

Registration Form

Pretreatment 101 CEU Training Course \$300.00
48 HOUR RUSH ORDER PROCESSING FEE ADDITIONAL \$40.00

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

Name _____ Signature _____
(This will appear on your certificate as above)

Address: _____

City _____ State _____ Zip _____ Email _____

Phone:
Home () _____ Work () _____ Fax () _____

Operator ID # _____
Your certificate will be mailed to you in about two weeks.

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

Water Treatment Water Distribution Wastewater Collection Wastewater Treatment

Onsite Installer Onsite Installer SP Other _____

Technical Learning College
Western Campus
PO Box 420, Payson AZ 85547-0420
(928) 468-0665 Fax (928) 272-0747
Toll Free (866) 557-1746
info@tlch2o.com

3 digit code on back of card _____

American Express
Visa or MasterCard # _____ Exp. Date _____

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

Referral's Name _____

Pretreatment 101 Answer Key

Name

Telephone

Please circle or X

- | | | |
|-----------|-----------|------------|
| 1. ABCDE | 41. ABCDE | 81. ABCDE |
| 2. ABCDE | 42. ABCDE | 82. ABCDE |
| 3. ABCDE | 43. ABCDE | 83. ABCDE |
| 4. ABCDE | 44. ABCDE | 84. ABCDE |
| 5. ABCDE | 45. ABCDE | 85. ABCDE |
| 6. ABCDE | 46. ABCDE | 86. ABCDE |
| 7. ABCDE | 47. ABCDE | 87. ABCDE |
| 8. ABCDE | 48. ABCDE | 88. ABCDE |
| 9. ABCDE | 49. ABCDE | 89. ABCDE |
| 10. ABCDE | 50. ABCDE | 90. ABCDE |
| 11. ABCDE | 51. ABCDE | 91. ABCDE |
| 12. ABCDE | 52. ABCDE | 92. ABCDE |
| 13. ABCDE | 53. ABCDE | 93. ABCDE |
| 14. ABCDE | 54. ABCDE | 94. ABCDE |
| 15. ABCDE | 55. ABCDE | 95. ABCDE |
| 16. ABCDE | 56. ABCDE | 96. ABCDE |
| 17. ABCDE | 57. ABCDE | 97. ABCDE |
| 18. ABCDE | 58. ABCDE | 98. ABCDE |
| 19. ABCDE | 59. ABCDE | 99. ABCDE |
| 20. ABCDE | 60. ABCDE | 100. ABCDE |
| 21. ABCDE | 61. ABCDE | 101. ABCDE |
| 22. ABCDE | 62. ABCDE | 102. ABCDE |
| 23. ABCDE | 63. ABCDE | 103. ABCDE |
| 24. ABCDE | 64. ABCDE | 104. ABCDE |
| 25. ABCDE | 65. ABCDE | 105. ABCDE |
| 26. ABCDE | 66. ABCDE | 106. ABCDE |
| 27. ABCDE | 67. ABCDE | 107. ABCDE |
| 28. ABCDE | 68. ABCDE | 108. ABCDE |
| 29. ABCDE | 69. ABCDE | 109. ABCDE |
| 30. ABCDE | 70. ABCDE | 110. ABCDE |
| 31. ABCDE | 71. ABCDE | 111. ABCDE |
| 32. ABCDE | 72. ABCDE | 112. ABCDE |
| 33. ABCDE | 73. ABCDE | 113. ABCDE |
| 34. ABCDE | 74. ABCDE | 114. ABCDE |
| 35. ABCDE | 75. ABCDE | 115. ABCDE |
| 36. ABCDE | 76. ABCDE | 116. ABCDE |
| 37. ABCDE | 77. ABCDE | 117. ABCDE |
| 38. ABCDE | 78. ABCDE | 118. ABCDE |
| 39. ABCDE | 79. ABCDE | 119. ABCDE |
| 40. ABCDE | 80. ABCDE | 120. ABCDE |

121. A B C D E
122. A B C D E
123. A B C D E
124. A B C D E
125. A B C D E
126. A B C D E
127. A B C D E
128. A B C D E
129. A B C D E
130. A B C D E
131. A B C D E
132. A B C D E
133. A B C D E
134. A B C D E
135. A B C D E
136. A B C D E
137. A B C D E
138. A B C D E
139. A B C D E
140. A B C D E
141. A B C D E
142. A B C D E
143. A B C D E
144. A B C D E
145. A B C D E
146. A B C D E
147. A B C D E
148. A B C D E
149. A B C D E
150. A B C D E
151. A B C D E
152. A B C D E
153. A B C D E
154. A B C D E
155. A B C D E
156. A B C D E
157. A B C D E
158. A B C D E
159. A B C D E
160. A B C D E
161. A B C D E
162. A B C D E
163. A B C D E
164. A B C D E
165. A B C D E
166. A B C D E

167. A B C D E
168. A B C D E
169. A B C D E
170. A B C D E
171. A B C D E
172. A B C D E
173. A B C D E
174. A B C D E
175. A B C D E
176. A B C D E
177. A B C D E
178. A B C D E
179. A B C D E
180. A B C D E
181. A B C D E
182. A B C D E
183. A B C D E
184. A B C D E
185. A B C D E
186. A B C D E
187. A B C D E
188. A B C D E
189. A B C D E
190. A B C D E
191. A B C D E
192. A B C D E
193. A B C D E
194. A B C D E
195. A B C D E
196. A B C D E
197. A B C D E
198. A B C D E
199. A B C D E
200. A B C D E
201. A B C D E
202. A B C D E
203. A B C D E
204. A B C D E
205. A B C D E
206. A B C D E
207. A B C D E
208. A B C D E
209. A B C D E
210. A B C D E
211. A B C D E
212. A B C D E

213. A B C D E
214. A B C D E
215. A B C D E
216. A B C D E
217. A B C D E
218. A B C D E
219. A B C D E
220. A B C D E
221. A B C D E
222. A B C D E
223. A B C D E
224. A B C D E
225. A B C D E
226. A B C D E
227. A B C D E
228. A B C D E
229. A B C D E
230. A B C D E
231. A B C D E
232. A B C D E
233. A B C D E
234. A B C D E
235. A B C D E
236. A B C D E
237. A B C D E
238. A B C D E
239. A B C D E
240. A B C D E
241. A B C D E
242. A B C D E
243. A B C D E
244. A B C D E
245. A B C D E
246. A B C D E
247. A B C D E
248. A B C D E
249. A B C D E
250. A B C D E
251. A B C D E
252. A B C D E
253. A B C D E
254. A B C D E
255. A B C D E
256. A B C D E
257. A B C D E
258. A B C D E

259. A B C D E
260. A B C D E
261. A B C D E
262. A B C D E
263. A B C D E
264. A B C D E
265. A B C D E
266. A B C D E
267. A B C D E
268. A B C D E
269. A B C D E
270. A B C D E
271. A B C D E
272. A B C D E

273. A B C D E
274. A B C D E
275. A B C D E
276. A B C D E
277. A B C D E
278. A B C D E
279. A B C D E
280. A B C D E
281. A B C D E
282. A B C D E
283. A B C D E
284. A B C D E
285. A B C D E
286. A B C D E

287. A B C D E
288. A B C D E
289. A B C D E
290. A B C D E
291. A B C D E
292. A B C D E
293. A B C D E
294. A B C D E
295. A B C D E
296. A B C D E
297. A B C D E
298. A B C D E
299. A B C D E
300. A B C D E

You are finished.

Please fax the answer key to TLC Western Campus Fax (928) 272-0747.

Rush Grading Service

If you need this assignment graded and the results mailed to you within a 48-hour period, prepare to pay an additional rush service handling fee of \$40.00. This fee may not cover postage costs. If you need this service, simply write RUSH on the top of your Registration Form. We will place you in the front of the grading and processing line.

Thank you...

Please mail or fax this survey along with your final exam

**PRETREATMENT 101 CEU TRAINING COURSE
CUSTOMER SERVICE RESPONSE CARD**

DATE: _____

NAME: _____

ADDRESS: _____

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? _____

Any other concerns or comments.

Pretreatment 101 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.

Pretreatment Terms

Please select the best answer for the question.

1. A State with an NPDES permit program approved pursuant to section 402(b) of the Act and an approved State Pretreatment Program.
 - A. Approved State Pretreatment Program
 - B. Approved/Authorized State
 - C. Act or "the Act"
 - D. Approval Authority
 - E. Approved POTW Pretreatment Program or Program

2. A report submitted by categorical industrial users (CIUs) within 180 days after the effective date of an applicable categorical standard, or at least 90 days prior to commencement of discharge for new sources, which contains specific facility information, including flow and pollutant concentration data. For existing sources, the report must also certify as to the compliance status of the facility with respect to the categorical standards.
 - A. Best Professional Judgment (BPJ)
 - B. Baseline Monitoring Report (BMR)
 - C. Best Management Practices (BMPs)
 - D. Best Practicable Control Technology Currently Available (BPT)
 - E. None of the Above

3. The Federal Water Pollution Control Act, also known as the Clean Water Act, as amended, 33 USC 1251 et. seq.
 - A. Approved State Pretreatment Program
 - B. Approved/Authorized State
 - C. Act or "the Act"
 - D. Approval Authority
 - E. Approved POTW Pretreatment Program or Program

4. The Director in an NPDES State with an approved State Pretreatment Program and the appropriate EPA Regional Administrator in a non-NPDES State or State without an approved pretreatment program.
 - A. Approved State Pretreatment Program
 - B. Approved/Authorized State
 - C. Act or "the Act"
 - D. Approval Authority
 - E. Approved POTW Pretreatment Program or Program

5. An industrial user subject to National categorical pretreatment standards.
 - A. Blowdown
 - B. Categorical Industrial User (CIU)
 - C. Bypass
 - D. Categorical Pretreatment Standards

6. A codification of Federal rules published annually by the Office of the Federal Register National Archives and Records Administration. Title 40 of the CFR contains the regulations for Protection of the Environment.

- A. Code of Federal Regulations (CFR)
- B. Chronic
- C. Combined Sewer Overflow (CSO)
- D. Clean Water Act (CWA)
- E. None of the Above

7. A discharge of untreated wastewater from a combined sewer system at a point prior to the headworks of a publicly owned treatment works. CSOs generally occur during wet weather (rainfall or snowfall). During periods of wet weather, these systems become overloaded, bypass treatment works, and discharge directly to receiving waters.

- A. Code of Federal Regulations (CFR)
- B. Chronic
- C. Combined Sewer Overflow (CSO)
- D. Clean Water Act (CWA)
- E. None of the Above

8. A program administered by a POTW that meets the criteria established in 40 CFR Part 403 and which has been approved by a Regional Administrator or State Director.

- A. Approved State Pretreatment Program
- B. Approved/Authorized State
- C. Act or "the Act"
- D. Approval Authority
- E. Approved POTW Pretreatment Program or Program

9. A level of technology based on the best existing control and treatment measures that are economically achievable within the given industrial category or subcategory.

- A. Best Professional Judgment (BPJ)
- B. Baseline Monitoring Report (BMR)
- C. Best Management Practices (BMPs)
- D. Best Practicable Control Technology Currently Available (BPT)
- E. None of the Above

10. Schedules of activities, prohibitions of practices, maintenance procedures, and other management practices to prevent or reduce the pollution of waters of the U.S. BMPs also include treatment requirements, operating procedures and practices to control plant site runoff, spillage or leaks, sludge or waste disposal, or drainage from raw material storage.

- A. Best Professional Judgment (BPJ)
- B. Baseline Monitoring Report (BMR)
- C. Best Management Practices (BMPs)
- D. Best Practicable Control Technology Currently Available (BPT)

11. A program administered by a State that meets the criteria established in 40 CFR §403.10 and which has been approved by a Regional Administrator

- A. Approved State Pretreatment Program
- B. Approved/Authorized State
- C. Act or "the Act"
- D. Approval Authority
- E. Approved POTW Pretreatment Program or Program

12. Procedure for calculating alternative discharge limits at industrial facilities where a regulated wastestream from a categorical industrial user is combined with other wastestreams prior to treatment.

- A. Code of Federal Regulations (CFR)
- B. Chronic
- C. Combined Sewer Overflow (CSO)
- D. Clean Water Act (CWA)
- E. None of the Above

13. A stimulus that lingers or continues for a relatively long period of time, often one-tenth of the life span or more. Chronic should be considered a relative term depending on the life span of an organism. The measurement of chronic effect can be reduced growth, reduced reproduction, etc., in addition to lethality.

- A. Code of Federal Regulations (CFR)
- B. Chronic
- C. Combined Sewer Overflow (CSO)
- D. Clean Water Act (CWA)
- E. None of the Above

14. The common name for the Federal Water Pollution Control Act. Public law 92-500; 33 U.S.C. 1251 et seq.; legislation which provides statutory authority for both NPDES and Pretreatment Programs.

- A. Code of Federal Regulations (CFR)
- B. Chronic
- C. Combined Sewer Overflow (CSO)
- D. Clean Water Act (CWA)
- E. None of the Above

15. Limitations on pollutant discharges to POTWs promulgated by the EPA in accordance with Section 307 of the Clean Water Act, that apply to specific process wastewater discharges of particular industrial categories.

- A. Blowdown
- B. Categorical Industrial User (CIU)
- C. Bypass
- D. Categorical Pretreatment Standards

16. A record of each person involved in the possession of a sample from the person who collects the sample to the person who analyzes the sample in the laboratory.

- A. Blowdown
- B. Categorical Industrial User (CIU)
- C. Bypass
- D. Chain of Custody (COC)

17. A schedule of remedial measures included in a permit or an enforcement order, including a sequence of interim requirements (for example, actions, operations, or milestone events) that lead to compliance with the CWA and regulations.

- A. Code of Federal Regulations (CFR)
- B. Chronic
- C. Combined Sewer Overflow (CSO)
- D. Clean Water Act (CWA)
- E. None of the Above

18. Sample composed of two or more discrete samples. The aggregate sample will reflect the average water quality covering the compositing or sample period.

- A. Code of Federal Regulations (CFR)
- B. Chronic
- C. Combined Sewer Overflow (CSO)
- D. Clean Water Act (CWA)
- E. None of the Above

19. A limit based upon the relative strength of a pollutant in a wastestream, usually expressed in mg/l.

- A. Daily Maximum Limitations
- B. Continuous Discharge
- C. Concentration-based Limit
- D. Control Authority
- E. Conventional Pollutants

20. A discharge that occurs without interruption during the operating hours of a facility, except for infrequent shutdowns for maintenance, process changes or similar activities.

- A. Daily Maximum Limitations
- B. Continuous Discharge
- C. Concentration-based Limit
- D. Control Authority
- E. Conventional Pollutants

21. A POTW with an approved pretreatment program or the approval authority in the absence of a POTW pretreatment program.

- A. Daily Maximum Limitations
- B. Continuous Discharge
- C. Concentration-based Limit
- D. Control Authority
- E. Conventional Pollutants

22. BOD, TSS, fecal coliform, oil and grease, and pH

- A. Daily Maximum Limitations
- B. Continuous Discharge
- C. Concentration-based Limit
- D. Control Authority
- E. Conventional Pollutants

23. The maximum allowable discharge of pollutants during a 24-hour period. Where daily maximum limitations are expressed in units of mass, the daily discharge is the total mass discharged over the course of the day.

- A. Daily Maximum Limitations
- B. Continuous Discharge
- C. Concentration-based Limit
- D. Control Authority
- E. Conventional Pollutants

If you need any assistance, utilize the Search function in Adobe Acrobat.

24. Where daily maximum limitations are expressed in terms of a concentration, the daily discharge is the arithmetic average measurement of the pollutant concentration derived from all measurements taken that day.

- A. Daily Maximum Limitations
- B. Continuous Discharge
- C. Concentration-based Limit
- D. Control Authority

25. The minimum concentration of an analyte (substance) that can be measured and reported with a 99% confidence that the analyte concentration is greater than zero as determined by the procedure set forth in 40 CFR Part 136, Appendix B.

- A. Detection Limit
- B. Development Document
- C. Dilute Wastestream
- D. Effluent Limitations Guideline
- E. None of the Above

26. Detailed report of studies conducted by the U.S. EPA for the purpose of establishing effluent guidelines and categorical pretreatment standards.

- A. Detection Limit
- B. Development Document
- C. Dilute Wastestream
- D. Effluent Limitations Guideline
- E. None of the Above

27. For purposes of the combined wastestream formula, the average daily flow (at least a 30-day average) from : (a) boiler blowdown streams, non-contact cooling streams, storm water streams, and demineralized backwash streams; provided, however, that where such streams contain a significant amount of a pollutant, and the combination of such streams, prior to treatment, with an industrial user's regulated process wastestream(s) will result in a substantial reduction of that pollutant the Control Authority, upon application of the industrial user, may exercise its discretion to determine whether such stream(s) should be classified as diluted or unregulated.

- A. Detection Limit
- B. Development Document
- C. Dilute Wastestream
- D. Effluent Limitations Guideline
- E. None of the Above

28. In its application to the Control Authority, the industrial user must provide engineering, production, sampling and analysis, and such other information so the control authority can make its determination; or (b) sanitary wastestreams where such streams are not regulated by a categorical pretreatment standard; or (c) from any process wastestreams which were, or could have been, entirely exempted from categorical pretreatment standards pursuant to paragraph 8 of the NRDC v. Costle Consent Decree (12 ERC 1833) for one more of the following reasons (see Appendix D of 40 CFR Part 403):

- A. Detection Limit
- B. Development Document
- C. Dilute Wastestream
- D. Effluent Limitations Guideline
- E. None of the Above

29. The pollutants of concern are not detectable in the effluent from the industrial user.
- A. Detection Limit
 - B. Development Document
 - C. Dilute Wastestream
 - D. Effluent Limitations Guideline
 - E. None of the Above
30. The pollutants of concern are present only in trace amounts and are neither causing nor likely to cause toxic effects (paragraph (8)(a)(iii));
- A. Detection Limit
 - B. Development Document
 - C. Dilute Wastestream
 - D. Effluent Limitations Guideline
 - E. None of the Above
31. The pollutants of concern are present in amounts too small to be effectively deduced by technologies known to the Administrator (paragraph (8)(a)(iii)); or
- A. Detection Limit
 - B. Development Document
 - C. Dilute Wastestream
 - D. Effluent Limitations Guideline
 - E. None of the Above
32. The wastestream contains only pollutants which are compatible with the POTW (paragraph (8)(b)(I)).
- A. Detection Limit
 - B. Development Document
 - C. Dilute Wastestream
 - D. Effluent Limitations Guideline
 - E. None of the Above
33. Any effluent limitations guidelines issued by the EPA pursuant to Section 304(b) of the CWA.
- A. Detection Limit
 - B. Development Document
 - C. Dilute Wastestream
 - D. Effluent Limitations Guideline
 - E. None of the Above
34. These regulations are published to adopt or revise a national standard prescribing restrictions on quantities, rates, and concentrations of chemical, physical, biological, and other constituents which are discharged from point sources, in specific industrial categories (e.g., metal finishing, metal molding and casting, etc).
- A. Detection Limit
 - B. Development Document
 - C. Dilute Wastestream
 - D. Effluent Limitations Guideline
 - E. None of the Above

35. Step-by-step enforcement procedures followed by Control Authority staff to identify, document, and respond to violations.
- A. Federal Water Pollution Control Act
 - B. Flow Weighted Average Formula (FWA)
 - C. Existing Source
 - D. Enforcement Response Plan
 - E. Flow Proportional Composite Sample
36. Any source of discharge, the construction or operation of which commenced prior to the publication by the EPA of proposed categorical pretreatment standards, which will be applicable to such source if the standard is thereafter promulgated in accordance with Section 307 of the Act.
- A. Federal Water Pollution Control Act
 - B. Flow Weighted Average Formula (FWA)
 - C. Existing Source
 - D. Enforcement Response Plan
 - E. Flow Proportional Composite Sample
37. The title of Public law 92-500; 33 U.S.C. 1251 et seq., also known as the Clean Water Act (CWA), enacted October 18, 1972.
- A. Federal Water Pollution Control Act
 - B. Flow Weighted Average Formula (FWA)
 - C. Existing Source
 - D. Enforcement Response Plan
 - E. Flow Proportional Composite Sample
38. A procedure used to calculate alternative limits where wastestreams regulated by a categorical pretreatment standard and nonregulated wastestreams combine after treatment but prior to the monitoring point.
- A. Federal Water Pollution Control Act
 - B. Flow Weighted Average Formula (FWA)
 - C. Existing Source
 - D. Enforcement Response Plan
39. Combination of individual samples proportional to the flow of the wastestream at the time of sampling.
- A. Federal Water Pollution Control Act
 - B. Flow Weighted Average Formula (FWA)
 - C. Existing Source
 - D. Enforcement Response Plan
 - E. Flow Proportional Composite Sample
40. Case-by-case variance from categorical pretreatment standards based on the factors considered by the EPA in developing the applicable category/subcategory being fundamentally different than factors relating to a specific industrial user.
- A. Grab Sample
 - B. Fundamentally Different Factors
 - C. General Prohibitions
 - D. Indirect Discharge or Discharge
 - E. None of the Above

41. No user shall introduce into a POTW any pollutant(s) which cause pass through or interference.
- A. Grab Sample
 - B. Fundamentally Different Factors
 - C. General Prohibitions
 - D. Indirect Discharge or Discharge
 - E. None of the Above
42. A level of technology represented by the average of the best existing wastewater treatment performance levels within an industrial category or subcategory.
- A. Best Professional Judgment (BPJ)
 - B. Baseline Monitoring Report (BMR)
 - C. Best Management Practices (BMPs)
 - D. Best Practicable Control Technology Currently Available (BPT)
 - E. None of the Above
43. The method used by a permit writer to develop technology-based limitations on a case-by-case basis using all reasonably available and relevant data.
- A. Best Professional Judgment (BPJ)
 - B. Baseline Monitoring Report (BMR)
 - C. Best Management Practices (BMPs)
 - D. Best Practicable Control Technology Currently Available (BPT)
 - E. None of the Above
44. The discharge of water with high concentrations of accumulated solids from boilers to prevent plugging of the boiler tubes and/or steam lines. In cooling towers, blowdown is discharged to reduce the concentration of dissolved salts in the recirculating cooling water.
- A. Blowdown
 - B. Categorical Industrial User (CIU)
 - C. Bypass
 - D. Categorical Pretreatment Standards
 - E. Chain of Custody (COC)
45. The intentional diversion of wastestreams from any portion of an Industrial User's treatment facility.
- A. Blowdown
 - B. Categorical Industrial User (CIU)
 - C. Bypass
 - D. Categorical Pretreatment Standards
 - E. Chain of Custody (COC)
46. A sample which is taken from a wastestream on a one-time basis with no regard to the flow of the wastestream and without consideration of time. A single grab sample should be taken over a period of time not to exceed 15 minutes.
- A. Grab Sample
 - B. Fundamentally Different Factors
 - C. General Prohibitions
 - D. Indirect Discharge or Discharge
 - E. None of the Above

47. The introduction of pollutants into a POTW from any non-domestic source regulated under section 307(b), (c), or (d) of the Act.

- A. Grab Sample
- B. Fundamentally Different Factors
- C. General Prohibitions
- D. Indirect Discharge or Discharge
- E. None of the Above

48. A source of indirect discharge.

- A. Grab Sample
- B. Fundamentally Different Factors
- C. General Prohibitions
- D. Indirect Discharge or Discharge
- E. None of the Above

49. The process of identifying and locating industrial users and characterizing their industrial discharge.

- A. Grab Sample
- B. Fundamentally Different Factors
- C. General Prohibitions
- D. Indirect Discharge or Discharge
- E. None of the Above

50. Estimate of the toxicant concentration that would cause a given percent reduction (e.g., IC25) in a nonlethal biological measurement of the test organisms, such as reproduction or growth.

- A. Inhibition Concentration
- B. Interference
- C. Local Limits
- D. Monthly Average
- E. None of the Above

51. The building, structure, facility or installation is constructed at a site at which no other discharge source is located.

- A. New Source
- B. National Pollutant Discharge Elimination System (NPDES)
- C. National Pretreatment Standard or Pretreatment Standard or Standard
- D. 90-Day Final Compliance Report
- E. None of the Above

52. The building, structure, facility or installation totally replaces the process or production equipment that causes the discharge of pollutants at an existing source.

- A. New Source
- B. National Pollutant Discharge Elimination System (NPDES)
- C. National Pretreatment Standard or Pretreatment Standard or Standard
- D. 90-Day Final Compliance Report
- E. None of the Above

53. The production or wastewater generating processes of the building, structure, facility, or installation are substantially independent of an existing source at the same site. In determining whether these are substantially independent, factors such as the extent to which the new facility is integrated with the existing plant, and the extent to which the new facility is engaged in the same general type of activity as the existing source, should be considered.

- A. New Source
- B. National Pollutant Discharge Elimination System (NPDES)
- C. National Pretreatment Standard or Pretreatment Standard or Standard
- D. 90-Day Final Compliance Report
- E. None of the Above

54. Construction on a site at which an existing source is located results in a modification rather than a new source if the construction does not create a new building, structure, facility, or installation meeting the criteria of paragraphs (k)(1)(ii), or (k)(1)(iii) of this section but otherwise alters, replaces, or adds to existing processor production equipment.

- A. New Source
- B. National Pollutant Discharge Elimination System (NPDES)
- C. National Pretreatment Standard or Pretreatment Standard or Standard
- D. 90-Day Final Compliance Report
- E. None of the Above

55. Construction of a new source, as defined under this paragraph has commenced if the owner or operator has:

(i) Begun, or caused to begin as part of a continuous onsite construction program:
(A) Any placement, assembly, or installation of facilities or equipment; or
(B) Significant site preparation work including clearing, excavation, or removal of existing buildings, structures, or facilities which is necessary for the placement, assembly, or installation of new source facilities or equipment.

- A. New Source
- B. National Pollutant Discharge Elimination System (NPDES)
- C. National Pretreatment Standard or Pretreatment Standard or Standard
- D. 90-Day Final Compliance Report
- E. None of the Above

56. Entered into a binding contractual obligation for the purchase of facilities or equipment which are intended to be used in its operation within a reasonable time. Options to purchase or contracts which can be terminated or modified without substantial loss, and contracts for feasibility, engineering, and design studies do not constitute a contractual obligation under this paragraph.

- A. New Source
- B. National Pollutant Discharge Elimination System (NPDES)
- C. National Pretreatment Standard or Pretreatment Standard or Standard
- D. 90-Day Final Compliance Report
- E. None of the Above

57. A discharge which, alone or in conjunction with a discharge or discharges from other sources, both: (1)inhibits or disrupts the POTW, its treatment processes or operations, or its sludge processes, use or disposal;

- A. Inhibition Concentration
- B. Interference
- C. Local Limits
- D. Monthly Average
- E. None of the Above

58. Therefore is a cause of a violation of any requirement of the POTW's NPDES permit (including an increase in the magnitude or duration of a violation) or of the prevention of sewage sludge use or disposal in compliance with ... [applicable] statutory provisions and regulations or permits issued there under (or more stringent State or local regulations)

- A. Inhibition Concentration
- B. Interference
- C. Local Limits
- D. Monthly Average
- E. None of the Above

59. Specific discharge limits developed and enforced by POTWs upon industrial or commercial facilities to implement the general and specific discharge prohibitions listed in 40 CFR §§403.5(a)(1) and (b).

- A. Inhibition Concentration
- B. Interference
- C. Local Limits
- D. Monthly Average
- E. None of the Above

60. The arithmetic average value of all samples taken in a calendar month for an individual pollutant parameter. The monthly average may be the average of all grab samples taken in a given calendar month, or the average of all composite samples taken in a given calendar month.

- A. Inhibition Concentration
- B. Interference
- C. Local Limits
- D. Monthly Average
- E. None of the Above

61. The national program for issuing, modifying, revoking and reissuing, terminating, monitoring and enforcing discharge permits from point sources to waters of the United States, and imposing and enforcing pretreatment requirements, under sections 307, 402, 318, and 405 of the CWA.

- A. New Source
- B. National Pollutant Discharge Elimination System (NPDES)
- C. National Pretreatment Standard or Pretreatment Standard or Standard
- D. 90-Day Final Compliance Report
- E. None of the Above

62. Any regulation containing pollutant discharge limits promulgated by the EPA in accordance with section 307(b) and (c) of the Act, which applies to Industrial Users. This term includes prohibitive discharge limits established pursuant to §403.5.

- A. New Source
- B. National Pollutant Discharge Elimination System (NPDES)
- C. National Pretreatment Standard or Pretreatment Standard or Standard
- D. 90-Day Final Compliance Report
- E. None of the Above

63. Any building, structure, facility or installation from which there is or may be a discharge of pollutants, the construction of which commenced after the publication of proposed Pretreatment Standards under section 307(c) of the Act.

- A. New Source
- B. National Pollutant Discharge Elimination System (NPDES)
- C. National Pretreatment Standard or Pretreatment Standard or Standard
- D. 90-Day Final Compliance Report
- E. None of the Above

64. A report submitted by categorical industrial users within 90 days following the date for final compliance with the standards. This report must contain flow measurement (of regulated process streams and other streams), measurement of pollutants, and a certification as to whether the categorical standards are being met.

- A. New Source
- B. National Pollutant Discharge Elimination System (NPDES)
- C. National Pretreatment Standard or Pretreatment Standard or Standard
- D. 90-Day Final Compliance Report
- E. None of the Above

65. Any pollutant that is neither a toxic pollutant nor a conventional pollutant (e.g., manganese, ammonia, etc.)

- A. Nonconventional Pollutants
- B. Non-Contact Cooling Water
- C. Non-Regulated Wastestream
- D. Pass Through
- E. None of the Above

66. Water used for cooling which does not come into direct contact with any raw material, intermediate product, waste product, or finished product. The only pollutant contributed from the discharge is heat.

- A. Nonconventional Pollutants
- B. Non-Contact Cooling Water
- C. Non-Regulated Wastestream
- D. Pass Through
- E. None of the Above

67. Unregulated and dilute wastestreams (not regulated by categorical standards).

- A. Nonconventional Pollutants
- B. Non-Contact Cooling Water
- C. Non-Regulated Wastestream
- D. Pass Through
- E. None of the Above

68. A discharge which exits the POTW into waters of the United States in quantities or concentrations which, alone or in conjunction with a discharge or discharges from other sources, is a cause of a violation of any requirement of the POTW's NPDES permit (including an increase in the magnitude or duration of a violation).

- A. Nonconventional Pollutants
- B. Non-Contact Cooling Water
- C. Non-Regulated Wastestream
- D. Pass Through
- E. None of the Above

69. A report on compliance status submitted by categorical industrial users and significant noncategorical industrial users to the control authority at least semiannually (once every six months).

- A. Nonconventional Pollutants
- B. Non-Contact Cooling Water
- C. Periodic Compliance Report
- D. Pass Through
- E. None of the Above

70. Any discernible, confined, and discrete conveyance, including but not limited to any pipe, ditch, channel, tunnel, conduit, well, discrete fixture, container, rolling stock concentrated animal feeding operation vessel, or other floating craft from which pollutants are or may be discharged.

- A. Point Source
- B. Pollutant
- C. Pretreatment Requirements
- D. Pretreatment Standards for Existing Sources
- E. None of the Above

71. Dredged spoil, solid waste, incinerator residue, filter backwash, sewage, garbage, sewage sludge, munitions, chemical wastes, biological materials, radioactive materials (except those regulated under the Atomic Energy Act of 1954, as amended (42 U.S.C. 2011 et seq.)), heat, wrecked or discarded equipment, rock, sand, cellar dirt, and industrial, municipal and agricultural waste discharged into water.

- A. Pretreatment
- B. Pollutant
- C. Pretreatment Requirements
- D. Pretreatment Standards for Existing Sources
- E. None of the Above

72. The reduction of the amount of pollutants, the elimination of pollutants, or the alteration of the nature of pollutant properties in wastewater prior to or in lieu of discharging or otherwise introducing such pollutants into a POTW.

- A. Pretreatment
- B. Pollutant
- C. Pretreatment Requirements
- D. Pretreatment Standards for Existing Sources
- E. None of the Above

73. Any substantive or procedural requirement related to Pretreatment, other than a National Pretreatment Standard, imposed on an Industrial User.
- A. Pretreatment
 - B. Pollutant
 - C. Pretreatment Requirements
 - D. Pretreatment Standards for Existing Sources
 - E. None of the Above
74. Categorical Standards and requirements applicable to industrial sources that began construction prior to the publication of the proposed pretreatment standards for that industrial category.
- A. Pretreatment
 - B. Pollutant
 - C. Pretreatment Requirements
 - D. Pretreatment Standards for Existing Sources
 - E. None of the Above
75. Categorical Standards and requirements applicable to industrial sources that began construction after the publication of the proposed pretreatment standards for that industrial category. (see individual standards at 40 CFR Parts 405-471.)
- A. Pretreatment
 - B. Pollutant
 - C. Pretreatment Requirements
 - D. Pretreatment Standards for Existing Sources
 - E. None of the Above
76. Pollutant listed by the Administrator of the EPA under Clean Water Act section 307(a). The list of the current 126 Priority Pollutants can be found in 40 CFR Part 423 Appendix A.
- A. Production-Based Standards
 - B. Publicly Owned Treatment Works (POTW)
 - C. Process Wastewater
 - D. Priority Pollutant
 - E. Removal Credit
77. Any water which, during manufacturing or processing, comes into contact with or results from the production or use of any raw material, intermediate product, finished product, byproduct, or waste product.
- A. Production-Based Standards
 - B. Publicly Owned Treatment Works (POTW)
 - C. Process Wastewater
 - D. Priority Pollutant
 - E. Removal Credit
78. A legal mechanism implemented by a local government entity which sets out, among others, requirements for the discharge of pollutants into a publicly owned treatment works.
- A. Representative Sample
 - B. Sewer Use Ordinance (SUO)
 - C. Significant Industrial User (SIU)
 - D. Sanitary Sewer Overflow (SSO)
 - E. Self-Monitoring

79. All users subject to Categorical Pretreatment Standards under 40 CFR 403.6 and 40 CFR chapter I, subchapter N; and (2) Any other industrial user that: discharges an average of 25,000 gallons per day or more of process wastewater to the POTW (excluding sanitary, noncontact cooling and boiler blowdown wastewater).

- A. Representative Sample
- B. Sewer Use Ordinance (SUO)
- C. Significant Industrial User (SIU)
- D. Sanitary Sewer Overflow (SSO)
- E. Self-Monitoring

80. Contributes a process wastestream which makes up 5 percent or more of the average dry weather hydraulic or organic capacity of the POTW treatment plant; or is designated as such by the Control Authority as defined in 40 CFR 403.12(a) on the basis that the industrial user has a reasonable potential for adversely affecting the POTW's operation or for violating any pretreatment standard or requirement (in accordance with 40 CFR 403.8(f)(6)).

- A. Representative Sample
- B. Sewer Use Ordinance (SUO)
- C. Significant Industrial User (SIU)
- D. Sanitary Sewer Overflow (SSO)
- E. Self-Monitoring

81. A discharge standard expressed in terms of pollutant mass allowed in a discharge per unit of product manufactured.

- A. Production-Based Standards
- B. Publicly Owned Treatment Works (POTW)
- C. Process Wastewater
- D. Priority Pollutant
- E. Removal Credit

82. A treatment works as defined by section 212 of the Act, which is owned by a State or municipality (as defined by section 502(4) of the Act). This definition includes any devices or systems used in the storage, treatment, recycling, and reclamation of municipal sewage or industrial wastes of a liquid nature. It also includes sewers, pipes or other conveyances only if they convey wastewater to a POTW Treatment Plant.

- A. Production-Based Standards
- B. Publicly Owned Treatment Works (POTW)
- C. Process Wastewater
- D. Priority Pollutant
- E. Removal Credit

83. The term also means the municipality as defined in section 502(4) of the Act, which has jurisdiction over the Indirect Discharges to and the discharges from such a treatment works.

- A. Production-Based Standards
- B. Publicly Owned Treatment Works (POTW)
- C. Process Wastewater
- D. Priority Pollutant
- E. Removal Credit

84. For purposes of applying the combined wastestream formula, a wastestream from an industrial process that is regulated by a categorical standard.

- A. Production-Based Standards
- B. Regulated Wastestream
- C. Process Wastewater
- D. Priority Pollutant
- E. Removal Credit

85. Variance from a pollutant limit specified in a categorical pretreatment standard to reflect removal by the POTW of said pollutant.

- A. Production-Based Standards
- B. Publicly Owned Treatment Works (POTW)
- C. Process Wastewater
- D. Priority Pollutant
- E. Removal Credit

86. A sample from a wastestream that is as nearly identical as possible in composition to that in the larger volume of wastewater being discharged and typical of the discharge from the facility on a normal operating day.

- A. Representative Sample
- B. Sewer Use Ordinance (SUO)
- C. Significant Industrial User (SIU)
- D. Sanitary Sewer Overflow (SSO)

87. Untreated or partially treated sewage overflows from a sanitary sewer collection system.

- A. Representative Sample
- B. Sewer Use Ordinance (SUO)
- C. Significant Industrial User (SIU)
- D. Sanitary Sewer Overflow (SSO)
- E. Self-Monitoring

88. Sampling and analyses performed by a facility to ensure compliance with a permit or other regulatory requirements.

- A. Representative Sample
- B. Sewer Use Ordinance (SUO)
- C. Significant Industrial User (SIU)
- D. Sanitary Sewer Overflow (SSO)
- E. Self-Monitoring

89. Chronic violations of wastewater discharge limits, defined here as those in which sixty-six percent or more of all of the measurements taken during a six month period exceed (by any magnitude) the daily maximum limit or the average limit for the same pollutant parameter;

- A. Significant Noncompliance
- B. Sewer Use Ordinance (SUO)
- C. Significant Industrial User (SIU)
- D. Sanitary Sewer Overflow (SSO)
- E. None of the Above

90. Technical Review Criteria (TRC) violations, defined here as those in which thirty-three percent or more of all of the measurements for each pollutants parameter taken during a six-month period equal or exceed the product of the daily maximum limit or the average limit multiplied by the applicable TRC (TRC=1.4 for BOD, TSS, fats, oil, and grease, and 1.2 for all other pollutants except pH).

- A. Significant Noncompliance
- B. Sewer Use Ordinance (SUO)
- C. Significant Industrial User (SIU)
- D. Sanitary Sewer Overflow (SSO)
- E. None of the Above

91. Any other violation of a pretreatment effluent limit (daily maximum or longer-term average) that the Control Authority determines has caused, alone or in combination with other dischargers, interference or pass through (including endangering the health of POTW personnel or the general public).

- A. Significant Noncompliance
- B. Sewer Use Ordinance (SUO)
- C. Significant Industrial User (SIU)
- D. Sanitary Sewer Overflow (SSO)
- E. None of the Above

92. Any discharge of a pollutant that has caused imminent endangerment to human health, welfare or to the environment or has resulted in the POTW's exercise of its emergency authority under paragraph (f)(1)(vi)(B) of this section to halt or prevent such a discharge.

- A. Significant Noncompliance
- B. Sewer Use Ordinance (SUO)
- C. Significant Industrial User (SIU)
- D. Sanitary Sewer Overflow (SSO)
- E. None of the Above

93. Failure to meet, within 90 days after the schedule date, a compliance schedule milestone contained in a local control mechanism or enforcement order for starting construction, completing construction, or attaining final compliance.

- A. Significant Noncompliance
- B. Sewer Use Ordinance (SUO)
- C. Significant Industrial User (SIU)
- D. Sanitary Sewer Overflow (SSO)
- E. None of the Above

94. Failure to provide, within 30 days after the due date, required reports such as baseline monitoring reports, 90-day compliance reports, periodic self-monitoring reports, and reports on compliance with compliance schedules.

- A. Significant Noncompliance
- B. Sewer Use Ordinance (SUO)
- C. Significant Industrial User (SIU)
- D. Sanitary Sewer Overflow (SSO)
- E. None of the Above

95. Any other violation or group of violations which the Control Authority determines will adversely affect the operation or implementation of the local pretreatment program.
- A. Significant Noncompliance
 - B. Sewer Use Ordinance (SUO)
 - C. Significant Industrial User (SIU)
 - D. Sanitary Sewer Overflow (SSO)
 - E. None of the Above
96. Any discharge of a non-routine, episodic nature, including but not limited to, an accidental spill or a noncustomary batch discharge.
- A. Storm Water
 - B. Time Proportional Composite Sample
 - C. Slug Discharge
 - D. Specific Prohibitions
 - E. Standard Industrial Classification
97. Pollutants which create a fire or explosion hazard in the POTW, including but not limited to, wastestreams with a closed cup flashpoint of less than 140 degrees Fahrenheit or 60 degrees Centigrade using the test methods specified in 40 CFR Part 261.21;
- A. Storm Water
 - B. Time Proportional Composite Sample
 - C. Slug Discharge
 - D. Specific Prohibitions
 - E. Standard Industrial Classification
98. Pollutants which will cause corrosive structural damage to the POTW, but in no case discharges with pH lower than 5.0, unless the works is specifically designed to accommodate such discharges.
- A. Storm Water
 - B. Time Proportional Composite Sample
 - C. Slug Discharge
 - D. Specific Prohibitions
 - E. Standard Industrial Classification
99. Solid or viscous pollutants in amounts which will cause obstruction to the flow in the POTW resulting in interference.
- A. Storm Water
 - B. Time Proportional Composite Sample
 - C. Slug Discharge
 - D. Specific Prohibitions
 - E. Standard Industrial Classification
100. Any pollutant, including oxygen-demanding pollutants (BOD, etc.) Released in a discharge at a flow rate and/or concentration which will cause interference with the POTW.
- A. Storm Water
 - B. Time Proportional Composite Sample
 - C. Slug Discharge
 - D. Specific Prohibitions
 - E. Standard Industrial Classification

101. Heat in amounts which will inhibit biological activity in the POTW resulting in interference, but in no case heat in such quantities that the temperature at the POTW treatment plant exceeds 40°C (104°F) unless the Approval Authority, upon request of the POTW, approves alternative temperature limits.

- A. Storm Water
- B. Time Proportional Composite Sample
- C. Slug Discharge
- D. Specific Prohibitions
- E. Standard Industrial Classification

102. Petroleum oil, nonbiodegradable cutting oil, or products of mineral oil origin in amounts that will cause interference or pass through.

- A. Storm Water
- B. Time Proportional Composite Sample
- C. Slug Discharge
- D. Specific Prohibitions
- E. Standard Industrial Classification

103. Pollutants which result in the presence of toxic gases, vapors, or fumes within the POTW in a quantity that may cause acute worker health and safety problems.

- A. Storm Water
- B. Time Proportional Composite Sample
- C. Slug Discharge
- D. Specific Prohibitions
- E. Standard Industrial Classification

104. Any trucked or hauled pollutants, except at discharge points designated by the POTW.

- A. Storm Water
- B. Time Proportional Composite Sample
- C. Slug Discharge
- D. Specific Prohibitions
- E. Standard Industrial Classification

105. A system developed by the U.S. Office of Management and Budget that is used to classify various types of business entities. Effective in 1998, the SIC scheme is replaced by the North American Industry Classification System (**NAICS**), although the EPA has not yet implemented this change.

- A. Storm Water
- B. Time Proportional Composite Sample
- C. Toxic Pollutant
- D. Specific Prohibitions
- E. Standard Industrial Classification

106. Rain water, snowmelt, and surface runoff and drainage.

- A. Storm Water
- B. Time Proportional Composite Sample
- C. Toxic Pollutant
- D. Specific Prohibitions
- E. Standard Industrial Classification

107. A sample consisting of a series of aliquots collected from a representative point in the discharge stream at equal time intervals over the entire discharge period on the sampling day.

- A. Storm Water
- B. Time Proportional Composite Sample
- C. Toxic Pollutant
- D. Specific Prohibitions
- E. Standard Industrial Classification

108. Any pollutant listed as toxic under section 307(a)(1) of the CWA, or in the case of sludge use or disposal practices, any pollutant identified in regulations implementing section 405(d) of the CWA.

- A. Storm Water
- B. Toxicity Test
- C. Toxic Pollutant
- D. Toxicity Reduction Evaluation
- E. Standard Industrial Classification

109. A site-specific study conducted in a stepwise process designed to identify the causative agent(s) of effluent toxicity, isolate the sources of toxicity, evaluate the effectiveness of toxicity control options, and then confirm the reduction in effluent toxicity.

- A. Storm Water
- B. Toxicity Test
- C. Toxic Pollutant
- D. Toxicity Reduction Evaluation
- E. Standard Industrial Classification

110. A procedure to determine the toxicity of a chemical or an effluent using living organisms. A toxicity test measures the degree of effect on exposed test organisms of a specific chemical or effluent.

- A. Storm Water
- B. Toxicity Test
- C. Toxic Pollutant
- D. Toxicity Reduction Evaluation
- E. Standard Industrial Classification

111. Set of procedures to identify the specific chemicals responsible for effluent toxicity.

- A. Toxicity Identification Evaluation
- B. Toxicity Test
- C. Toxic Pollutant
- D. Toxicity Reduction Evaluation
- E. Standard Industrial Classification

112. For purposes of applying the combined wastestream formula, a wastestream not regulated by a categorical standard nor considered a dilute wastestream.

- A. Unregulated Wastestream
- B. Water Quality Standard
- C. Water Quality Criteria
- D. Upset
- E. Whole Effluent Toxicity

113. An exceptional incident in which there is unintentional and temporary noncompliance with categorical Pretreatment Standards because of factors beyond the reasonable control of the Industrial User.

- A. Unregulated Wastestream
- B. Water Quality Standard
- C. Water Quality Criteria
- D. Upset
- E. Whole Effluent Toxicity

114. An Upset does not include noncompliance to the extent caused by operational error, improperly designed treatment facilities, inadequate treatment facilities, lack of preventative maintenance, or careless or improper operation.

- A. Unregulated Wastestream
- B. Water Quality Standard
- C. Water Quality Criteria
- D. Upset
- E. Whole Effluent Toxicity

115. Comprised of both numeric and narrative criteria. Numeric criteria are scientifically derived ambient concentrations developed by EPA or States for various pollutants of concern to protect human health and aquatic life. Narrative criteria are statements that describe the desired water quality goal.

- A. Unregulated Wastestream
- B. Water Quality Standard
- C. Water Quality Criteria
- D. Upset
- E. Whole Effluent Toxicity

116. A statute or regulation that consists of the beneficial designated use or uses of a waterbody, the numeric and narrative water quality criteria that are necessary to protect the use or uses of that particular waterbody, and an antidegradation statement.

- A. Unregulated Wastestream
- B. Water Quality Standard
- C. Water Quality Criteria
- D. Upset
- E. Whole Effluent Toxicity

117. The total toxic effect of an effluent measured directly with a toxicity test.

- A. Unregulated Wastestream
- B. Water Quality Standard
- C. Water Quality Criteria
- D. Upset
- E. Whole Effluent Toxicity

These questions will come from the body of the course text.

118. Prohibited discharge standards are somewhat general, national standards are applicable to all industrial users to a _____, regardless of whether or not the POTW has an approved pretreatment program or the industrial user has been issued a permit.

- A. Prohibited discharge standards
- B. Beneficial biosolids use
- C. On pollutant discharges
- D. POTW
- E. None of the Above

119. These standards are designed to protect against pass through and interference, protect the _____ collection system, and to promote worker safety and beneficial biosolids use.

- A. Prohibited discharge standards
- B. Beneficial biosolids use
- C. On pollutant discharges
- D. POTW
- E. None of the Above

120. Categorical Pretreatment Standards are limitations on pollutant discharges to publicly owned treatment works (POTWs), promulgated by the _____ in accordance with Section 307 of the Clean Water Act that apply to specific process wastewaters of particular industrial categories.

- A. Prohibited discharge standards
- B. Beneficial biosolids use
- C. On pollutant discharges
- D. POTW
- E. None of the Above

121. These are national, technology-based standards that apply regardless of whether or not the _____ has an approved pretreatment program or the industrial user has been issued a permit.

- A. Prohibited discharge standards
- B. Beneficial biosolids use
- C. On pollutant discharges
- D. POTW
- E. None of the Above

122. Such industries are called Categorical Industrial Users. The standards applicable to industrial discharges to a POTW collection system are designated in the Effluent Guidelines & Limitations [Parts 405-471] by the terms "Pretreatment Standards for Existing Sources" (or "_____") and "Pretreatment Standards for New Sources" (or "PSNS").

- A. NPDES
- B. NSPS
- C. PSES
- D. POTW
- E. None of the Above

123. The Effluent Guidelines & Limitations designated by the terms "Best Practicable Control Technology Currently Available (BPT)", "Best Available Technology Economically Achievable (BAT)", "Best Conventional Pollutant Control Technology (BCT)", and "New Source Performance Standards (_____)" apply to industries that discharge process wastewater to waters of the U.S. and should have a National Pollutant Discharge Elimination System (NPDES) Permit.

- A. NPDES
- B. NSPS
- C. PSES
- D. POTW
- E. None of the Above

124. Local limits are developed to reflect specific needs and capabilities at individual POTWs and designed to protect the _____ receiving waters.

- A. NPDES
- B. NSPS
- C. PSES
- D. POTW
- E. None of the Above

125. Regulations at 40 CFR 403.8(f)(4) state that POTW Pretreatment Programs must develop local limits or demonstrate that they are unnecessary; 40 CFR 403.5(c) states that local limits are needed when pollutants are received that could result in pass through or interference at the _____.

- A. NPDES
- B. NSPS
- C. PSES
- D. POTW
- E. None of the Above

126. Essentially, _____translate the general prohibited discharge standards of 40 CFR 403.5 to site-specific needs.

- A. NPDES
- B. NSPS
- C. PSES
- D. POTW
- E. None of the Above

The Following questions will come from The EPA Supplemental Manual on the Development And Implementation of Local Discharge Limitations Under the Pretreatment Program: Residential and Commercial Toxic Pollutant Loadings and POTW Removal published May 1, 1991 provides information related to residential and commercial sources of toxic pollutants and estimated removal efficiencies of municipal treatment processes.

127. A statute or regulation that consists of the beneficial designated use or uses of a waterbody, the numeric and _____ water quality criteria that are necessary to protect the use or uses of that particular waterbody, and an antidegradation statement.

- A. Public
- B. Narrative
- C. One percent
- D. Wastes

128. The average American uses roughly 100 to 200 gallons of water a day, with less than _____ of that water actually being consumed. The rest is used for activities such as washing, preparing food, watering lawns, heating and cooling, transporting wastes, and fire protection.

- A. Public
- B. Overloading
- C. One percent
- D. Wastes
- E. None of the Above

129. The public is very _____ about the quality of water that comes out of their tap each day, quickly notifying authorities of changes in appearance, odor, and taste.

- A. Public
- B. Conscious
- C. One percent
- D. Wastes
- E. None of the Above

130. These same Americans, on average, _____ about the same amount of wastewater to local sewage treatment plants daily. This wastewater (commonly referred to as “domestic sewage”) receives much less attention than drinking water, likely the result of an “out of sight, out of mind” attitude.

- A. Public
- B. Discharge
- C. One percent
- D. Wastes
- E. None of the Above

131. The Clean Water Act is a 1977 amendment to the _____, which set the basic structure for regulating discharges of pollutants to waters of the United States.

- A. 1977 amendments
- B. Clean Water Act
- C. NPDES
- D. Federal Water Pollution Control Act of 1972
- E. None of the Above

132. The law gave the _____ the authority to set effluent standards on an industry basis (technology-based) and continued the requirements to set water quality standards for all contaminants in surface waters.

- A. 1977 amendments
- B. Clean Water Act
- C. EPA
- D. National clean water legislation
- E. None of the Above

133. The CWA makes it unlawful for any person to discharge any pollutant from a point source into navigable waters unless a permit _____ is obtained under the Act.

- A. 1977 amendments
- B. Clean Water Act
- C. NPDES
- D. National clean water legislation

134. The _____ focused on toxic pollutants.

- A. 1977 amendments
- B. Clean Water Act
- C. NPDES
- D. National clean water legislation
- E. None of the Above

135. In 1987, the _____ was reauthorized and again focused on toxic substances, authorized citizen suit provisions, and funded sewage treatment plants (**POTW's**) under the Construction Grants Program.

- A. 1977 amendments
- B. Clean Water Act
- C. NPDES
- D. National clean water legislation
- E. None of the Above

136. The _____ provides for the delegation by the EPA of many permitting, administrative, and enforcement aspects of the law to state governments.

- A. 1977 amendments
- B. Clean Water Act
- C. NPDES
- D. National clean water legislation
- E. None of the Above

137. In states with the authority to implement _____ programs, the EPA still retains oversight responsibilities.

- A. 1977 amendments
- B. Clean Water Act
- C. NPDES
- D. National clean water legislation
- E. None of the Above

138. In 1972, Congress enacted the first comprehensive _____ in response to growing public concern for serious and widespread water pollution.

- A. 1977 amendments
- B. Clean Water Act
- C. NPDES
- D. National clean water legislation
- E. None of the Above

139. The _____ is the primary federal law that protects our nation's waters, including lakes, rivers, aquifers and coastal areas.

- A. 1977 amendments
- B. Clean Water Act
- C. NPDES
- D. National clean water legislation
- E. None of the Above

140. The _____ focuses on improving the quality of the nation's waters.

- A. 1977 amendments
- B. Clean Water Act
- C. NPDES
- D. National clean water legislation
- E. None of the Above

141. The Clean Water Act provides a comprehensive framework of standards, technical tools and financial assistance to address the many causes of pollution and _____, including municipal and industrial wastewater discharges, polluted runoff from urban and rural areas, and habitat destruction.

- A. 1977 amendments
- B. Clean Water Act
- C. NPDES
- D. Poor water quality
- E. None of the Above

142. The Clean Water Act requires major industries to meet performance standards to ensure pollution control; charges states and tribes with _____ criteria appropriate for their waters and developing pollution control programs to meet them.

- A. 1977 amendments
- B. Clean Water Act
- C. NPDES
- D. Setting specific water quality
- E. None of the Above

143. The Clean Water Act provides funding to states and communities to help them meet their clean _____; and protects valuable wetlands and other aquatic habitats through a permitting process that ensures development and other activities are conducted in an environmentally sound manner.

- A. 1977 amendments
- B. Clean Water Act
- C. NPDES
- D. Water infrastructure needs
- E. None of the Above

144. The _____ continues to provide a clear path for clean water and a solid foundation for an effective national water program.

- A. 1977 amendments
- B. Clean Water Act
- C. NPDES
- D. Effective national water program
- E. None of the Above

145. There are two basic stages in the treatment of _____, primary and secondary.

- A. Organisms
- B. Primary
- C. Water
- D. Wastewater
- E. None of the Above

146. In the _____ stage, solids are allowed to settle and are removed from wastewater. The secondary stage uses biological processes to further purify wastewater. Sometimes, these stages are combined into one operation.

- A. Organisms
- B. Primary
- C. Water
- D. Wastewater

147. Wastewater is mostly _____ by weight. Other materials make up only a small portion of wastewater, but can be present in large enough quantities to endanger public health and the environment.

- A. Organisms
- B. Primary
- C. Water
- D. Wastewater
- E. None of the Above

148. Because practically anything that can be flushed down a toilet, drain, or sewer can be found in _____, even household sewage contains many potential pollutants.

- A. Organisms
- B. Primary
- C. Water
- D. Wastewater
- E. None of the Above

149. Many different types of _____ live in wastewater and some are essential contributors to treatment.

- A. Organisms
- B. Primary
- C. Water
- D. Wastewater
- E. None of the Above

150. A variety of bacteria, _____, and worms work to break down certain carbon-based (organic) pollutants in wastewater by consuming them.

- A. Organisms
- B. Primary
- C. Water
- D. Wastewater
- E. None of the Above

151. _____ turn wastes into carbon dioxide, water, or new cell growth.

- A. Organisms
- B. Primary
- C. Water
- D. Wastewater
- E. None of the Above

152. Bacteria and other microorganisms are particularly plentiful in _____ and accomplish most of the treatment.

- A. Organisms
- B. Primary
- C. Water
- D. Wastewater
- E. None of the Above

153. Most _____ treatment systems are designed to rely in large part on biological processes.

- A. Organisms
- B. Primary
- C. Water
- D. Wastewater
- E. None of the Above

154. Many disease-causing viruses, _____, and bacteria also are present in wastewater and enter from almost anywhere in the community. These pathogens often originate from people and animals who are infected with or are carriers of a disease.

- A. Gastroenteritis
- B. Pathogens
- C. Diseases
- D. Parasites

155. Graywater and blackwater from typical homes contain enough pathogens to pose a risk to _____. Other likely sources in communities include hospitals, schools, farms, and food processing plants.

- A. Gastroenteritis
- B. Pathogens
- C. Diseases
- D. Parasites
- E. None of the Above

156. Gastroenteritis can result from a variety of _____ in wastewater, and cases of illnesses caused by the parasitic protozoa *Giardia lamblia* and *Cryptosporidium* are not unusual in the U.S.

- A. Gastroenteritis
- B. Pathogens
- C. Diseases
- D. Parasites
- E. None of the Above

157. Other important wastewater-related _____ include hepatitis A, typhoid, polio, cholera, and dysentery. Outbreaks of these diseases can occur as a result of drinking water from wells polluted by wastewater, eating contaminated fish, or recreational activities in polluted waters.

- A. Gastroenteritis
- B. Pathogens
- C. Diseases
- D. Parasites
- E. None of the Above

158. _____are found everywhere in the environment. They are composed of the carbon-based chemicals that are the building blocks of most living things.

- A. Gastroenteritis
- B. Pathogens
- C. Diseases
- D. Parasites
- E. None of the Above

159. Organic materials in wastewater originate from plants, animals, or _____, and enter wastewater through human wastes, paper products, detergents, cosmetics, foods, and from agricultural, commercial, and industrial sources.

- A. Gastroenteritis
- B. Pathogens
- C. Diseases
- D. Parasites
- E. None of the Above

160. _____normally are some combination of carbon, hydrogen, oxygen, nitrogen, and other elements. Many organics are proteins, carbohydrates, or fats and are biodegradable, which means they can be consumed and broken down by organisms.

- A. Proteins
- B. Organic matter or organic compounds or organic materials
- C. Synthetic organics
- D. BOD
- E. None of the Above

161. Too much _____in wastewater can be devastating to receiving waters.

- A. Proteins
- B. Organic matter or organic compounds or organic materials
- C. Synthetic organics
- D. BOD
- E. None of the Above

162. Large amounts of biodegradable materials are dangerous to lakes, streams, and oceans, because organisms use _____in the water to break down the wastes.

- A. Proteins
- B. Organic matter or organic compounds or organic materials
- C. Synthetic organics
- D. DO
- E. None of the Above

163. Some organic compounds are more stable than others and cannot be quickly broken down by organisms, posing an additional challenge for treatment. This is true of many _____compounds developed for agriculture and industry.

- A. Proteins
- B. Organic matter or organic compounds or organic materials
- C. Synthetic organic
- D. BOD
- E. None of the Above

164. Certain _____ are highly toxic.

- A. Proteins
- B. Organic matter or organic compounds or organic materials
- C. Synthetic organics
- D. BOD
- E. None of the Above

165. Benzene and toluene are two _____ found in some solvents, pesticides, and other products.

- A. Proteins
- B. Toxic organic compounds
- C. Synthetic organics
- D. BOD
- E. None of the Above

166. New _____ compounds are being developed all the time, which can complicate treatment efforts.

- A. Proteins
- B. Organic matter or organic compounds or organic materials
- C. Synthetic organic
- D. BOD
- E. None of the Above

167. Fatty organic materials from animals, vegetables, and petroleum also are not quickly broken down by _____ and can cause pollution in receiving environments.

- A. Proteins
- B. Organic matter or organic compounds or organic materials
- C. Synthetic organics
- D. Bacteria
- E. None of the Above

168. When large amounts of oils and greases are discharged to receiving waters from community systems, they increase _____ and they may float to the surface and harden, causing aesthetically displeasing conditions.

- A. Proteins
- B. Organic matter or organic compounds or organic materials
- C. Synthetic organics
- D. BOD
- E. None of the Above

169. _____ also can trap trash, plants, and other materials, causing foul odors and attracting flies and mosquitoes and other disease vectors. In some cases, too much oil and grease causes septic conditions in ponds and lakes by preventing oxygen from the atmosphere from reaching the water.

- A. Inorganic minerals
- B. Inorganic substances
- C. Oils and greases
- D. Petroleum-based waste oils
- E. Stormwater

170. Onsite systems also can be harmed by too much _____, which can clog onsite system drainfield pipes and soils, adding to the risk of system failure.

- A. Inorganic minerals
- B. Inorganic substances
- C. Oils and grease
- D. Petroleum-based waste oils
- E. Stormwater

171. Excessive _____ also adds to the septic tank scum layer, causing more frequent tank pumping to be required. Both possibilities can result in significant costs to homeowners.

- A. Inorganic minerals
- B. Inorganic substances
- C. Grease
- D. Petroleum-based waste oils
- E. Stormwater

172. _____ used for motors and industry are considered hazardous waste and should be collected and disposed of separately from wastewater.

- A. Inorganic minerals
- B. Inorganic substances
- C. Oils and greases
- D. Petroleum-based waste oils
- E. Stormwater

173. _____, metals, and compounds, such as sodium, potassium, calcium, magnesium, cadmium, copper, lead, nickel, and zinc are common in wastewater from both residential and nonresidential sources.

- A. Inorganic minerals
- B. Inorganic substances
- C. Oils and greases
- D. Petroleum-based waste oils
- E. Stormwater

174. They can originate from a variety of sources in the community including industrial and commercial sources, _____, and inflow and infiltration from cracked pipes and leaky manhole covers.

- A. Inorganic minerals
- B. Inorganic substances
- C. Oils and greases
- D. Petroleum-based waste oils
- E. Stormwater

175. Most _____ are relatively stable, and cannot be broken down easily by organisms in wastewater.

- A. Inorganic minerals
- B. Inorganic substances
- C. Oils and greases
- D. Petroleum-based waste oils
- E. Stormwater

176. Large amounts of many _____ can contaminate soil and water. Some are toxic to animals and humans and may accumulate in the environment. For this reason, extra treatment steps are often required to remove inorganic materials from industrial wastewater sources.

- A. Inorganic minerals
- B. Inorganic substances
- C. Oils and greases
- D. Petroleum-based waste oils

177. Heavy metals are discharged with many types of industrial wastewaters, are difficult to remove by _____.

- A. Solid materials
- B. Nitrogen
- C. Nutrients
- D. Deprived of oxygen
- E. None of the Above

178. Although acute poisonings from heavy metals in drinking water are rare in the U.S., potential long-term health effects of ingesting small amounts of some _____ over an extended period of time are possible.

- A. Solid materials
- B. Nitrogen
- C. Nutrients
- D. Deprived of oxygen
- E. None of the Above

179. Wastewater often contains large amounts of the _____ nitrogen and phosphorus in the form of nitrate and phosphate, which promote plant growth.

- A. Solid materials
- B. Nitrogen
- C. Nutrients
- D. Deprived of oxygen
- E. None of the Above

180. Organisms only require small amounts of nutrients in biological treatment, so there normally is an excess available in treated wastewater. In severe cases, excessive _____ in receiving waters cause algae and other plants to grow quickly depleting oxygen in the water.

- A. Solid materials
- B. Nitrogen
- C. Nutrients
- D. Deprived of oxygen
- E. None of the Above

181. _____, fish and other aquatic life die, emitting foul odors.

- A. Solid materials
- B. Nitrogen
- C. Nutrients
- D. Deprived of oxygen
- E. None of the Above

182. _____ from wastewater have also been linked to ocean "red tides" that poison fish and cause illness in humans.

- A. Solid materials
- B. Nitrogen
- C. Nutrients
- D. Deprived of oxygen
- E. None of the Above

183. _____ in drinking water may contribute to miscarriages and is the cause of a serious illness in infants called methemoglobinemia or "blue baby syndrome."

- A. Solid materials
- B. Nitrogen
- C. Nutrients
- D. Deprived of oxygen
- E. None of the Above

184. _____ in wastewater can consist of organic and/or inorganic materials and organisms.

- A. Solid materials
- B. Nitrogen
- C. Nutrients
- D. Deprived of oxygen
- E. None of the Above

185. The solids must be significantly reduced by treatment or they can increase BOD when discharged to receiving waters and provide places for _____ to escape disinfection. They also can clog soil absorption fields in onsite systems.

- A. Solid materials
- B. Nitrogen
- C. Nutrients
- D. Deprived of oxygen
- E. None of the Above

186. Certain substances, such as sand, grit, and heavier organic and inorganic materials settle out from the rest of the wastewater stream during the preliminary stages of treatment.

- A. Suspended solids
- B. Settleable solids
- C. Biologically active layer
- D. Dissolved solids
- E. None of the Above

187. On the bottom of settling tanks and ponds, organic material makes up a _____ of sludge that aids in treatment.

- A. Suspended solids
- B. Settleable solids
- C. Biologically active layer
- D. Dissolved solids
- E. None of the Above

188. Materials that resist settling may remain suspended in wastewater.

- A. Suspended solids
- B. Settleable solids
- C. Biologically active layer
- D. Dissolved solids
- E. None of the Above

189. _____ in wastewater must be treated, or they will clog soil absorption systems or reduce the effectiveness of disinfection systems.

- A. Suspended solids
- B. Settleable solids
- C. Biologically active layer
- D. Dissolved solids
- E. None of the Above

190. Small particles of certain wastewater materials can dissolve like salt in water.

- A. Suspended solids
- B. Settleable solids
- C. Biologically active layer
- D. Dissolved solids
- E. None of the Above

191. Some dissolved materials are consumed by microorganisms in wastewater, but others, such as heavy metals, are difficult to remove by conventional treatment. Excessive amounts of _____ in wastewater can have adverse effects on the environment.

- A. Suspended solids
- B. Settleable solids
- C. Biologically active layer
- D. Dissolved solids
- E. None of the Above

192. Certain gases in wastewater can cause _____, affect treatment, or are potentially dangerous.

- A. Suspended solids
- B. Settleable solids
- C. Biologically active layer
- D. Dissolved solids
- E. None of the Above

193. _____ is a byproduct of anaerobic biological treatment and is highly combustible.

- A. Hydrogen sulfide
- B. Methane gas
- C. Wastewater odors
- D. Ammonia
- E. Substances

194. Special precautions need to be taken near septic tanks, manholes, treatment plants, and other areas where _____ can collect.

- A. Hydrogen sulfide
- B. Methane gas
- C. Wastewater gases
- D. Ammonia
- E. Substances

195. The gases _____ and ammonia can be toxic and pose asphyxiation hazards.

- A. Hydrogen sulfide
- B. Methane gas
- C. Wastewater odors
- D. Ammonia
- E. Substances

196. _____ as a dissolved gas in wastewater also is dangerous to fish.

- A. Hydrogen sulfide
- B. Methane gas
- C. Wastewater odors
- D. Ammonia
- E. Substances

197. Unless effectively contained or minimized by design and location, _____ can affect the mental well-being and quality of life of residents. In some cases, odors can even lower property values and affect the local economy.

- A. Hydrogen sulfide
- B. Methane gas
- C. Wastewater odors
- D. Ammonia
- E. Substances

198. In addition to the many _____ found in wastewater, there are other characteristics system designers and operators use to evaluate wastewater.

- A. Temperatures
- B. Turbidity
- C. Alkalinity
- D. pH
- E. None of the Above

199. The color, odor, and _____ of wastewater give clues about the amount and type of pollutants present and treatment necessary.

- A. Temperatures
- B. Turbidity
- C. Alkalinity
- D. pH
- E. None of the Above

200. The following are some other important wastewater characteristics that can affect public health and the environment, as well as the _____, cost, and effectiveness of treatment.

- A. Temperatures
- B. Turbidity
- C. Alkalinity
- D. pH
- E. None of the Above

201. Activated sludge, trickling filters, and rotating biological contactors are examples of common secondary treatment operations. Depending on effluent discharge requirements, POTWs may perform other “_____” operations such as nitrification (to convert ammonia and nitrite to the less toxic nitrate), denitrification (to convert nitrate to molecular nitrogen).

- A. Treated effluent directly
- B. Effluent is discharged
- C. Advanced treatment
- D. Physical-chemical treatment
- E. None of the Above

202. _____ (to remove dissolved metals and organics), and disinfection (to kill any remaining pathogens).

- A. Treated effluent directly
- B. Effluent is discharged
- C. Advanced treatment
- D. Physical-chemical treatment
- E. None of the Above

203. After treatment is complete, _____ to the receiving stream, typically a creek, river, lake, estuary or ocean.

- A. Treated effluent directly
- B. Effluent is discharged
- C. Advanced treatment
- D. Physical-chemical treatment
- E. None of the Above

204. Some POTWs may apply _____ to golf courses, parkland, or croplands.

- A. Treated effluent directly
- B. Effluent is discharged
- C. Advanced treatment
- D. Physical-chemical treatment
- E. None of the Above

205. Both primary and secondary treatment _____ waste solids, known as sewage sludge or biosolids.

- A. Treated effluent directly
- B. Processes generate
- C. Advanced treatment
- D. May be used productively
- E. None of the Above

206. Sludges from the treatment process _____ (i.e., as fertilizer or soil conditioner), disposed of in a landfill or incinerated in a dedicated sewage sludge incinerator with the ash also disposed of in a landfill.

- A. Treated effluent directly
- B. Processes generate
- C. Advanced treatment
- D. May be used productively
- E. None of the Above

207. _____ are designed to treat typical household wastes and biodegradable commercial and biodegradable industrial wastes. The Clean Water Act (CWA) and the EPA define the contaminants from these sources as conventional pollutants.

- A. POTWs
- B. Commercial and industrial facilities
- C. Treatment techniques
- D. Non-domestic dischargers
- E. None of the Above

208. _____ may, however, discharge toxic pollutants that the treatment plant is neither designed for nor able to remove.

- A. POTWs
- B. Commercial and industrial facilities
- C. Treatment techniques
- D. Non-domestic dischargers
- E. None of the Above

209. _____ are not designed to treat toxics in industrial waste. As such, these discharges, from both industrial and commercial sources, can cause serious problems.

- A. POTWs
- B. Commercial and industrial facilities
- C. Treatment techniques
- D. Non-domestic dischargers
- E. None of the Above

210. The undesirable outcome of these discharges can be prevented using _____ or management practices to reduce or eliminate the discharge of these contaminants.

- A. POTWs
- B. Commercial and industrial facilities
- C. Treatment techniques
- D. Non-domestic dischargers

211. The act of treating wastewater prior to discharge to a _____ is commonly referred to as "pretreatment."

- A. POTWs
- B. Commercial and industrial facilities
- C. Treatment techniques
- D. Non-domestic dischargers
- E. None of the Above

212. The National Pretreatment Program, published in Title 40 Code of Federal Regulations (CFR) Part 403, provides the regulatory basis to require non-domestic dischargers to comply with pretreatment standards (effluent limitations) to ensure that the goals of the _____ are attained.

- A. POTWs
- B. Commercial and industrial facilities
- C. Treatment techniques
- D. Non-domestic dischargers
- E. None of the Above

213. As noted in 40CFR §403.2, the objectives of the National Pretreatment Program are to: Prevent the introduction of pollutants into _____ which will interfere with the operation of a POTW, including interference with its use or disposal of municipal sludge;

- A. POTWs
- B. Commercial and industrial facilities
- C. Treatment techniques
- D. Non-domestic dischargers
- E. None of the Above

214. Prevent the introduction of pollutants into _____ which will pass through the treatment works or otherwise be incompatible with such works.

- A. POTWs
- B. Commercial and industrial facilities
- C. Treatment techniques
- D. Non-domestic dischargers
- E. None of the Above

215. Improve opportunities to recycle and reclaim _____ wastewaters and sludges.

- A. POTWs
- B. Municipal and industrial
- C. Treatment techniques
- D. Non-domestic dischargers
- E. None of the Above

216. Air pollution can occur from volatilization of toxic chemicals in the _____ collection system or treatment plant, or through incineration of sewage sludge.

- A. POTWs
- B. Commercial and industrial facilities
- C. Treatment techniques
- D. Non-domestic dischargers
- E. None of the Above

217. _____ system and treatment plant from acidic discharges or discharges containing elevated levels of sulfate (forming toxic and corrosive hydrogen sulfide).

- A. Groundwater pollution
- B. Corrosion of collection system
- C. Producing sludges
- D. Capability to remove

218. _____ can occur from leaks in the collection system or pollutants from contaminated sewage sludge.

- A. Groundwater pollution
- B. Corrosion of collection system
- C. Producing sludges
- D. Capability to remove
- E. Removed in primary treatment

219. Even where the POTW has the _____ these toxics, the pollutants may end up in the sewage sludge, thereby limiting sludge disposal options or escalating the cost of disposal. Incinerated contaminated sludge may release toxic emissions into the atmosphere.

- A. Groundwater pollution
- B. Corrosion of collection system
- C. Producing sludges
- D. Capability to remove
- E. Removed in primary treatment

220. Toxic metals _____, while itself not an inhibitory process, can impact sludge digestion, a process that utilizes bacteria to stabilize sludge solids.

- A. Groundwater pollution
- B. Corrosion of collection system
- C. Producing sludges
- D. Capability to remove
- E. Removed in primary treatment

221. For example, chromium can inhibit reproduction of aerobic digestion microorganisms, thereby disrupting sludge treatment and _____ that must be disposed of with special treatment.

- A. Groundwater pollution
- B. Corrosion of collection system
- C. Producing sludges
- D. Capability to remove
- E. Removed in primary treatment

222. Uncontaminated _____, on the other hand, can be used as fertilizer or soil conditioner, thereby improving the productivity of our land.

- A. Hexane
- B. Sludge
- C. Volatile organics
- D. Slug
- E. None of the Above

223. Many municipalities apply sewage sludge to pastureland or parkland that they could not do if the _____ were contaminated.

- A. Hexane
- B. Sludge
- C. Volatile organics
- D. Slug
- E. None of the Above

224. _____ discharged to sewers can accumulate in the headspace of sewers, increasing the likelihood of explosions that can cause significant damage.

- A. Hexane
- B. Sludge
- C. Volatile organics
- D. Slug
- E. None of the Above

225. Probably the most well known impact from industrial discharges to POTWs in the U.S. is the explosion in Louisville, KY that occurred in 1981 as the result of excessive discharges of _____ into the collection system, eventually igniting and destroying more than 3 miles of sewers and causing \$20 million in damage.

- A. Hexane
- B. Sludge
- C. Volatile organics
- D. Slug
- E. None of the Above

226. Discharge limitations and management practices to control _____ discharges have significantly reduced the likelihood of future catastrophes such as the explosion in Louisville.

- A. Hexane
- B. Sludge
- C. Volatile organics
- D. Slug
- E. None of the Above

227. Discharges of toxic _____ can also result in the release of poisonous gas. This occurs most often when acidic wastes react with other wastes in the discharge.

- A. Hexane
- B. Sludge
- C. Organics
- D. Slug
- E. None of the Above

228. Cyanide and acid, both present in many electroplating operations, react to form highly toxic _____.

- A. Chromium
- B. Solvents
- C. Toxic metals
- D. Hydrogen cyanide gas
- E. None of the Above

229. Sulfides from leather tanning can combine with acid to form _____, another toxic gas. These can be highly dangerous to POTW collection system operators exposed to such conditions in the performance of their duties.

- A. Chromium
- B. Solvents
- C. Toxic metals
- D. Hydrogen sulfide
- E. None of the Above

230. _____ including lead, mercury, chromium, and cadmium that cannot be destroyed or broken down through treatment or environmental degradation.

- A. Chromium
- B. Solvents
- C. Toxic metals
- D. Contaminated seafood
- E. None of the Above

231. _____ can cause different human health problems such as lead poisoning and cancer.

- A. Chromium
- B. Solvents
- C. Toxic metals
- D. Contaminated seafood
- E. None of the Above

232. Consumption of _____ and agricultural food crops has resulted in exposures exceeding recommended safe levels.

- A. Chromium
- B. Solvents
- C. Toxic metals
- D. Contaminated seafood
- E. None of the Above

233. _____, including solvents, pesticides, dioxins, and polychlorinated biphenyls (PCBs) can be cancer-causing and lead to other serious ailments, such as kidney and liver damage, anemia, and heart failure.

- A. Chromium
- B. Solvents
- C. Toxic organics
- D. Contaminated seafood
- E. None of the Above

234. Reductions in pollutants can ensure that industrial development vital to the economic well being of a community is compatible with a _____.

- A. POTW (S)
- B. Community
- C. Treatment works
- D. Systems
- E. None of the Above

235. Many POTWs are responsible for ensuring that industrial and _____ do not cause problems resulting from their discharges. In 1991, the EPA estimated that 190 to 204 million pounds of metals and 30 to 108 million pounds of organics were removed each year as a result of pretreatment program requirements.

- A. POTW (S)
- B. Community
- C. Treatment works
- D. Systems
- E. None of the Above

236. This is substantiated by many POTWs that _____ in the loadings of toxics to their treatment plants that is directly attributable to implementation of the National Pretreatment Program.

- A. POTW (S)
- B. Community
- C. Treatment works
- D. Systems
- E. None of the Above

237. A treatment works as defined by section 212 of the Act, which is owned by a State or municipality (as defined by section 502(4) of the Act). This definition includes any devices or systems used in the storage, treatment, recycling, and _____ or industrial wastes of a liquid nature. It also includes sewers, pipes or other conveyances only if they convey wastewater to a POTW Treatment Plant.

- A. POTW (S)
- B. Community
- C. Treatment works
- D. Systems
- E. None of the Above

Chapter 2

Overview of the National Pretreatment Program

The Clean Water Act

238. On October 18, 1972, the 92nd Congress of the United States passed the Federal Water Pollution Control Act Amendments of 1972, _____ and maintenance of the chemical, physical, and biological integrity of the Nation's water as a National Objective.

- A. Modified over time
- B. Declaring the restoration
- C. Control the discharge
- D. EPA-promulgated industry-specific technology-based
- E. Against treatment plant interference

239. While procedures for implementing this act (more commonly referred to as the Clean Water Act (**CWA**)) have been re-evaluated and _____, the 1972 objective has remained unchanged in its 31 year history.

- A. Modified over time
- B. Declaring the restoration
- C. Control the discharge
- D. EPA-promulgated industry-specific technology-based
- E. Against treatment plant interference

240. The 1972 Amendments to the CWA established a water quality regulatory approach along with the _____ effluent limitations.

- A. Modified over time
- B. Declaring the restoration
- C. Control the discharge
- D. EPA-promulgated industry-specific technology-based
- E. Against treatment plant interference

241. The National Pollutant Discharge Elimination System (**NPDES**) permit program was established under the CWA to _____ of pollutants from point sources and served as a vehicle to implement the industrial technology-based standards.

- A. Modified over time
- B. Declaring the restoration
- C. Control the discharge
- D. EPA-promulgated industry-specific technology-based
- E. Against treatment plant interference

242. To implement pretreatment requirements, the _____ 40 CFR Part 128 in late 1973, establishing general prohibitions against treatment plant interference and pass through and pretreatment standards for the discharge of incompatible pollutants from specific industrial categories.

- A. Modified over time
- B. Declaring the restoration
- C. Control the discharge
- D. EPA-promulgated
- E. Against treatment plant interference

243. In 1975, several environmental groups filed suit against the EPA, challenging it's criteria for identifying toxic pollutants, the EPA's failure to promulgate effluent standards, and the _____ pretreatment standards for numerous industrial categories.

- A. Modified over time
- B. Declaring the restoration
- C. Control the discharge
- D. EPA's failure to promulgate
- E. Against treatment plant interference

244. As a result of this litigation, the _____ the General Pretreatment Regulations at 40 CFR Part 403 on June 26, 1978, replacing the 40 CFR Part 128 requirements.

- A. Modified over time
- B. Declaring the restoration
- C. Control the discharge
- D. EPA promulgated

245. A result of the suit, the _____ the discharge of 65 categories of pollutants from 21 industrial categories.

- A. Modified over time
- B. Declaring the restoration
- C. Control the discharge
- D. EPA agreed to regulate

246. The _____ is still in effect today (the original list actually had 129 pollutants, three of which have since been removed from that list) while the list of regulated industrial categories has grown to more than 51 distinct industries.

- A. Modified over time
- B. Declaring the restoration
- C. Control the discharge
- D. List of priority pollutants
- E. Against treatment plant interference

247. The National Pretreatment Program is unique in that the General Pretreatment Regulations require all large POTWs (i.e., those designed to treat flows of more than 5 million gallons per day) and smaller _____ with significant industrial discharges to establish local pretreatment programs.

- A. POTW (S)
- B. Community
- C. Treatment works
- D. Systems
- E. None of the Above

248. These local programs must enforce all national pretreatment standards and requirements in addition to any more stringent local requirements necessary to protect site-specific conditions at the _____.

- A. POTW (S)
- B. Community
- C. Treatment works
- D. Systems
- E. None of the Above

The General Pretreatment Regulations

249. The _____ establish responsibilities of Federal, State, and local government, industry and the public to implement Pretreatment Standards to control pollutants which pass through or interfere with POTW treatment processes or which may contaminate sewage sludge.

- A. Local municipalities
- B. General Pretreatment Regulations
- C. Significant Industrial User
- D. Industrial users
- E. None of the Above

250. The _____ apply to all non-domestic sources which introduce pollutants into a POTW. These sources of “**indirect discharge**” are more commonly referred to as industrial users (**IUs**).

- A. Local municipalities
- B. General Pretreatment Regulations
- C. Significant Industrial User
- D. Industrial users
- E. None of the Above

251. Since IUs can be as simple as an unmanned coin operated car wash to as complex as an automobile manufacturing plant or a synthetic organic chemical producer, EPA developed four criteria that define a _____.

- A. Local municipalities
- B. General Pretreatment Regulations
- C. Significant Industrial User
- D. Industrial users
- E. None of the Above

252. Many of the General Pretreatment Regulations apply to _____ as opposed to IUs, based on the fact that control of SIUs should provide adequate protection of the POTW.

- A. Local municipalities
- B. General Pretreatment Regulations
- C. Significant Industrial User
- D. Industrial users
- E. None of the Above

253. An _____ that discharges an average of 25,000 gallons per day or more of process wastewater to the POTW.

- A. Local municipalities
- B. General Pretreatment Regulations
- C. Significant Industrial User
- D. Industrial users
- E. None of the Above

254. An _____ that contributes a process wastestream making up 5 percent or more of the average dry weather hydraulic or organic capacity of the POTW treatment plant;

- A. Local municipalities
- B. General Pretreatment Regulations
- C. Significant Industrial User
- D. Industrial users
- E. None of the Above

255. An _____ designated by the Control Authority as such because of its reasonable potential to adversely affect the POTW's operation or violate any pretreatment standard or requirement.

- A. Local municipalities
- B. General Pretreatment Regulations
- C. Significant Industrial User
- D. Industrial users
- E. None of the Above

256. An _____ subject to Federal categorical pretreatment standards.

- A. Local municipalities
- B. General Pretreatment Regulations
- C. Significant Industrial User
- D. Industrial users
- E. None of the Above

257. Unlike other environmental programs that rely on Federal or State governments to implement and enforce specific requirements, the Pretreatment Program places the majority of the responsibility on _____.

- A. Local municipalities
- B. General Pretreatment Regulations
- C. Significant Industrial User
- D. Industrial users
- E. None of the Above

258. Section 403.8(a) of the _____ states that any POTW (or combination of treatment plants operated by the same authority) with a total design flow greater than 5 million gallons per day (**MGD**) and smaller POTWs with SIUs must establish a local pretreatment program.

- A. Local municipalities
- B. General Pretreatment Regulations
- C. Significant Industrial User
- D. Industrial users
- E. None of the Above

259. As of early 1998, 1,578 _____ are required to have local programs. While this represents only about 15 percent of the total treatment plants nationwide, these POTWs account for more than 80 percent (i.e., approximately 30 billion gallons a day) of the national wastewater flow.

- A. Local municipalities
- B. General Pretreatment Regulations
- C. Significant Industrial User
- D. Industrial users
- E. None of the Above

260. The _____ define the term "Control Authority" as a POTW that administers an approved pretreatment program since it is the entity authorized to control discharges to its system.

- A. Local municipalities
- B. General Pretreatment Regulations
- C. Significant Industrial User
- D. Industrial users
- E. None of the Above

261. Section 403.10(e) provides States authority to implement _____ pretreatment programs in lieu of POTWs. Five States have elected to assume this responsibility (Vermont, Connecticut, Alabama, Mississippi, and Nebraska). In these instances, the State is defined as the Control Authority.

- A. Local municipalities
- B. General Pretreatment Regulations
- C. Significant Industrial User
- D. Industrial users
- E. None of the Above

262. All _____ must establish a local pretreatment program to control discharges from non-domestic sources.

- A. Local municipalities
- B. General Pretreatment Regulations
- C. Significant Industrial User
- D. Industrial users
- E. None of the Above

POTW Pretreatment Programs

263. The actual requirement for a POTW to develop and implement a local _____ is a condition of its NPDES permit. Once the Approval Authority determines that a POTW needs a pretreatment program, the POTW's NPDES permit is modified to require development of a local program and submission of the program to the Approval Authority for review and approval. Consistent with §403.8(f), POTW pretreatment programs must contain the six minimum elements.

- A. Pretreatment program
- B. Program requirements
- C. Public Participation
- D. POTW
- E. None of the Above

264. In addition to the six specific elements, _____ submissions must include: A statement from the City Solicitor (or the like) declaring the POTW has adequate authority to carry out program requirements;

- A. Pretreatment program
- B. Program requirements
- C. Public Participation
- D. POTW
- E. None of the Above

265. Copies of statutes, ordinances, regulations, agreements, or other authorities the POTW relies upon to administer the _____ including a statement reflecting the endorsement or approval of the bodies responsible for supervising and/or funding the program.

- A. Pretreatment program
- B. Program requirements
- C. Public Participation
- D. POTW
- E. None of the Above

266. _____ and organizational chart of the organization administering the program.

- A. Pretreatment program
- B. Program requirements
- C. Public Participation
- D. POTW
- E. None of the Above

267. A description of funding levels and _____ to implement the program.

- A. Pretreatment program
- B. Program requirements
- C. Public Participation
- D. POTW
- E. None of the Above

268. Pretreatment program submissions found to be complete proceed to the public notice process, _____and POTW Reporting. Upon program approval, the Approval Authority is responsible for modifying the POTW's NPDES permit to require implementation of the approved pretreatment program.

- A. Pretreatment program
- B. Program requirements
- C. Public Participation
- D. POTW
- E. None of the Above

269. Once approved, the _____oversees POTW pretreatment program implementation via receiving annual reports and conducting periodic audits and inspections.

- A. Pretreatment program
- B. Program requirements
- C. Public Participation
- D. POTW
- E. None of the Above

Prohibited Discharge Standards

270. All _____, whether or not subject to any other National, State, or local pretreatment requirements, are subject to the general and specific prohibitions identified in 40 CFR.

- A. Compliance
- B. Pass through
- C. Discharges
- D. Interference
- E. None of the Above

271. General prohibitions forbid the discharge of any pollutant(s) to a POTW that cause pass through or _____.

- A. Compliance
- B. Pass through
- C. Discharges
- D. Interference
- E. None of the Above

Specific prohibitions forbid eight categories of pollutant discharges as follows:

272. _____ containing pollutants which create a fire or explosion hazard in the POTW, including but not limited to, wastestreams with a closed cup flashpoint of less than 140°F (60°C) using the test methods specified in 40 CFR §261.21.

- A. Compliance
- B. Pass through
- C. Discharges
- D. Interference
- E. None of the Above

273. _____ containing pollutants causing corrosive structural damage to the POTW, but in no case discharges with a pH lower than 5.0, unless the POTW is specifically designed to accommodate such discharges.

- A. Compliance
- B. Pass through
- C. Discharges
- D. Interference
- E. None of the Above

274. Discharges containing pollutants in amounts causing obstruction to the flow in the POTW resulting in _____.

- A. Compliance
- B. Pass through
- C. Discharges
- D. Interference
- E. None of the Above

275. Discharges of any pollutants released at a flow rate and/or concentration which will cause _____ with the POTW.

- A. Compliance
- B. Pass through
- C. Discharges
- D. Interference
- E. None of the Above

276. Discharges of heat in amounts which will inhibit biological activity in the POTW resulting in interference, but in no case heat in such quantities that the temperature at the POTW treatment plant exceeds 40°C (104°F) unless the Approval Authority, upon request of the POTW, approves _____.

- A. Compliance
- B. Pass through
- C. Discharges
- D. Interference
- E. None of the Above

277. Discharges of petroleum oil, nonbiodegradable cutting oil, or products of mineral oil origin in amounts that will cause _____ or pass through.

- A. Compliance
- B. Pass through
- C. Discharges
- D. Interference
- E. None of the Above

278. _____ which result in the presence of toxic gases, vapors, or fumes within the POTW in a quantity that may cause acute worker health and safety problems.

- A. Compliance
- B. Pass through
- C. Discharges
- D. Interference
- E. None of the Above

279. _____ of trucked or hauled pollutants, except at discharge points designated by the POTW.

- A. Compliance
- B. Pass through
- C. Discharges
- D. Interference
- E. None of the Above

280. Compliance with the general and specific prohibitions is mandatory for all IUs, although a facility may have an _____ in any action brought against it alleging a violation of the general prohibitions.

- A. Compliance
- B. Pass through
- C. Discharge
- D. Interference
- E. None of the Above

281. Where the IU can demonstrate it did not have reason to know that its _____, alone or in conjunction with a discharge or discharges from other sources, would cause pass through or interference, and the IU was in compliance with a technically-based local limit developed to prevent pass through or interference.

- A. Compliance
- B. Pass through
- C. Discharge
- D. Interference
- E. None of the Above

282. These prohibited _____ standards are intended to provide general protection for POTWs. However, their lack of specific pollutant limitations creates the need for additional controls, namely categorical pretreatment standards and local limits.

- A. Compliance
- B. Pass through
- C. Discharge
- D. Interference
- E. None of the Above

283. _____ - A discharge which exits the POTW into waters of the US in quantities or concentrations which, alone or in conjunction with a discharge or discharges from other sources, is a cause of a violation of any requirement of the POTW's NPDES permit (including an increase in the magnitude or duration of a violation).

- A. Compliance
- B. Pass through
- C. Discharge
- D. Interference
- E. None of the Above

284. _____ - A discharge which, alone or in conjunction with a discharge or discharges from other sources, both (1) inhibits or disrupts the POTW, its treatment processes or operations, or its sludge processes, use or disposal; and (2) therefore is a cause of a violation of any requirement of the POTW's NPDES permit or of the prevention of sewage sludge use or disposal.

- A. Compliance
- B. Pass through
- C. Discharge
- D. Interference
- E. None of the Above

Categorical Pretreatment Standards

285. Categorical pretreatment standards (i.e., categorical standards) are national, uniform, technology-based _____ that apply to discharges to POTWs from specific industrial categories (i.e., indirect dischargers) and limit the discharge of specific pollutants.

- A. Limitation(s)
- B. Standard(s)
- C. Categories(ical)
- D. Guideline
- E. None of the Above

286. Categorical pretreatment _____ for both existing and new sources (PSES and PSNS, respectively) are promulgated by the EPA pursuant to Section 307(b) and (c) of the CWA.

- A. Limitation(s)
- B. Standard(s)
- C. Categories(ical)
- D. Guideline
- E. None of the Above

287. _____ developed for indirect discharges are designed to prevent the discharge of pollutants that could pass through, interfere with, or otherwise be incompatible with POTW operations.

- A. Limitation(s)
- B. Standard(s)
- C. Categories(ical)
- D. Guideline
- E. None of the Above

288. Effluent _____ guidelines (ELGs), developed in conjunction with categorical standards, limit the discharge from facilities directly to waters of the U.S. (i.e., direct dischargers) and do not apply to indirect dischargers.

- A. Limitation(s)
- B. Standard(s)
- C. Categories(ical)
- D. Guideline
- E. None of the Above

289. The significant difference between categorical standards and effluent limitations guidelines is that categorical _____ account for any pollutant removal that may be afforded through treatment at the POTW while effluent limitations guidelines do not.

- A. Limitation(s)
- B. Standard(s)
- C. Categories(ical)
- D. Guideline
- E. None of the Above

290. Industries identified as major sources of toxic pollutants are typically targeted for effluent guideline and _____ standard development.

- A. Limitation(s)
- B. Standard(s)
- C. Categories(ical)
- D. Guideline
- E. None of the Above

291. If limits are deemed necessary, the EPA investigates affected IUs and gathers information regarding process operations and treatment and management practices, accounting for differences in facility size and age, equipment age, and wastewater _____.

- A. Limitation(s)
- B. Standard(s)
- C. Categories(ical)
- D. Guideline
- E. None of the Above

292. Sub categorization within an industrial _____ is evaluated based on variability in processes employed, raw materials used, types of items produced, and characteristics of wastes generated.

- A. Limitation(s)
- B. Standard(s)
- C. Categories(ical)
- D. Guideline
- E. None of the Above

293. Categorical pretreatment standards are developed both for existing _____ and new sources (PSNS).

- A. Limitation
- B. PSES
- C. New source
- D. Direct dischargers
- E. None of the Above

294. Facilities are classified as either _____ or PSNS based on the definition of "new source" set out in 40 CFR§403.3(k) of the General Pretreatment Regulations.

- A. Limitation
- B. PSES
- C. New source
- D. Direct dischargers

295. _____ subject to PSES are required to comply with those standards by a specified date, typically no more than three years after the effective date of the categorical standard.

- A. Limitation
- B. PSES
- C. New source
- D. Dischargers
- E. None of the Above

296. Users subject to PSNS, however, are required to achieve compliance within the shortest feasible time, not to exceed 90 days from commencement of _____. PSNS are often more stringent than PSES based on the opportunity for new sources to install the best available demonstrated technology and operate the most efficient production processes.

- A. Limitation
- B. PSES
- C. New source
- D. Discharge
- E. None of the Above

297. As a result of various court decrees and settlement agreements resulting from litigation, and from the EPA's internal work plan development process, the EPA has developed effluent guidelines (_____) and/or categorical pretreatment standards (for indirect dischargers) for 51 industrial categories.

- A. Limitation
- B. PSES
- C. New source
- D. Direct dischargers
- E. None of the Above

298. Of these industrial categories, the EPA implements pretreatment standards for 32 categories, and either _____solely with 40 CFR Part 403 General Pretreatment Regulations or does not address pretreatment standards for the remaining categories.

- A. Limitation
- B. PSES
- C. Requires compliance
- D. Concentration-based standards
- E. None of the Above

299. _____are expressed as milligrams of pollutant allowed per liter (mg/l) of wastewater discharged and are issued where production rates for the particular industrial category do not necessarily correlate with pollutant discharges.

- A. Limitation
- B. PSES
- C. Requires compliance
- D. Concentration-based standards
- E. None of the Above

300. _____ are generally expressed on a mass per unit of production (e.g., milligrams of pollutant per kilogram of product produced, pounds of pollutant per million cubic feet of air scrubbed, etc.) and are issued where water conservation is an important component in the limitation development process.

- A. Limitation
- B. PSES
- C. Requires compliance
- D. Concentration-based standards
- E. None of the Above

