Program                    D. None of the above
27. Which of the following is creating a public awareness of the pollutorial risk of misusing and improper disposal of chemicals?  
A. Public Education Program                    C. Stormwater Monitoring Program  
B. Industrial Monitoring Program                    D. None of the above
28. Which of the following or objective is evaluating industrial storm water runoff locations and to perform physical site inspections and develop future pollution prevention plans.  
A. Stormwater Monitoring Program                    C. Illicit Connection Program  
B. Industrial Monitoring Program                    D. None of the above
29. Which of the following is discovering and eliminating illicit connections to the storm sewer system?  
A. Stormwater Monitoring Program                    C. Illicit Connection Program  
B. Industrial Monitoring Program                    D. None of the above
30. Which of the following is the analysis of the monitoring sites with a full scan of pollutants as required by the NPDES permit?  
A. Stormwater Monitoring Program                    C. Illicit Connection Program  
B. Industrial Monitoring Program                    D. None of the above
31. Which of the following or objective is reducing the amount of household hazardous waste disposed of improperly?  
A. Public Education Program                    C. Stormwater Monitoring Program  
B. Recycling Program                    D. None of the above
32. NPDES stands for National Pollutant Discharge Elimination System.  
A. True                    B. False

### Why Is the Phase II Storm Water Program Necessary?

Phase I of the U.S. Environmental Protection Agency's (EPA) storm water program was promulgated in 1990 under the CWA. Phase I relies on National Pollutant Discharge Elimination System (NPDES) permit coverage to address storm water runoff from:

33. "Medium" and "large" municipal separate storm sewer systems (MS4s) generally serving populations of \_\_\_\_\_ or greater,

- A. 100,000
- B. 5,000
- C. 10,000
- D. None of the above

34. Construction activity disturbing \_\_\_\_\_ acres of land or greater, and (3) ten categories of industrial activity.

- A. 25
- B. 5
- C. 10
- D. None of the above

35. The Phase II program expands the Phase I program by requiring additional operators of \_\_\_\_\_ in urbanized areas and operators of small construction sites, through the use of NPDES permits, to implement programs and practices to control polluted storm water runoff.

- A. NPDES permit(s)
- B. Phase II
- C. MS4s
- D. None of the above

36. \_\_\_\_\_ is intended to further reduce adverse impacts to water quality and aquatic habitat by instituting the use of controls on the unregulated sources of storm water discharges that have the greatest likelihood of causing continued environmental degradation.

- A. NPDES permit(s)
- B. Phase II
- C. Phase I
- D. None of the above

### MS4s in Urbanized Areas

37. Storm water discharges from MS4s in urbanized areas are a concern because of the \_\_\_\_\_ found in these discharges.

- A. Fecal coliform bacteria
- B. Other harmful pollutants
- C. High concentration of pollutants
- D. None of the above

38. Concentrated development in urbanized areas substantially increases impervious surfaces, such as city streets, driveways, parking lots, and sidewalks, on which pollutants from \_\_\_\_\_ settle and remain until a storm event washes them into nearby storm drains.

- A. Fecal coliform bacteria
- B. Other harmful pollutants
- C. Concentrated human activities
- D. None of the above

39. Common pollutants include pesticides, fertilizers, oils, salt, litter and other debris, and sediment. Another concern is the possible \_\_\_\_\_ of sanitary sewers, which can result in fecal coliform bacteria entering the storm sewer system.

- A. Illicit connections
- B. Other harmful pollutants
- C. High concentration of pollutants
- D. None of the above

40. Storm water runoff picks up and transports these and \_\_\_\_\_ and then discharges them – untreated – to waterways via storm sewer systems.

- A. Fecal coliform bacteria
- B. Other harmful pollutants
- C. High concentration of pollutants
- D. None of the above

41. When left uncontrolled, \_\_\_\_\_ can result in fish kills, the destruction of spawning and wildlife habitats, a loss in aesthetic value, and contamination of drinking water supplies and recreational waterways that can threaten public health.

- A. These discharges
- B. Other harmful pollutants
- C. High concentration of pollutants
- D. None of the above

### **Fact Sheet 1.0 – Storm Water Phase II Final Rule**

#### **Construction Activity**

42. \_\_\_\_\_ from construction sites is a water quality concern because of the devastating effects that sedimentation can have on local waterbodies, particularly small streams.

- A. Sedimentation
- B. Storm water runoff
- C. Uncontrolled runoff
- D. None of the above

43. Numerous studies have shown that the \_\_\_\_\_ transported by storm water runoff from construction sites with no controls is significantly greater than from sites with controls.

- A. Amount of sediment
- B. Storm water runoff
- C. Source of sediment-laden runoff
- D. None of the above

44. In addition to sediment, \_\_\_\_\_ yield pollutants such as pesticides, petroleum products, construction chemicals, solvents, asphalts, and acids that can contaminate storm water runoff.

- A. Sedimentation
- B. Storm water runoff
- C. Construction activities
- D. None of the above

45. During storms, construction sites may be the \_\_\_\_\_ runoff, which can overwhelm a small stream channel's capacity, resulting in streambed scour, streambank erosion, and destruction of near stream vegetative cover.

- A. Sedimentation
- B. Storm water runoff
- C. Source of sediment-laden runoff
- D. None of the above

46. Where left uncontrolled, \_\_\_\_\_ has been shown to result in the loss of in-stream habitats for fish and other aquatic species, an increased difficulty in filtering drinking water, the loss of drinking water reservoir storage capacity, and negative impacts on the navigational capacity of waterways.

- A. Sedimentation
- B. Storm water runoff
- C. Sediment laden runoff
- D. None of the above

#### **Are Municipally Operated Sources Exempted by the Intermodal Surface Transportation Efficiency Act (ISTEA) of 1991 Affected by the Final Rule?**

47. Provisions within ISTEA temporarily delayed the deadline for Phase I industrial activities (with the exception of power plants, airports, and uncontrolled sanitary landfills) operated by municipalities with populations of less than \_\_\_\_\_ people to obtain an NPDES storm water discharge permit.

- A. 100,000
- B. 5,000
- C. 10,000
- D. None of the above

#### **Who Is Covered by the Phase II Final Rule?**

48. A "small" MS4 is any MS4 not already covered by \_\_\_\_\_ of the NPDES storm water program.

- A. NPDES permit(s)
- B. Phase I
- C. Phase II
- D. None of the above

### **Phased-in Permit Coverage**

49. Permitting authorities may phase-in permit coverage for small MS4s serving jurisdictions with a population under \_\_\_\_\_ on a schedule consistent with a State watershed permitting approach.

- A. 100,000
- B. 5,000
- C. 10,000
- D. None of the above

### **Additional Designations by the Permitting Authority**

50. Small MS4s located outside of urbanized areas, construction activity disturbing less than \_\_\_\_\_ acre, and any other storm water discharges can be designated for coverage if the NPDES permitting authority or the EPA determines that storm water controls are necessary.

- A. 20
- B. 1
- C. 5
- D. None of the above

### **Fact Sheet 1.0 – Storm Water Phase II Final Rule**

#### **Small Construction Activity**

#### **What Does the Phase II Final Rule Require?**

51. Operators of Phase II-designated small MS4s and small construction activity are required to apply for NPDES permit coverage, most likely under a general rather than individual permit, and to implement storm water discharge judgements (known as “best practical judgements” (BPJs)).

- A. True
- B. False

52. The small MS4 storm water management program must include the following six minimum control measures: public education and outreach; public participation/involvement; illicit discharge detection and elimination; construction site runoff control; post-construction runoff control; and pollution prevention/good housekeeping.

- A. True
- B. False

53. A regulated small MS4 operator must identify its selection of BMPs and measurable goals for each maximum standards in the permit application. The evaluation and assessment of those chosen BMPs and measurable goals must be included in weekly reports to the NPDES permitting authority.

- A. True
- B. False

54. A regulated small MS4 operator must develop, implement, and enforce a storm water management program designed to reduce the discharge of pollutants from their MS4 to the “maximum extent practicable,” to protect water quality, and to satisfy the appropriate water quality requirements of the CWA. The rule assumes the use of narrative, rather than numeric, effluent limitations requiring implementation of BMPs.

- A. True
- B. False

### **3.0 – Construction Program Overview**

55. The 1972 amendments to the Federal Water Pollution Control Act, later referred to as the Clean Water Act (CWA), prohibit the discharge of any pollutant to navigable waters of the United States from a point source unless the discharge is authorized by a National Pollutant Discharge Elimination System (NPDES) permit.

- A. True
- B. False

56. Efforts to improve water quality under the NPDES program traditionally have focused on reducing pollutants in industrial process wastewater and municipal sewage treatment plant discharges. Over time, it has become evident that more diffuse sources of water pollution, such as storm water runoff from construction sites, are also significant contributors to water quality problems.

- A. True      B. False

57. Sediment runoff rates from construction sites are typically 1,000 to 2,000 times greater than those from agricultural lands, and 10 to 20 times greater than those of forest lands.

- A. True      B. False

58. During a short period of time, construction activity can contribute more sediment to streams than can be deposited over several decades, causing physical and biological harm to our Nation's waters.

- A. True      B. False

**Who Is Covered Under the Phase I Rule?  
Sites Five Acres and Greater**

59. Under category (x), the Phase I rule requires all operators of construction activity disturbing \_\_\_\_\_ acres or greater of land to apply for an NPDES storm water permit.

- A. 5              C. 20  
B. 6              D. None of the above

60. Operators of sites disturbing less than \_\_\_\_\_ acres are also required to obtain a permit if their activity is part of a "larger common plan of development or sale" with a planned disturbance of \_\_\_\_\_ acres or greater.

- A. 10 - 5      C. 5 - 20  
B. 5 - 5      D. None of the above

61. "Disturbance" refers to exposed soil resulting from activities such as clearing, grading, and excavating. \_\_\_\_\_ can include road building, construction of residential houses, office buildings, industrial sites, or demolition.

- A. Specifications              C. Permit coverage  
B. Construction activities      D. None of the above

**What Is Meant by a "Larger Common Plan of Development or Sale"?**

62. As defined in the EPA's \_\_\_\_\_ for large construction activity, a "larger common plan of development or sale" means a contiguous area where multiple separate and distinct construction activities are occurring under one plan (e.g., the operator is building on three half-acre lots in a 6-acre development).

- A. Large construction activity              C. NPDES storm water general permit  
B. Day-to-day operational control      D. None of the above

63. The "plan" in a common plan of development or sale is broadly defined as any announcement or piece of documentation (including a sign, public notice or hearing, sales pitch, advertisement, drawing, permit application, zoning request, computer design, etc.) or physical demarcation (including boundary signs, lot stakes, surveyor markings, etc.) indicating that \_\_\_\_\_ may occur on a specific plot.

- A. Specifications              C. Permit coverage  
B. Construction activities      D. None of the above

**What Is the Definition of an “Operator” of a Construction Site?**

64. As defined in the EPA’s storm water general permit for large construction activity, an “operator” is the party or parties that has:

\_\_\_\_\_ and specifications, including the ability to make modifications to those plans and specifications; or

- A. Day-to-day operational control
- B. Construction activities
- C. Operational control of construction project plans
- D. None of the above

65. Day-to-day operational control of those activities that are necessary to ensure compliance with a storm water pollution prevention plan (SWPPP) for the site or other permit conditions (e.g., they are authorized to direct workers at a site to carry out activities required by the \_\_\_\_\_ or comply with other permit conditions).

- A. Large construction activity
- B. SWPPP
- C. Site operator
- D. None of the above

66. Depending on the site and the relationship between the parties (e.g., owner, developer, contractor), there can either be a single party acting as site operator and consequently be responsible for obtaining permit coverage, or there can be two or more operators, all obligated to seek \_\_\_\_\_.

- A. Specifications
- B. Construction activities
- C. Permit coverage
- D. None of the above

**What is the Rainfall Erosivity Factor in Waiver?**

67. Waiver uses the Rainfall Erosivity Factor to determine whether the potential for polluted discharge is low enough to justify a waiver from the requirements. It is one of six variables used by the Revised Universal Soil Loss Equation (RUSLE)—a predictive tool originally used to measure soil loss from agricultural lands at various times of the year on a regional basis—to predict soil loss from construction sites.

- A. True
- B. False

68. The \_\_\_\_\_ waiver is time-sensitive and is dependent on when during the year a construction activity takes place, how long it lasts, and the expected rainfall and intensity during that time.

- A. Wasteload allocations
- B. Rainfall Erosivity Factor
- C. TMDL process
- D. None of the above

**What is a “TMDL” in Waiver?**

69. For impaired waters where technology-based controls required by NPDES permits are not achieving State water quality standards, the CWA requires implementation of the \_\_\_\_\_.

- A. Wasteload allocations
- B. Additional TMDLs
- C. TMDL process
- D. None of the above

70. The TMDL process establishes the \_\_\_\_\_ a waterbody can assimilate before water quality is impaired then requires that this maximum level not be exceeded.

- A. Wasteload allocations
- B. Additional TMDLs
- C. Maximum amount of pollutants
- D. None of the above

71. A TMDL is done for each pollutant that is found to be contributing to the impairment of a waterbody or a segment of a waterbody. To allow a waiver for \_\_\_\_\_, a TMDL would need to address sediment, or a parameter that addresses sediment such as total suspended solids, turbidity, or siltation.

- A. Construction activities
- B. Waterbody
- C. NPDES permit(s)
- D. None of the above

72. Additional TMDLs addressing common pollutants from construction sites such as nitrogen, phosphorus, and oil and grease also may be necessary to ensure water quality protection and allow a waiver from the \_\_\_\_\_.

- A. Wasteload allocations
- B. NPDES storm water program
- C. The TMDL process
- D. None of the above

73. \_\_\_\_\_ determines the source or sources of a pollutant of concern, considers the maximum allowable level of that pollutant for the waterbody, then allocates to each source or category of sources a set level of the pollutant that it is allowed to discharge into the waterbody.

- A. A TMDL assessment
- B. Waterbody
- C. NPDES permit(s)
- D. None of the above

74. Allocations to point sources are called \_\_\_\_\_ allocations.

- A. Wasteload
- B. TMDL
- C. Storm Water Pollution Prevention Plan (SWPPP)
- D. None of the above

### **What Does the Phase II Construction Program Require?**

75. For the Phase II small construction program, the EPA has taken an approach similar to Phase I where the program requirements are not fully defined in the rule but rather in the NPDES permit issued by the \_\_\_\_\_.

- A. NPDES permitting authority
- B. Phase I large construction permits
- C. Storm Water Pollution Prevention Plan (SWPPP)
- D. None of the above

76. The EPA recommends that the NPDES permitting authorities use their existing Phase I large construction general permits as a guide to developing their \_\_\_\_\_ small construction permits.

- A. Phase II
- B. Phase I
- C. Storm Water Pollution Prevention Plan (SWPPP)
- D. None of the above

77. The development and implementation of a Storm Water Pollution Prevention Plan (SWPPP) with appropriate BMPs to minimize the discharge of pollutants from the site; and Pollutants of concern include sediment or a parameter that addresses sediment (such as total suspended solids, turbidity, or siltation) and any other pollutant that has been identified as a cause of \_\_\_\_\_ when final stabilization of the site has been achieved as defined in the permit or when another operator has assumed control of the site.

- A. Submission of a Notice of Termination (NOT)
- B. Phase I large construction permit
- C. Storm Water Pollution Prevention Plan
- D. None of the above

### **Can the Permitting Authority Reference a Qualifying Erosion and Sediment Control Program in NPDES Construction Permits?**

78. The Phase II Rule allows the NPDES permitting authority to include in its NPDES permits for large and for small construction activity conditions that incorporate by reference qualifying State, Tribal, or local erosion and sediment control program requirements.

- A. True
- B. False

A qualifying program must include the following requirements:

79. Requirements for construction site operators to implement appropriate erosion and sediment control \_\_\_\_\_;

- A. Best Available Technology (BAT)
- B. Best management practices
- C. Storm water pollution prevention plan
- D. None of the above

80. \_\_\_\_\_ for construction site operators to control waste such as discarded building materials, concrete truck washout, chemicals, litter, and sanitary waste that may cause adverse impacts to water quality;

- A. Requirements
- B. Potential water quality impacts
- C. Most erosion and sediment control(s)
- D. None of the above

81. Requirements for construction site operators to develop and implement a \_\_\_\_\_;

- A. Best Available Technology
- B. Best management practice
- C. Storm water pollution prevention plan
- D. None of the above

82. Requirements to submit a \_\_\_\_\_ for review that incorporates consideration of potential water quality impacts.

- A. BMPs
- B. Storm water pollution prevention plan
- C. Site plan
- D. None of the above

83. In addition to the four elements above, a qualifying program for large construction activities must also include any additional requirements necessary to achieve the applicable technology-based standards of "Best Available Technology" (BAT) and \_\_\_\_\_ based on the best professional judgment of the permit writer.

- A. Best Conventional Technology (BCT)
- B. Best management practices
- C. Storm water pollution prevention plan
- D. None of the above

**What are Some Recommended BMPs for Small Construction Sites?**

84. The \_\_\_\_\_ used for controlling pollutants in storm water discharges from small construction sites may vary from those used for large sites since their characteristics can differ in many ways.

- A. Best Available Technology
- B. Approach and BMPs
- C. Storm water pollution prevention plan
- D. None of the above

85. For example, operators of small sites may have more limited access to qualified design personnel and technical information. In addition, small sites may have less space for installing and maintaining certain \_\_\_\_\_.

- A. BMPs
- B. Potential water quality impacts
- C. Most erosion and sediment control(s)
- D. None of the above

86. As is the case with all construction sites, erosion and sediment control at small construction sites is best accomplished with proper planning, installation, and \_\_\_\_\_. The following practices have shown to be efficient, cost effective, and versatile for small construction site operators to implement.

- A. Best Available Technology (BAT)
- B. Best management practices
- C. Maintenance of controls
- D. None of the above

87. \_\_\_\_\_ require regular maintenance to operate correctly.

- A. BMPs
- B. Potential water quality impacts
- C. Most erosion and sediment control(s)
- D. None of the above

**CMOM - "Capacity, Management, Operation and Maintenance"**

88. Which of the following is vital to protect public health, property, and waterways in the surrounding area?

- A. Sanitary sewage overflows (SSOs)
- B. Clean decantable water
- C. Proper function of sanitary sewer systems
- D. None of the above

**What are Sanitary Sewer Overflows?**

89. Sanitary Sewer Overflows (SSOs) are discharges of raw sewage from?

- A. Deteriorating Sewer System
- B. Pipe Failure(s)
- C. Municipal sanitary sewer systems
- D. None of the above

**Problems that Can Cause Chronic SSOs Include:**

90. Which of the following is too much rainfall or snowmelt infiltrating through the ground into leaky sanitary sewers?

- A. Infiltration and Inflow (I&I)
- B. Badly connected sewer service lines
- C. Sanitary Sewer Overflows or (SSOs)
- D. None of the above

**Other Wastewater Treatment Components**

**Biochemical Oxygen Demand**

91. Biochemical Oxygen Demand (BOD or BOD5) is an indirect measure of Biodegradable organic compounds in water, and is determined by measuring the dissolved oxygen decrease in a controlled water sample over a five-day period.

- A. True
- B. False

92. During this five-day period, aerobic (oxygen-consuming) bacteria decompose organic matter in the sample and consume dissolved oxygen in proportion to the amount of organic material that is present.

- A. True
- B. False

**Total Organic Carbon**

93. (TOC) bears a direct relationship with biological and chemical oxygen demand; high levels of TOC can result from human sources, which term being the main concern?

- A. Organic carbon
- B. High oxygen demand
- C. High BOD
- D. None of the above

**pH Section**

94. Mathematically, pH is the negative logarithm of the activity of the (solvated) hydronium ion, more often expressed as the measure of the?

- A. Electron concentration
- B. Alkalinity concentration
- C. Hydronium ion concentration
- D. None of the Above

95. pH is defined as the decimal logarithm of the reciprocal of the \_\_\_\_\_,  $a_{H^+}$ , in a solution.

- A. Hydrogen ion activity
- B. Acid-base behavior
- C. Brønsted–Lowry acid–base theory
- D. None of the Above

96. The calculation of the pH of a solution containing acids and/or bases is an example of a \_\_\_\_\_ calculation, that is, a mathematical procedure for calculating the concentrations of all chemical species that are present in the solution

- A. Chemical speciation
- B. Spectrophotometer
- C. Visual comparison
- D. None of the Above

97. Since pH is a logarithmic scale, a difference of one pH unit is equivalent to \_\_\_\_\_ difference in hydrogen ion concentration

- A. 1
- B. .1
- C. 10
- D. None of the Above

98. Which of the following terms measurements is used in the interpretation and control of water and wastewater treatment processes?

- A. Acid
- B. Alkalinity
- C. Hydrogen bond formation
- D. None of the Above

99. Which of the following terms are compounds that, for practical purposes, are completely dissociated in water?

- A. Strong acids and bases
- B. Chemical ions in chains
- C. Strong bases and weak acids
- D. None of the Above

100. The pH of a solution containing a \_\_\_\_\_ may require the solution of a cubic equation.

- A. Strong acids and bases
- B. Strong base
- C. Weak base
- D. None of the Above

101. Sodium hydroxide, NaOH, is an example of a?

- A. Weak base
- B. Strong base
- C. Strong acid
- D. None of the Above

### Types of Wastewater Samples

#### General

102. Hand compositing is a series of time proportional grab samples that are collected and composited by hand.

- A. True
- B. False

#### Wastewater Grab Samples

103. Grab samples are individual samples collected in less than 3 minutes without regard to flow or time of day.

- A. True
- B. False

104. Which of the following are normally taken manually, but can be pumped?

- A. Grab samples
- B. Concentration of pollutants
- C. Flow proportional composites
- D. None of the above

#### A grab sample is usually taken when a sample is needed to:

105. Provide information about \_\_\_\_\_ of pollutants at a specific time.

- A. The volume of sample
- B. Concentration of pollutants
- C. An instantaneous concentration
- D. None of the above

106. According the text, corroborate \_\_\_\_\_ if the waste is not highly variable.

- A. Entire batch discharge
- B. Composite samples
- C. An individual sample
- D. None of the above

107. Which of the following are not amenable to compositing such as pH, temperature, dissolved oxygen, chlorine, purgeable organics and sulfides, oil and grease, coliform bacteria, and sulfites?
- A. Monitor parameters.
  - B. Hand composites
  - C. Flow proportional composites
  - D. None of the above

#### **Timed Composites**

108. Which of the following are usually taken in instances where the intention is to characterize the wastes over a period of time without regard to flow?
- A. Timed samples
  - B. Hand composites
  - C. Grab samples
  - D. None of the above

#### **Flow Proportional Composites**

109. Which of the following consist of: a series of grab samples whose volumes are equal in size and proportion to the flow at the time of sampling?
- A. Sample preservation
  - B. Duplicate samples
  - C. Flow proportional composite samples
  - D. None of the above

110. Which of the following are taken at varying time intervals are most often collected by the sampling inspectors?
- A. The volume of sample
  - B. Equal volume samples
  - C. Proportional composite sampling
  - D. None of the above

111. Wherever possible, grab sampling is recommended because it most accurately reflects the nature of the wastestream.
- A. True
  - B. False

#### **Quality Assurance/Quality Control Policy Example**

112. According to the text, Quality Assurance/Quality Control (QA/QC) measures taken by the sampling crew include equipment blanks, trip blanks, split samples and duplicate samples.
- A. True
  - B. False

#### **Chain-of-Custody**

113. Laboratory personnel sign and date the chain of custody form, and return it to the sampling crew who makes two copies of the form. One copy is for the sampling crew files and the other is for data entry.
- A. True
  - B. False

#### **Proper Sample Handling**

114. Check with the laboratory about \_\_\_\_\_ when using pre-preserved bottles.
- A. Other parameters
  - B. Preservatives
  - C. Quality control procedures
  - D. None of the above

#### **Code of Federal Regulations**

115. Which of the following means all municipal separate storm sewers that are either: Located in an incorporated place with a population of 250,000 or more as determined by the 1990 Decennial Census by the Bureau of the Census?
- A. Medium municipal separate storm sewer system
  - B. Major municipal separate storm sewer outfall
  - C. Large municipal separate storm sewer system
  - D. None of the above

116. Which of the following means a municipal separate storm sewer outfall that discharges from a single pipe with an inside diameter of 36 inches or more or its equivalent; or for municipal separate storm sewers that receive storm water from lands zoned for industrial activity?

- A. Major outfall
- B. Major municipal separate storm sewer outfall
- C. Large municipal separate storm sewer system
- D. None of the above

117. Which of the following means a major municipal separate storm sewer outfall?

- A. Medium municipal separate storm sewer system
- B. Major outfall
- C. Large municipal separate storm sewer system
- D. None of the above

118. Which of the following means all municipal separate storm sewers that are either:(i) Located in an incorporated place with a population of 100,000 or more but less than 250,000, as determined by the 1990 Decennial Census by the Bureau of the Census?

- A. Medium municipal separate storm sewer system
- B. Major municipal separate storm sewer outfall
- C. Large municipal separate storm sewer system
- D. None of the above

119. Which of the following means any material of any nature, consolidated or unconsolidated, that overlies a mineral deposit?

- A. Storm water
- B. Runoff coefficient
- C. Overburden
- D. None of the above

120. Which of the following means the fraction of total rainfall that will appear at a conveyance as runoff?

- A. Significant materials
- B. Runoff coefficient
- C. Overburden
- D. None of the above

121. Which of the following means raw materials; fuels; materials such as solvents, detergents, and plastic pellets; finished materials such as metallic products; raw materials used in food processing or production; hazardous substances?

- A. Significant materials
- B. Overburden
- C. Runoff coefficient
- D. None of the above

122. Which of the following means storm water runoff, snowmelt runoff, and surface runoff and drainage?

- A. Stormwater discharge
- B. Significant materials
- C. Storm water
- D. None of the above

123. Which of the following means the discharge from any conveyance that is used for collecting and conveying storm water and that is directly related to manufacturing, processing or raw materials storage areas at an industrial plant?

- A. Storm water or Stormwater discharge associated with industrial activity
- B. Runoff coefficient
- C. Overburden
- D. None of the above

### **Confined Space Entry Program**

#### **Purpose**

124. The Confined Space Entry Program is provided to protect authorized employees that will enter confined spaces from safety or health hazards associated with confined spaces.

- A. True
- B. False

## Scope

125. According to the text, you are required to recognize \_\_\_\_\_ associated with confined spaces.
- A. Internal configurations
  - B. Permit-Required Confined Spaces
  - C. The dangers and hazards
  - D. None of the above

## Definitions

### Confined space:

126. A confined space is large enough or so configured that an employee can \_\_\_\_\_.
- A. Have sufficient oxygen
  - B. Bodily enter and perform work
  - C. Recognize serious safety or health hazards
  - D. None of the above

127. A confined space has limited or restricted means for \_\_\_\_\_.
- A. An internal configuration
  - B. Entry or exit
  - C. Hazardous atmosphere
  - D. None of the above

128. A confined space is not designed for \_\_\_\_\_.
- A. An internal configuration
  - B. Hazardous atmospheres
  - C. Continuous employee occupancy
  - D. None of the above

129. A permit required confined space (permit space) contains or has a potential to contain a \_\_\_\_\_.
- A. Recognized internal configuration
  - B. Hazardous atmosphere
  - C. Entry or exit
  - D. None of the above

130. A permit required confined space (permit space) contains a material that has \_\_\_\_\_.
- A. Authorized entrants
  - B. Hazardous atmospheres
  - C. The potential for engulfing an entrant
  - D. None of the above

131. A permit required confined space (permit space) has an internal configuration such that \_\_\_\_\_ could be trapped or asphyxiated by inwardly converging walls or by a floor which slopes downward and tapers to a smaller cross-section.
- A. An entrant
  - B. Hazardous atmosphere
  - C. An internal configuration
  - D. None of the above

132. A permit required confined space (permit space) contains any other recognized serious safety or \_\_\_\_\_.
- A. Engulfing problems
  - B. Strange atmospheres
  - C. Health hazard
  - D. None of the above

133. Each \_\_\_\_\_ must be marked "Confined Space - Entry Permit Required".
- A. Permit-Required Confined Space
  - B. Hazardous atmosphere
  - C. Entry or exit
  - D. None of the above

### Confined Space Hazards

134. Fatalities and injuries constantly occur among construction workers who are required to enter \_\_\_\_\_.
- A. An internal configuration
  - B. Hazardous atmosphere
  - C. Confined spaces
  - D. None of the above

135. Workers encounter both inherent and \_\_\_\_\_ within confined workspaces.

- A. An internal configuration
- B. Induced hazards
- C. Hazardous atmosphere
- D. None of the above

### **Inherent Hazards**

136. \_\_\_\_\_ are associated with specific types of equipment and the interactions among them. These hazards can be electrical, thermal, chemical, mechanical, etc.

- A. Inherent hazards
- B. Hazardous atmospheres
- C. Recognized serious safety or health hazards
- D. None of the above

137. Inherent hazards include high voltage, radiation generated by equipment, \_\_\_\_\_, omission of protective features, high or low temperatures, high noise levels, and high-pressure vessels and lines.

- A. Defective design
- B. Hazardous atmosphere
- C. An internal configuration
- D. None of the above

138. Inherent hazards usually cannot be eliminated without degrading or shutting down the system or equipment. Therefore, emphasis must be placed on \_\_\_\_\_.

- A. Hazard control methods
- B. Hazardous atmospheres
- C. Continuous employee occupancy
- D. None of the above

### **Induced Hazards**

139. \_\_\_\_\_ result from a multitude of incorrect decisions and actions that occur during the actual construction process.

- A. Induced hazards
- B. Below-grade locations
- C. Build-up of explosive gases
- D. None of the above

140. Some examples of induced hazards are: omission of protective features, physical arrangements that may cause unintentional worker contact with electrical energy sources, oxygen-deficient atmospheres created at the bottom of pits or shafts, lack of safety factors in structural strength, and \_\_\_\_\_.

- A. Common confined spaces
- B. Flammable atmospheres
- C. Extreme temperatures
- D. None of the above

### **Typical Examples of Confined Workspaces**

141. Confined workspaces in construction contain \_\_\_\_\_.

- A. Purging agents
- B. Below-grade location
- C. Both inherent and induced hazards
- D. None of the above

### **Vaults**

142. Workers must enter \_\_\_\_\_ found on the construction jobsite to perform a number of functions.

- A. Common confined spaces
- B. Hazards
- C. A variety of vaults
- D. None of the above

143. The restricted nature of vaults and their frequently \_\_\_\_\_ are reasons that vaults have an assortment of safety and health problems.

- A. Purged atmosphere
- B. Below-grade location
- C. Explosive atmosphere
- D. None of the above

### **Oxygen-Deficient Atmosphere**

144. The ever-present possibility of \_\_\_\_\_ is one of the major problems confronting construction workers while working in vaults.

- A. A common confined space
- B. Vaults
- C. An oxygen-deficient atmosphere
- D. None of the above

### **Explosive or Toxic Gases, Vapors, or Fumes**

145. \_\_\_\_\_ produce toxic fumes which are confined in the limited atmosphere of a confined space.

- A. Purging agents
- B. Below-grade locations
- C. Welding and soldering
- D. None of the above

### **Electrical Shock**

146. \_\_\_\_\_ results because the contractor has not provided an approved grounding system or the protection afforded by ground-fault circuit interrupters or low-voltage systems.

- A. Common confined space
- B. Electrical shock
- C. An oxygen-deficient atmosphere
- D. None of the above

### **Purging**

147. Purging agents such as nitrogen and argon may enter a vault from adjacent areas. These agents may displace the oxygen in the vault and asphyxiate workers almost immediately.

- A. True
- B. False

### **Materials Falling In and On**

148. According to the text, a \_\_\_\_\_ normally considered a problem associated with confined spaces is material or equipment which may fall into the vault.

- A. Common confined space
- B. Hazard
- C. Oxygen-deficient atmosphere
- D. None of the above

149. If the \_\_\_\_\_ were removed, materials could fall into the vault, causing injury to the workers inside.

- A. Purging agents
- B. Manhole covers
- C. Explosive gases
- D. None of the above

### **Manholes**

150. Manholes are necessary to provide a means of entry into and exit from vaults, tanks, and pits, but these confined spaces may present \_\_\_\_\_ which could cause injuries and fatalities.

- A. Serious hazards
- B. Ventilation ducts
- C. Sumps
- D. None of the above

151. \_\_\_\_\_ are associated with manholes. For example, workers could fall into manholes when covers are missing.

- A. Nitrogen purges
- B. Collection places
- C. A variety of hazards
- D. None of the above

### **Containment Cavities**

152. Containment cavities are characterized by little or no air movement. Ventilation is always a problem, and the possibility of oxygen deficiency exists.

- A. True
- B. False

153. Welding and other gases may easily collect in containment cavities, creating \_\_\_\_\_.

- A. Toxic atmospheres
- B. Poor ventilation
- C. Confined workspaces
- D. None of the above

### **Unusual Conditions**

#### **Confined Space within a Confined Space**

154. One of the most hazardous confined spaces of all is a confined space within a confined space.

- A. True
- B. False

155. The \_\_\_\_\_ associated with the outer confined space and those of the inner confined space both require testing, monitoring, and control.

- A. Potential hazards
- B. Access passages
- C. Manholes
- D. None of the above

### Hazards in One Space Entering another Space

156. In a situation where hazards in one space may enter another, a serious problem is that workers working in the "safe" area are not aware of the \_\_\_\_\_.

- A. Oxygen Level
- B. Access passages
- C. Hazards leaking into their area
- D. None of the above

### Permitted Confined Space Entry Program

157. Subpart P (of OSHA's Construction Regulations) applies to all \_\_\_\_\_ in the earth's surface.

- A. Open excavations
- B. Vaults
- C. Pits
- D. None of the above

158. According to the text, all trenches are \_\_\_\_\_.

- A. Too narrow for work
- B. Excavations
- C. Safe for short-term work
- D. None of the above

159. According to the text, all excavations are \_\_\_\_\_.

- A. Permit-required
- B. Not trenches
- C. Access passages
- D. None of the above

### Permit Required Confined Space Entry General Rules

160. According to the text, only authorized and trained employees may enter a \_\_\_\_\_ or act as safety watchmen/attendants.

- A. Hazard
- B. Pipe
- C. Confined space
- D. None of the above

161. Employees are not permitted to smoke \_\_\_\_\_ or near the entrance/exit area.

- A. Near air and oxygen monitors
- B. During a side entry
- C. In a confined space
- D. None of the above

162. A watchmen or attendant must be present at all times during \_\_\_\_\_.

- A. Confined space entries
- B. Access passages
- C. Air monitoring
- D. None of the above

163. According to the text, constant visual or voice communication will be maintained between the safety watchmen and employees entering \_\_\_\_\_.

- A. Inner spaces
- B. Access passages
- C. A confined space
- D. None of the Above

164. According to the text, no \_\_\_\_\_ will be made or work conducted below the level of any hanging material or material that could cause engulfment.

- A. Monitoring of entrant status
- B. Bottom or side entry
- C. Identification of authorized entrants
- D. None of the above

165. \_\_\_\_\_ is required before workers are allowed to enter any permit-required confined space. Oxygen levels in the confined space must be between 19.5 and 23.5 percent.

- A. Air and oxygen monitoring
- B. A supervisor
- C. Communication
- D. None of the above

166. Air and oxygen monitoring will check the levels of oxygen, explosive gasses, and carbon monoxide. Entry will not be permitted if explosive gas is detected above one-half the \_\_\_\_\_.

- A. Nitrogen level
- B. Argon level
- C. Lower Explosive Limit (LEL)
- D. None of the above

167. When covers are removed, all \_\_\_\_\_ will be protected by a barricade to prevent injuries to others.

- A. Air and oxygen monitoring
- B. Side entries
- C. Openings to confined spaces
- D. None of the above

### **Confined Space Duties and Responsibilities**

#### **Employees**

168. Employees must not \_\_\_\_\_ that have not been evaluated for safety concerns.

- A. Follow program requirements
- B. Report hazards
- C. Enter any confined spaces
- D. None of the above

#### **Management**

169. Management must provide annual confined space training to all employees that may need it.

- A. True
- B. False

170. Management must annually review the confined space entry program and all entry permits.

- A. True
- B. False

#### **Rescue or Training Department**

171. The Rescue or Training Department must provide proper equipment for entry and rescue teams.

- A. True
- B. False

#### **Entry Supervisor**

172. Entry supervisors must coordinate all entry procedures, tests, \_\_\_\_\_, equipment, and other activities related to the permit space entry.

- A. Publicity
- B. News media
- C. Permits
- D. None of the above

173. Before endorsing the permit and allowing entry to begin, the \_\_\_\_\_ must check that all appropriate entries have been made on the permit, all tests specified by the permit have been conducted, and that all procedures and equipment specified by the permit are in place.

- A. Entry supervisor
- B. Attendant
- C. Unauthorized persons
- D. None of the above

174. The rescue workers must terminate the entry and cancel the permit when the entry is complete or there is a need for terminating the permit.

- A. True
- B. False

175. The entry supervisor must verify that rescue services are available and that the means for summoning them are operable.

- A. True
- B. False

#### **Entry Attendants**

176. A responsibility of the entry attendant is to know the hazards that may be faced during entry, including information on the mode, signs or symptoms, and consequences of the exposure.

- A. True
- B. False

177. A responsibility of the entry attendant is to be aware of \_\_\_\_\_ of hazard exposure on entrants.

- A. The attendants' primary duty
- B. Worker training
- C. Possible behavioral effects
- D. None of the above

178. A responsibility of the entry attendant is to continuously maintain an accurate count of entrants in the permit space and ensure a means to \_\_\_\_\_.

- A. Timely complete the work
- B. Add workers when needed
- C. Accurately identify authorized entrants
- D. None of the above

179. A responsibility of the entry attendant is to remain outside the permit space during entry operations until \_\_\_\_\_.

- A. Assistance is requested
- B. Safety equipment arrives
- C. Relieved by another attendant
- D. None of the above

180. A responsibility of the entry attendant is to \_\_\_\_\_ as necessary to monitor entrant status and alert entrants of the need to evacuate.

- A. Communicate with entrants
- B. Encourage entrants
- C. Check the work progress
- D. None of the above

181. A responsibility of the entry attendant is to monitor activities inside and outside the space to determine if it is safe for entrants to remain in the space, and order the entrants to immediately evacuate if the attendant detects a prohibited condition.

- A. True
- B. False

182. A responsibility of the entry attendant is to summon rescue and other emergency services as soon as the attendant \_\_\_\_\_ to escape the permit space hazards.

- A. Identifies entrant status
- B. Gets approval to summon rescue
- C. Determines the entrants need assistance
- D. Accurately unauthorized entrants

183. A responsibility of the entry attendant is to perform non-entry rescues as specified by that rescue procedure and entry supervisor.

- A. True
- B. False

### **Duties of the Person Authorizing or in Charge of the Entry**

Note: This section further explains the duties of the Entry Supervisor.

184. If the person who would otherwise issue an entry permit is in charge of the entry and present during the entire entry, a written permit is still required even if that person uses a checklist.

- A. True
- B. False

185. The person in charge of the entry may also serve as the Entrant at the site.

- A. True
- B. False

### **Special Considerations During A Permit Required Entry**

186. Welding, drilling, or sludge removal work being performed in a permit entry confined space could cause the atmosphere in the space to change.

- A. True
- B. False

187. In situations such as welding, drilling, or sludge removal, continuous air monitoring of the confined space throughout the time of the entry is not required.

- A. True
- B. False

188. If the \_\_\_\_\_ leave the confined space for any significant period of time, the atmosphere of the confined space must be retested before the workers are allowed to reenter the confined space.

- A. Workers
- B. Attendants
- C. Unauthorized persons
- D. None of the above

### Unauthorized Persons

189. Actions must be taken when \_\_\_\_\_ approach or enter a permit space while entry is under way.

- A. Authorized workers
- B. Rescue Workers
- C. Unauthorized persons
- D. None of the above

190. \_\_\_\_\_ must be warned to stay away from the permit space,

- A. Authorized workers
- B. Unauthorized persons
- C. Entrants
- D. None of the above

191. If \_\_\_\_\_ have entered the space, they must be advised to exit immediately.

- A. Authorized workers
- B. Entrants
- C. Unauthorized persons
- D. None of the above

192. If unauthorized persons have entered the permit space, inform the \_\_\_\_\_ and the entry supervisor.

- A. Authorized entrants
- B. Attendant
- C. Unauthorized persons
- D. None of the above

### Entrants

193. According to the text, all \_\_\_\_\_ must be authorized by the entry supervisor to enter permit spaces, have received the required training, have used the proper equipment, and observed the entry procedures and permit requirements

- A. Workers
- B. Entrants
- C. Unauthorized persons
- D. None of the above

194. Entrants are required to know the \_\_\_\_\_ that may be faced during entry.

- A. Spaces
- B. Hazards
- C. Unauthorized persons
- D. None of the above

195. Entrants are required to communicate with the \_\_\_\_\_ as necessary to enable the attendant to monitor their status and alert them of the need to evacuate the space if necessary.

- A. Inspectors
- B. Attendant
- C. Unauthorized persons
- D. None of the above

196. Entrants must know information on the mode, signs or symptoms, and consequences of exposure.

- A. True
- B. False

197. Entrants are required to alert the attendant whenever the entrant recognizes any warning signs or symptoms of exposure to a dangerous situation, or whenever any prohibited condition is detected.

- A. True
- B. False

198. Entrants must exit the permit space as quickly as possible when given an order to evacuate by the attendant or entry supervisor.

- A. True
- B. False

## Permit Required Confined Space Entry General Rules

### Confined Space Entry Permits

199. Before entry, the Confined Space Entry Permit must be completed and signed by an authorized member of management.

A. True B. False

200. According to the text, Confined Space Entry Permits must be completed before any employee

- \_\_\_\_\_.
- A. Begins work C. Enters a permit-required confined space  
B. Leaves the permit space D. None of the above

## When Finished with Your Assignment...

### REQUIRED DOCUMENTS

Please scan the **Registration Page, Answer Key, Survey and Driver's License** and email these documents to [info@TLCH2O.com](mailto:info@TLCH2O.com).

### IPhone Scanning Instructions

If you are unable to scan, take a photo of these documents with your **iPhone** and send these photos to TLC, [info@TLCH2O.com](mailto:info@TLCH2O.com).

### FAX

If you are unable to scan and email, please fax these documents to TLC, if you fax, call to confirm that we received your paperwork. **(928) 468-0675**