# Public Water System (PWS) Information

|  |  |  |
| --- | --- | --- |
| **PWS Name:** | **PWS ID:** | **Phone Number or Email:** |
|  |  |  |
| **PWS Mailing Address:** | **City:** | **State and Zip Code:** |
|  |  |  |
| **Name of Person Completing Form:** | **Date:** | **Signature:** |
|  |  |  |

**A PWS that exceeds the lead and/or copper action level is required to submit a corrosion control treatment recommendation to the Texas Commission on Environmental Quality (TCEQ) within six months following the end of the exceeded monitoring period. Additionally, a PWS is scheduled to collect water quality parameter (WQP) samples during the exceeded monitoring period and quarterly during two follow-up six-month monitoring periods. These seasonal water corrosivity characteristics help the PWS and the TCEQ determine an appropriate corrosion control treatment option. If you have questions on how to fill out this form or about the Lead and Copper in Drinking Water Program, please contact us at 512-239-4691.**

**Please provide a contact name and mailing address for TCEQ’s response letter:**

Name (if different from that above): \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

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

City: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ State: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Zip Code: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

|  |  |
| --- | --- |
| 1. **Does your PWS have any partial or full lead service lines (LSLs)? (Yes or No or I don’t know)**
 |  |
| 1. **If yes, how many LSLs are in place?**
 |  |
| 1. **If yes, is the PWS actively replacing full or partial LSLs?**
 |  |
| 1. **Describe the corrosion control method installed at the time of the lead and/or copper exceedance.**
 |  |
| 1. **Describe** any changes in treatment or source that occurred prior to, during the time of the lead and/or copper exceedance.
 |  |
| 1. **Describe any** plans to change water treatment (e.g. coagulant or disinfectant) in the next two years**.**
 |  |
| 1. Describe any plans to change water source or to add additional water sources in the next two years.
 |  |

# Water Quality Parameter (WQP) Sample Results

Complete the tables below using laboratory data from WQP samples collected during the exceeded monitoring period and first quarter following the exceeded monitoring period, if available.

**Distribution System (DS01)**

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **Parameters** | **Number of Sample Sites** | **Total Number of Samples** | **Start****Date** **mm/dd/yy** | **End Date****mm/dd/yy** | **Min Value** | **Max Value** | **Average Value** |
| **pH** |  |  |  |  |  |  |  |
| **Total Alkalinity****(mg/L as CaCO3)** |  |  |  |  |  |  |  |
| **Iron (mg/L)** |  |  |  |  |  |  |  |
| **Manganese (mg/L)** |  |  |  |  |  |  |  |
| **Orthophosphate1 (mg/L as P)** |  |  |  |  |  |  |  |
| **Silica1****(mg/L as SiO2)** |  |  |  |  |  |  |  |

1Orthophosphate and/or silica must be measured if an inhibitor containing a phosphate or silicate compound is used in the water treatment process.

**Entry Point (PBCU\_\_\_\_\_)** *Please add the Facility ID number. See page 5 for additional tables if more than one entry point exists.*

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Parameters** | **Total Number of Samples** | **Start****Date** **mm/dd/yy** | **End Date****mm/dd/yy** | **Min Value** | **Max Value** | **Average Value** |
| **pH** |  |  |  |  |  |  |
| **Total Alkalinity****(mg/L as CaCO3)** |  |  |  |  |  |  |
| **Iron (mg/L)** |  |  |  |  |  |  |
| **Manganese (mg/L)** |  |  |  |  |  |  |
| **Orthophosphate1 (mg/L as P)** |  |  |  |  |  |  |
| **Silica1****(mg/L as SiO2)** |  |  |  |  |  |  |

1Orthophosphate and/or silica must be measured if an inhibitor containing a phosphate or silicate compound is used in the water treatment process.

# Dissolved Inorganic Carbon (DIC) Estimation

Use the table below to estimate DIC (mg/L as C) based on averaged pH and averaged alkalinity values for the distribution system and for each active entry point.

|  |  |
| --- | --- |
| Total Alkalinity |  pH |
| **6.4** | **6.6** | **6.8** | **7.0** | **7.2** | **7.4** | **7.6** | **7.8** | **8.0** | **8.2** | **8.4** | **8.6** | **8.8** | **9.0** | **9.2** | **9.4** | **9.6** | **9.8** | **10.0** | **10.2** | **10.4** |
| **0** | 0 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| **2** | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |  |  |  |  |  |
| **4** | 2 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 0 |  |  |  |
| **6** | 3 | 2 | 2 | 2 | 2 | 2 | 2 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 0 |  |  |
| **8** | 4 | 3 | 3 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 1 | 1 | 1 | 0 |  |  |
| **10** | 4 | 4 | 3 | 3 | 3 | 3 | 3 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 1 | 1 | 0 |  |
| **12** | 5 | 4 | 4 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 2 | 2 | 2 | 2 | 1 | 1 |  |
| **14** | 6 | 5 | 4 | 4 | 4 | 4 | 4 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 2 | 2 | 1 | 1 | 0 |
| **16** | 7 | 6 | 5 | 5 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 3 | 3 | 3 | 2 | 2 | 1 | 0 |
| **18** | 8 | 7 | 6 | 5 | 5 | 5 | 5 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 3 | 3 | 2 | 2 | 1 |
| **20** | 9 | 7 | 6 | 6 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 4 | 4 | 4 | 4 | 3 | 3 | 2 | 1 |
| **22** | 10 | 8 | 7 | 6 | 6 | 6 | 6 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 4 | 4 | 4 | 3 | 2 | 1 |
| **24** | 11 | 9 | 8 | 7 | 7 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 5 | 5 | 5 | 5 | 4 | 4 | 3 | 2 | 2 |
| **26** | 11 | 10 | 8 | 8 | 7 | 7 | 7 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 5 | 5 | 4 | 4 | 3 | 2 |
| **28** | 12 | 10 | 9 | 8 | 8 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 6 | 6 | 6 | 6 | 5 | 5 | 4 | 3 | 2 |
| **30** | 13 | 11 | 10 | 9 | 8 | 8 | 8 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 6 | 6 | 6 | 5 | 4 | 3 | 2 |
| **35** | 15 | 13 | 11 | 10 | 9 | 9 | 9 | 9 | 9 | 8 | 8 | 8 | 8 | 8 | 8 | 7 | 7 | 6 | 5 | 4 | 3 |
| **40** | 18 | 15 | 13 | 12 | 11 | 10 | 10 | 10 | 10 | 10 | 10 | 9 | 9 | 9 | 9 | 8 | 8 | 7 | 6 | 5 | 4 |
| **45** | 20 | 16 | 14 | 13 | 12 | 12 | 11 | 11 | 11 | 11 | 11 | 11 | 10 | 10 | 10 | 9 | 9 | 8 | 7 | 6 | 5 |
| **50** | 22 | 18 | 16 | 14 | 14 | 13 | 13 | 12 | 12 | 12 | 12 | 12 | 12 | 11 | 11 | 10 | 10 | 9 | 8 | 7 | 5 |
| **55** | 24 | 20 | 18 | 16 | 15 | 14 | 14 | 14 | 13 | 13 | 13 | 13 | 13 | 12 | 12 | 11 | 11 | 10 | 9 | 8 | 6 |
| **60** | 26 | 22 | 19 | 17 | 16 | 16 | 15 | 15 | 15 | 14 | 14 | 14 | 14 | 14 | 13 | 12 | 12 | 11 | 10 | 8 | 7 |
| **65** | 29 | 24 | 21 | 19 | 18 | 17 | 16 | 16 | 16 | 16 | 15 | 15 | 15 | 15 | 14 | 14 | 13 | 12 | 10 | 9 | 8 |
| **70** | 31 | 26 | 22 | 20 | 19 | 18 | 18 | 17 | 17 | 17 | 17 | 16 | 16 | 16 | 15 | 15 | 14 | 13 | 11 | 10 | 8 |
| **75** | 33 | 27 | 24 | 22 | 20 | 19 | 19 | 19 | 18 | 18 | 18 | 18 | 17 | 17 | 16 | 16 | 15 | 14 | 12 | 11 | 9 |
| **80** | 35 | 29 | 26 | 23 | 22 | 21 | 20 | 20 | 19 | 19 | 19 | 19 | 19 | 18 | 18 | 17 | 16 | 14 | 13 | 12 | 10 |
| **85** | 37 | 31 | 27 | 25 | 23 | 22 | 21 | 21 | 21 | 20 | 20 | 20 | 20 | 19 | 19 | 18 | 17 | 15 | 14 | 12 | 11 |
| **90** | 40 | 33 | 29 | 26 | 24 | 23 | 23 | 22 | 22 | 22 | 21 | 21 | 21 | 20 | 20 | 19 | 18 | 16 | 15 | 13 | 11 |
| **95** | 42 | 35 | 30 | 28 | 26 | 25 | 24 | 23 | 23 | 23 | 23 | 22 | 22 | 22 | 21 | 20 | 19 | 17 | 16 | 14 | 12 |
| **100** | 44 | 37 | 32 | 29 | 27 | 26 | 25 | 25 | 24 | 24 | 24 | 24 | 23 | 23 | 22 | 21 | 20 | 18 | 17 | 15 | 13 |
| **125** | 55 | 46 | 40 | 36 | 34 | 32 | 31 | 31 | 30 | 30 | 30 | 29 | 29 | 28 | 27 | 26 | 25 | 23 | 21 | 19 | 17 |
| **150** | 66 | 55 | 48 | 43 | 41 | 39 | 38 | 37 | 37 | 36 | 36 | 35 | 35 | 34 | 33 | 32 | 30 | 28 | 25 | 23 | 20 |
| **175** | 77 | 64 | 56 | 51 | 47 | 45 | 44 | 43 | 43 | 42 | 42 | 41 | 41 | 40 | 39 | 37 | 35 | 32 | 30 | 27 | 24 |
| **200** | 88 | 73 | 64 | 58 | 54 | 52 | 50 | 49 | 49 | 48 | 48 | 47 | 46 | 45 | 44 | 42 | 40 | 37 | 34 | 31 | 28 |
| **225** | 99 | 82 | 72 | 65 | 61 | 58 | 57 | 56 | 55 | 54 | 54 | 53 | 52 | 51 | 50 | 48 | 45 | 42 | 38 | 35 | 32 |
| **250** | 110 | 91 | 80 | 72 | 68 | 65 | 63 | 62 | 61 | 60 | 60 | 59 | 58 | 57 | 55 | 53 | 50 | 47 | 43 | 39 | 36 |
| **275** | 121 | 100 | 88 | 80 | 75 | 71 | 69 | 68 | 67 | 66 | 66 | 65 | 64 | 63 | 61 | 58 | 55 | 51 | 47 | 43 | 39 |
| **300** | 132 | 110 | 96 | 87 | 81 | 78 | 76 | 74 | 73 | 72 | 72 | 71 | 70 | 68 | 66 | 64 | 60 | 56 | 52 | 47 | 43 |
| **325** | 143 | 119 | 104 | 94 | 88 | 84 | 82 | 80 | 79 | 78 | 77 | 77 | 75 | 74 | 72 | 69 | 65 | 61 | 56 | 51 | 47 |
| **350** | 154 | 128 | 112 | 101 | 95 | 91 | 88 | 86 | 85 | 84 | 83 | 82 | 81 | 80 | 77 | 74 | 70 | 65 | 60 | 55 | 51 |
| **375** | 165 | 137 | 120 | 109 | 102 | 97 | 94 | 93 | 91 | 90 | 89 | 88 | 87 | 85 | 83 | 79 | 75 | 70 | 65 | 59 | 54 |
| **400** | 176 | 146 | 128 | 116 | 108 | 104 | 101 | 99 | 97 | 96 | 95 | 94 | 93 | 91 | 88 | 85 | 80 | 75 | 69 | 63 | 58 |

 *WQP pH and alkalinity values may require rounding to the nearest value.*

**Estimated DIC**

Distribution system (DS01) DIC range = \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_mg/L as C

Entry point (PBCU\_\_\_\_\_) DIC range = \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_mg/L as C

*Use page 5 if multiple entry points to the distribution system exist.*

**Determining the Appropriate Treatment Table**

Use the table below and answers to questions above to determine the appropriate treatment table (pages 6 - 14) for selecting corrosion control treatment options.

|  |  |  |  |
| --- | --- | --- | --- |
| Is iron or manganese present at the entry point or in the distribution system? | Did the system exceed the lead, copper or both lead and copper action leveles? | What is the average distribution or entry point pH? | Use the following treatment table to determine corrosion control options. |
| No | Lead only, or both lead and copper | below 7.2 | 1a |
| 7.2 - 7.8 | 1b |
| 7.8 - 9.5 | 1c |
| above 9.5 | 1d |
| Copper only | below 7.2 | 2a |
| 7.2 - 7.8 | 2b |
| above 7.8 | 2c |
| Yes | Lead and/or copper | below 7.2 | 3a |
| at or above 7.2 | 3b |

**Determining the Appropriate Corrosion Control Treatment Option**

Complete the following using the information above and that found on pages 6-14. A PWS is required to recommend a viable corrosion control treatment option.

**Distribution System**

[ ]  Adjust pH [ ]  Adjust Alkalinity [ ]  Adjust pH & Alkalinity

[ ]  Add Orthophosphate [ ]  Add Blended Phosphate [ ]  Add Silica

**Entry Point (PBCU\_\_\_\_\_)**

[ ]  Adjust pH [ ]  Adjust Alkalinity [ ]  Adjust pH & Alkalinity

[ ]  Add Orthophosphate [ ]  Add Blended Phosphate [ ]  Add Silica

*Use page 5 if multiple entry points to the distribution system exist.*

**Additional Entry Point Information**

**Entry Point (PBCU\_\_\_\_\_)** *Please add the Facility ID number. Use for each additional entry point to the distribution system*

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Parameters** | **Total Number of Samples** | **Start****Date** **mm/dd/yy** | **End****Date** **mm/dd/yy** | **Min Value** | **Max Value** | **Average Value** |
| **pH** |  |  |  |  |  |  |
| **Total Alkalinity****(mg/L as CaCO3)** |  |  |  |  |  |  |
| **Iron (mg/L)** |  |  |  |  |  |  |
| **Manganese (mg/L)** |  |  |  |  |  |  |
| **Orthophosphate1 (mg/L as P)** |  |  |  |  |  |  |
| **Silica1****(mg/L as SiO2)** |  |  |  |  |  |  |

1Orthophosphate must be measured if an inhibitor containing a phosphate compound is used. Silica must be measured if an inhibitor containing silicate compound is used.

**Estimated DIC**

Entry point (PBCU\_\_\_\_\_) DIC range = \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_mg/L as C

**Determining the Appropriate Corrosion Control Treatment Option**

Complete the following using the information above and that found on pages 6-14. A PWS is required to recommend a viable corrosion control treatment option.

**Entry Point (PBCU\_\_\_\_\_)**

[ ]  Adjust pH [ ]  Adjust Alkalinity [ ]  Adjust pH & Alkalinity

[ ]  Add Orthophosphate [ ]  Add Blended Phosphate [ ]  Add Silica

**Table 1a: Selecting Treatment for Lead only or Lead and Copper with pH below 7.2**

|  |  |
| --- | --- |
| **What is the DIC (mg/L C)?** | **Treatment Options** |
| Less than 5 | Raise the pH in 0.5 unit increments and DIC between 5 and 10 mg/L C using one of the following:- Soda ash- Potash- Limestone contactor |
| Between 5 and 15 | **1.** Raise the pH in 0.5 unit increments using one of the following:- Soda ash- Potash- Caustic soda- Aeration- Limestone contactor1- Silicates **OR****2.** Add orthophosphate and raise the pH between 7.2 and 7.8 |
| Greater than 15 | **1.** Raise the pH in 0.25 unit increments using one of the following:- Soda ash- Potash- Caustic soda- Aeration **OR****2.** Add orthophosphate and raise the pH between 7.2 and 7.8 |
| 1. Limestone contactors may not be appropriate when the DIC is greater than 10 mg/L C |

**Table 1b: Selecting Treatment for Lead only or Lead and Copper with pH between 7.2 and 7.8**

|  |  |
| --- | --- |
| **What is the DIC (mg/L C)?** | **Treatment Options** |
| Less than 5 | Raise the pH in 0.5 unit increments and DIC to 5-10 mg/L C using one of the following:- Soda ash- Potash- Limestone contactor1 |
| Between 5 and 15 | **1.** Raise the pH in 0.3 unit increments using one of the following:- Soda ash- Potash- Caustic soda- Aeration- Silicates **OR****2.** Add orthophosphate  |
| Greater than 15 | Add orthophosphate  |
| 1. Carbon dioxide feed before the limestone contactor may be necessary |

**Table 1c: Selecting Treatment for Lead only or Lead and Copper with pH between 7.8 and 9.5**

|  |  |
| --- | --- |
| **What is the DIC (mg/L C)?** | **Treatment Options** |
| Less than 5 | **1.** Raise the DIC between 5 and 10 mg/L C using one of the following:- Soda ash- Potash- Baking soda **OR****2.** Add Orthophosphate2 |
| Greater than 5 | **1.** Raise the pH in 0.3 unit increments between 9 and 9.5 using:- Caustic soda1 **OR****2.** Add orthophosphate2 |
| 1. Systems with copper plumbing may experience copper pitting problems when operating between pH 9 and 9.5 and DIC between 5 and 15. Orthophosphate may be a better option. |
| 2. Optimal pH range for orthophosphate is between 7.2 and 7.8 although phosphate may be effective at higher pH depending on dose. Orthophosphate effectiveness is lowest in the pH range between 8 and 8.5. Systems should also avoid this range due to inadequate buffering in the distribution system. |

**Table 1d: Selecting Treatment for Lead only or Lead and Copper with pH greater than 9.5**

|  |  |
| --- | --- |
| **What is the DIC (mg/L C)?** | **Treatment Options** |
| Less than 5 | Raise the DIC between 5 and 10 mg/L C using:- Baking soda |
| Greater than 5 | Reduction of lead concentrations may not be possible with treatment. Systems should investigate the cause of lead release. |

**Table 2a: Selecting Treatment for Copper Only with pH less than 7.2**

|  |  |
| --- | --- |
| **What is the DIC (mg/L C)?** | **Treatment Options** |
| Less than 5 | Raise the pH in 0.5 unit increments and DIC between 5 and 10 mg/L C using one of the following:- Soda ash- Potash- Limestone contactor |
| Between 5 and 35 | Raise the pH in 0.5 unit increments using one of the following:- Potash- Caustic soda- Aeration1- Silicates |
| Greater than 35 | **1.** Decrease DIC using one of the following methods:- Conventional lime or lime softening- Membranes or anion exchange, followed by pH adjustment2 **OR****2.** Add orthophosphate and raise the pH between 7.2 and 7.8 |
| 1. May be more appropriate at higher DIC range. |
| 2. To achieve optimal levels consider treating less than 100% of the water (i.e. split stream). |

**Table 2b: Selecting Treatment for Copper Only with pH between 7.2 to 7.8**

|  |  |
| --- | --- |
| **What is the DIC (mg/L C)?** | **Treatment Options** |
| Less than 5 | Raise the pH in 0.5 unit increments and DIC between 5 and 10 mg/L C using one of the following:- Soda ash- Potash- Limestone contactor1 |
| Between 5 and 25 | Raise the pH in 0.3 unit increments using one of the following:- Soda ash- Potash- Caustic soda- Aeration2- Silicates |
| Greater than 25 | Add orthophosphate  |
| 1. Carbon dioxide feed before the limestone contactor may be necessary. |
| 2. May be more appropriate at higher end of DIC range. |

**Table 2c: Selecting Treatment for Copper Only with pH greater than 7.8**

|  |  |
| --- | --- |
| **What is the DIC (mg/L C)?** | **Treatment Options** |
| Less than 25 | Raise the pH in 0.3 unit increments and DIC between 5 and 10 mg/L C using one of the following:- Soda ash- Potash |
| Greater than 25 | Add orthophosphate  |

**Table 3a: Selecting Treatment for Lead and/or Copper with Iron and Manganese in Finished Water and pH less than 7.2**

|  |  |
| --- | --- |
| **What is the DIC (mg/L C)?** | **Treatment Options** |
| Less than 5 | Raise the pH in 0.5 unit increments and DIC between 5 and 10 mg/L C using one of the following:- Soda ash- Baking Soda and Silicates1 |
| Between 5 and 12 | Raise the pH using one of the following:- Caustic soda- Soda ash and blended phosphate2- Silicates1 |
| Between 12 and 25 | Raise the pH between 7.2 and 7.5 using:- Caustic soda **AND**- Add blended phosphate2 |
| Greater than 25 | Adjust the pH between 7.0 and 7.2 using:- Caustic soda **AND**- Add blended phosphate2 |
| 1. Silicates are more effective when combined iron and manganese concentrations are less than 1.0 mg/L. |
| 2. The effectiveness of blended phosphate varies based on the formulation. Additional evaluation and/or monitoring is recommended. See Section 3.3.2 of the EPA OCCT Evaluation Technical Recommendations guidance for more information. |

**Table 3b: Selecting Treatment for Lead and/or Copper with Iron and Manganese in Finished Water and pH at or above 7.2**

|  |  |
| --- | --- |
| **What is the DIC (mg/L C)?** | **Treatment Options** |
| Less than 5 | Raise the DIC between 5 and 10 mg/L C using one of the following:- Silicates1- Baking soda and blended phosphate2 |
| Greater than 5 | **1.** Add blended phosphate2 **OR****2.** Remove source water iron and/or manganese and add orthophosphate with pH adjusted between 7.2 and 7.8 |
| 1. Silicates are more effective when combined iron and manganese concentrations are less than 1.0 mg/L. |
| 2. The effectiveness of blended phosphate varies based on the formulation. Additional evaluation and/or monitoring is recommended. See Section 3.3.2 of the EPA OCCT Evaluation Technical Recommendations guidance for more information. Blended phosphates are less effective for controlling copper at DIC greater than 25 mg/L C. |