

Annex F5

## Groundwater Monitoring Results

**Table F5.1 Groundwater Monitoring Results**

| Parameters                                  | Units   | MWX-1 | MWX-2 | MWX-3 | MWX-4 | MWX-5 | MWX-6 | MWX-7 | MWX-8 | MWX-9 | MWX-10 | MWX-11 | MWX-12 | MWX-13 | MWX-14 |
|---|---------|-------|-------|-------|-------|-------|-------|-------|-------|-------|--------|--------|--------|--------|--------|
| Water Level                                 | mPD     | 2.70  | 2.84  | 2.79  | 2.69  | 2.71  | 2.65  | 2.42  | 2.53  | 2.89  | 2.93   | 3.23   | 6.62   | 36.50  | 45.13  |
| Bicarbonate Alkalinity as CaCO <sub>3</sub> | mg/L    | 138   | 309   | 147   | <1    | <1    | <1    | 8     | <1    | 75    | 167    | 135    | 60     | 15     | 8      |
| Carbonate Alkalinity as CaCO <sub>3</sub>   | mg/L    | <1    | <1    | <1    | 100   | 98    | 164   | 58    | 75    | 10    | <1     | <1     | <1     | <1     | <1     |
| Total Alkalinity as CaCO <sub>3</sub>       | mg/L    | 138   | 309   | 147   | 129   | 118   | 200   | 66    | 114   | 85    | 167    | 135    | 60     | 15     | 8      |
| pH Value                                    | pH Unit | 8.3   | 7.9   | 8     | 10.7  | 10.6  | 10.8  | 9.8   | 10.7  | 8.6   | 7.9    | 8.1    | 7      | 5.5    | 5.3    |
| Electrical Conductivity @ 25Å°C             | µS/cm   | 747   | 799   | 1110  | 1110  | 1130  | 1160  | 2330  | 3050  | 1550  | 863    | 372    | 319    | 95     | 97     |
| Ammonia as N                                | mg/L    | 0.29  | 0.02  | 1.33  | 6.79  | 1.95  | 3.52  | 5.42  | 12.5  | 5.34  | 0.03   | 0.02   | <0.01  | 0.04   | <0.01  |
| Chloride                                    | mg/L    | 116   | 29    | 197   | 246   | 193   | 177   | 681   | 1010  | 372   | 133    | 26     | 22     | 16     | 20     |
| Nitrite as N                                | mg/L    | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 | <0.01  | <0.01  | <0.01  | <0.01  | <0.01  |
| Reactive Phosphorus as P                    | mg/L    | 0.02  | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 | 0.02  | 0.01  | 0.02  | 0.02   | 0.02   | 0.04   | <0.01  | <0.01  |
| Sulphate as SO <sub>4</sub> - Turbidimetric | mg/L    | 54    | 91    | 95    | 54    | 131   | 91    | 66    | 38    | 111   | 74     | 13     | 57     | 3      | 2      |
| Sulphide as S <sup>2-</sup>                 | mg/L    | 0.1   | <0.1  | <0.1  | 7.7   | 3.1   | 9.6   | 1.8   | 11.8  | 0.3   | <0.1   | <0.1   | <0.1   | <0.1   | <0.1   |
| Total Kjeldahl Nitrogen as N                | mg/L    | 0.4   | 0.2   | 1.7   | 7.4   | 2.6   | 4.8   | 5.9   | 12.9  | 6     | <0.1   | 0.1    | <0.1   | 0.4    | 0.2    |
| Nitrate as N                                | mg/L    | <0.01 | 0.35  | <0.01 | <0.01 | <0.01 | <0.01 | 0.01  | 0.01  | <0.01 | <0.01  | <0.01  | <0.01  | 0.12   | 0.1    |
| Total Nitrogen as N                         | mg/L    | 0.4   | 0.5   | 1.7   | 7.4   | 2.6   | 4.8   | 5.9   | 12.9  | 6     | <0.1   | 0.1    | <0.1   | 0.5    | 0.3    |
| Boron                                       | µg/L    | 120   | 210   | 180   | 160   | 170   | 180   | 480   | 540   | 380   | 90     | 50     | 20     | 10     | 10     |
| Calcium                                     | mg/L    | 37.6  | 52.1  | 74.4  | 48.8  | 40.4  | 30.8  | 26.3  | 59.9  | 31.8  | 74.3   | 46.5   | 29.5   | 2.3    | 1.53   |
| Mercury                                     | µg/L    | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20 | <0.20  | <0.20  | <0.20  | <0.20  | <0.20  |
| Magnesium                                   | mg/L    | 5.22  | 47.4  | 5.64  | <0.05 | <0.05 | <0.05 | 1.01  | 0.12  | 12.4  | 7.03   | 2.5    | 4.62   | 1.02   | 1.04   |
| Sodium                                      | mg/L    | 85.7  | 28.8  | 111   | 128   | 141   | 154   | 419   | 488   | 233   | 83.3   | 25     | 27     | 14.1   | 12.9   |
| Iron  | mg/L    | <0.04 | <0.04 | 0.21  | <0.04 | <0.04 | <0.04 | <0.04 | <0.04 | <0.04 | <0.04  | <0.04  | 0.38   | <0.04  | <0.04  |
| Potassium                                   | mg/L    | 20.1  | 9.99  | 27.8  | 34.6  | 51.9  | 55.9  | 57.8  | 54.8  | 36.9  | 11.4   | 6.45   | 3.21   | 4.25   | 4.06   |
| Cadmium                                     | µg/L    | <0.2  | <0.2  | <0.2  | <0.2  | <0.2  | <0.2  | <0.2  | <0.2  | <0.2  | <0.2   | <0.2   | <0.2   | <0.2   | <0.2   |
| Chromium                                    | µg/L    | <1    | <1    | <1    | <1    | <1    | <1    | <1    | <1    | <1    | <1     | <1     | <1     | <1     | <1     |
| Copper                                      | µg/L    | <1    | <1    | <1    | <1    | <1    | <1    | <1    | <1    | <1    | <1     | <1     | <1     | 1      | 1      |
| Lead  | µg/L    | <1    | <1    | <1    | <1    | <1    | 3     | <1    | <1    | <1    | <1     | <1     | <1     | <1     | <1     |
| Manganese                                   | µg/L    | 417   | 216   | 956   | 2     | <1    | <1    | <1    | <1    | 8     | 1090   | 363    | 800    | 36     | 9      |
| Nickel                                      | µg/L    | <1    | <1    | <1    | 2     | 1     | 2     | <1    | 1     | <1    | <1     | <1     | <1     | <1     | <1     |
| Zinc  | µg/L    | <10   | 260   | <10   | <10   | <10   | <10   | <10   | <10   | <10   | <10    | <10    | 360    | 20     | <10    |
| Biochemical Oxygen Demand                   | mg/L    | <2    | <2    | <2    | <2    | <2    | 7     | <2    | 8     | 2     | <2     | <2     | <2     | <2     | <2     |
| Chemical Oxygen Demand                      | mg/L    | 11    | 3     | 19    | 36    | 28    | 56    | 23    | 44    | 20    | 6      | 4      | <2     | <2     | <2     |
| Total Organic Carbon                        | mg/L    | 6     | 4     | 9     | 11    | 10    | 13    | 8     | 11    | 9     | 4      | 4      | 4      | 4      | 4      |

Figure F5.1 Graphical Presentation for Groundwater Monitoring (MWX-1)

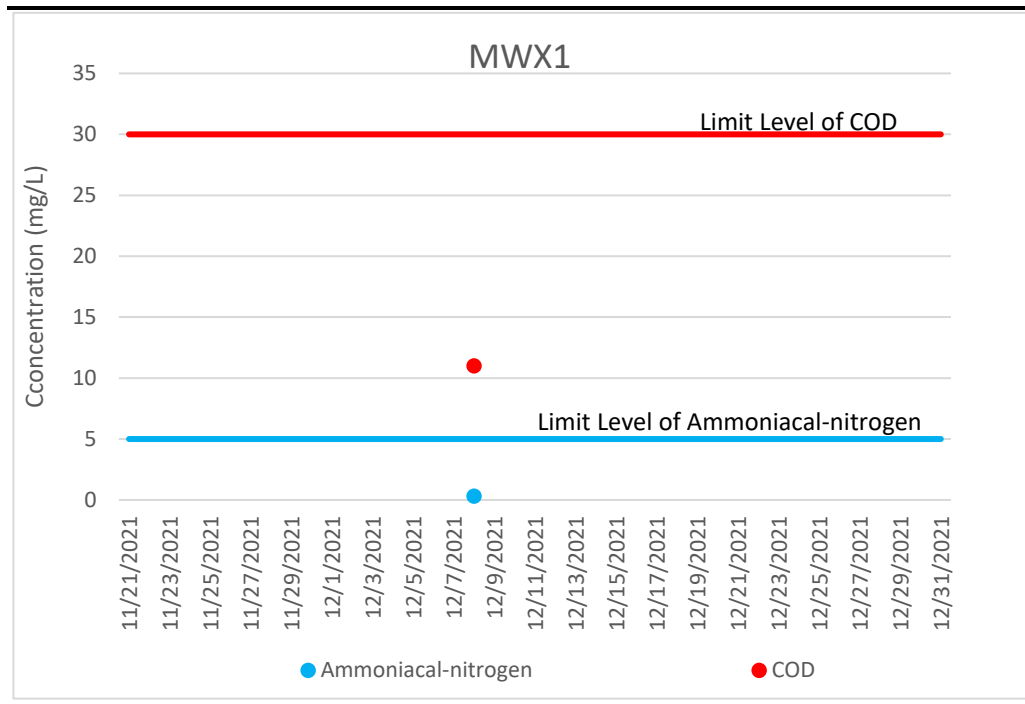


Figure F5.2 Graphical Presentation for Groundwater Monitoring (MWX-2)

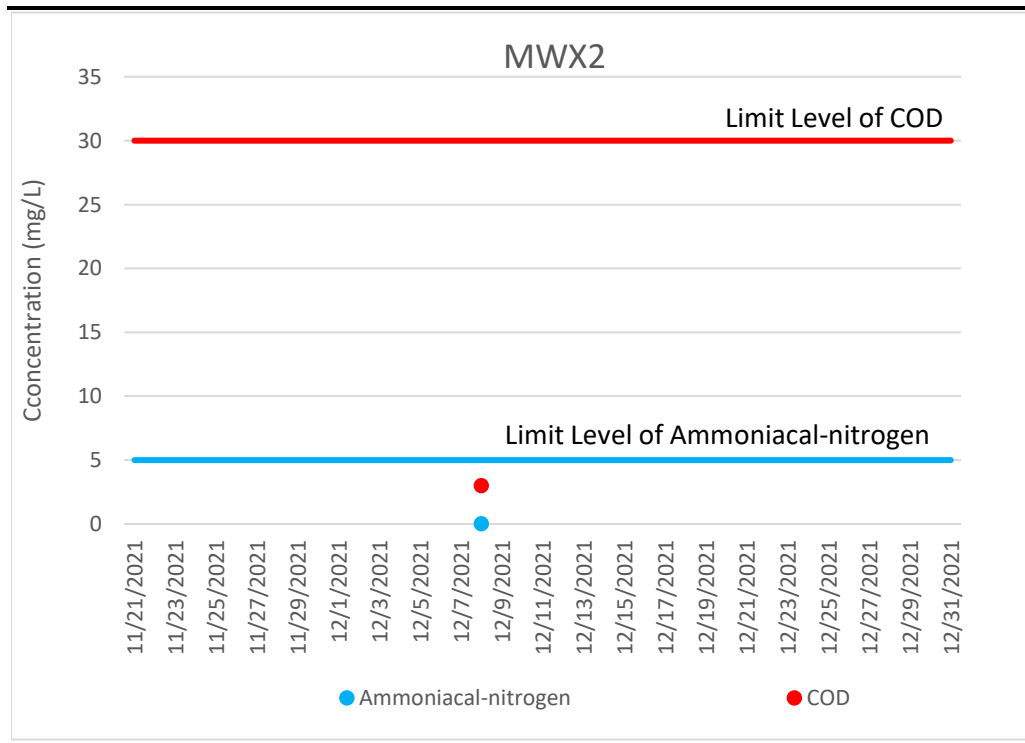


Figure F5.3 Graphical Presentation for Groundwater Monitoring (MWX-3)

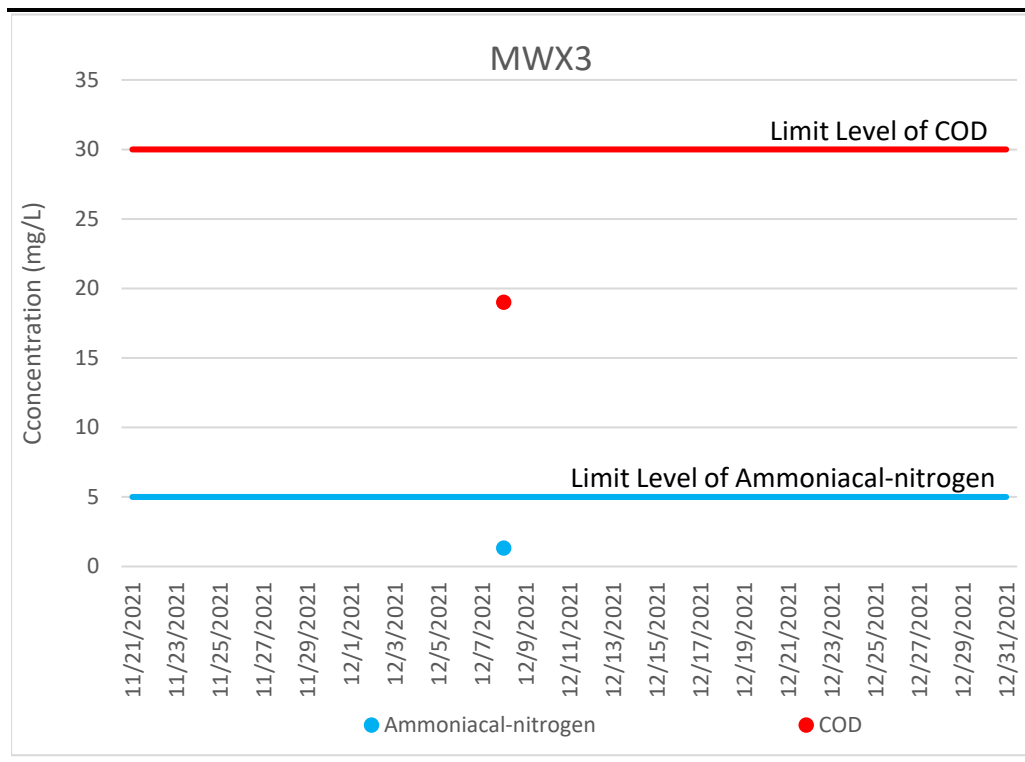


Figure F5.4 Graphical Presentation for Groundwater Monitoring (MWX-4)

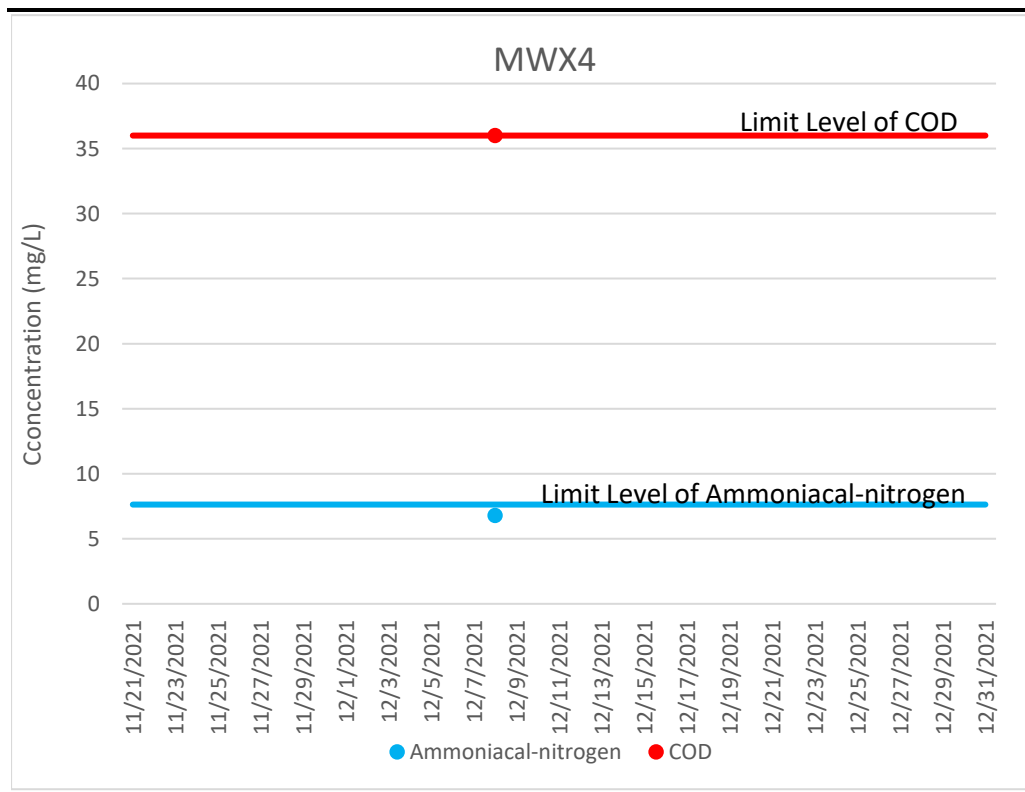


Figure F5.5 Graphical Presentation for Groundwater Monitoring (MWX-5)

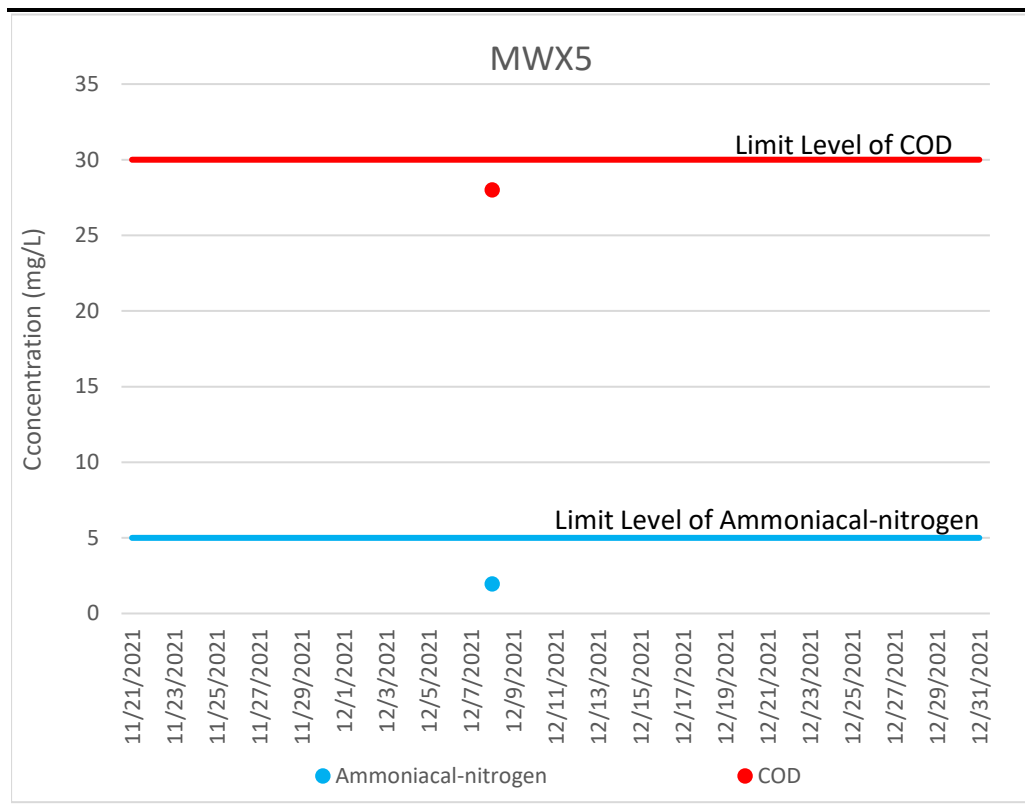


Figure F5.6 Graphical Presentation for Groundwater Monitoring (MWX-6)

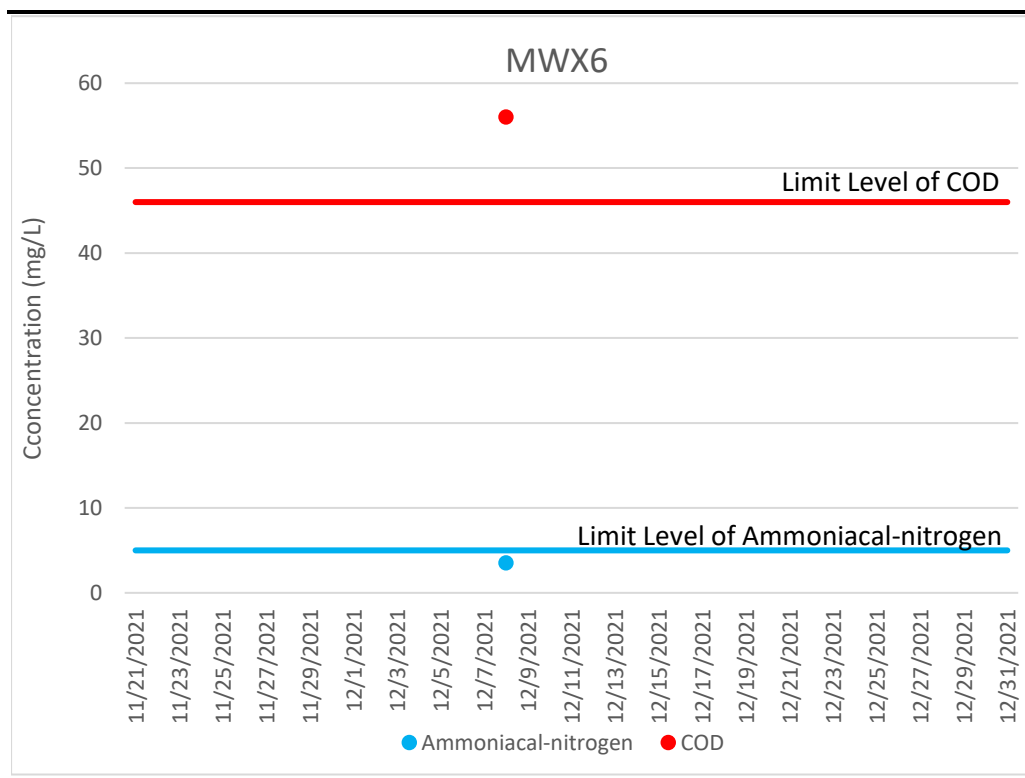


Figure F5.7 Graphical Presentation for Groundwater Monitoring (MWX-7)

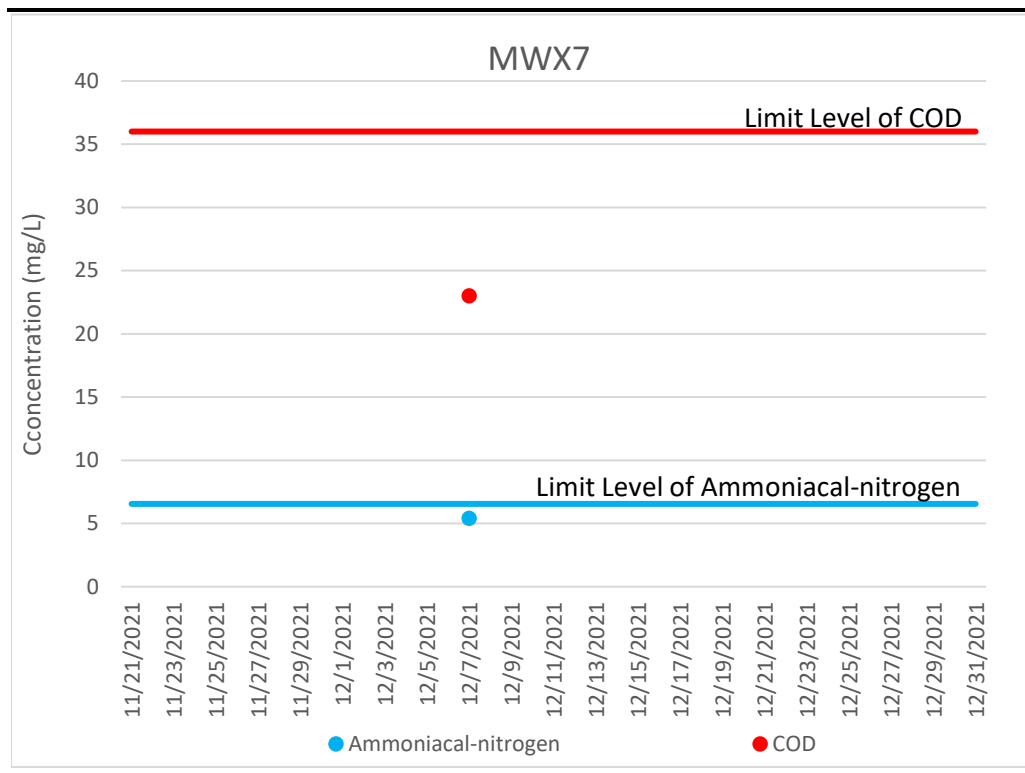


Figure F5.8 Graphical Presentation for Groundwater Monitoring (MWX-8)

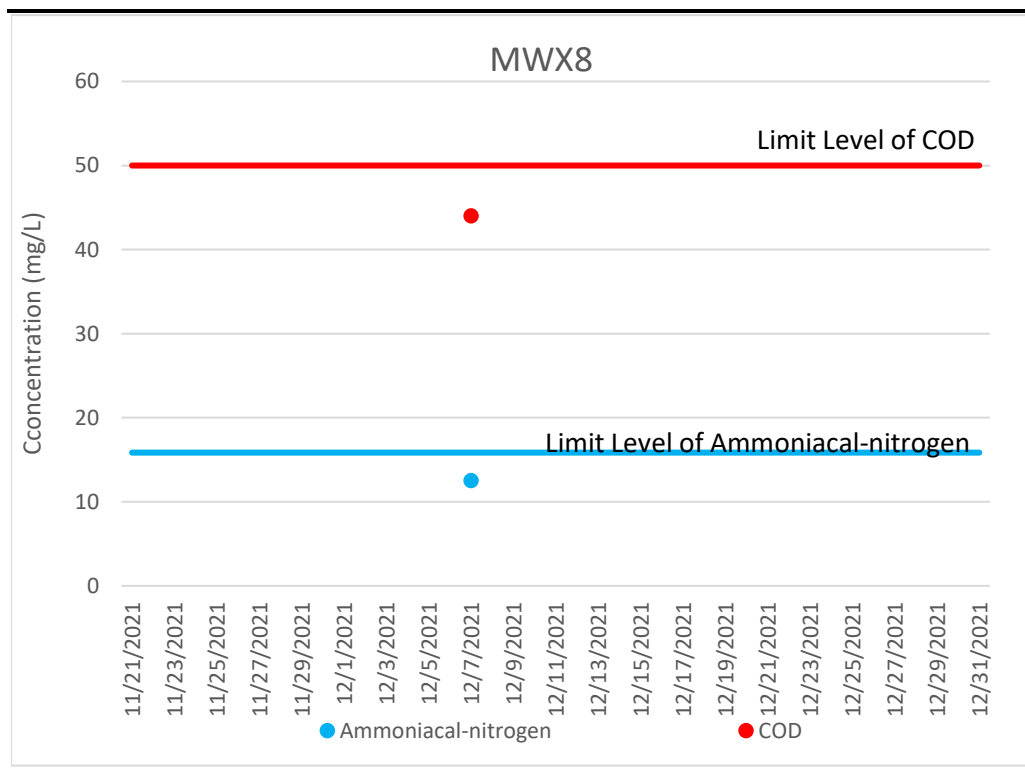


Figure F5.9 Graphical Presentation for Groundwater Monitoring (MWX-9)

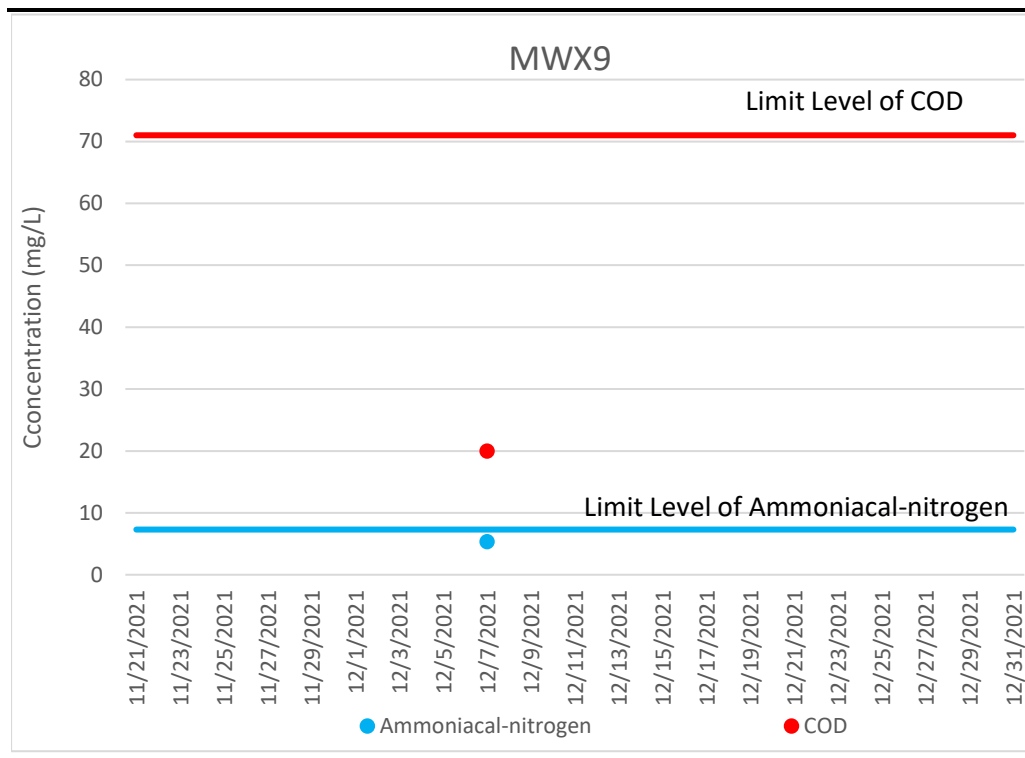


Figure F5.10 Graphical Presentation for Groundwater Monitoring (MWX-10)

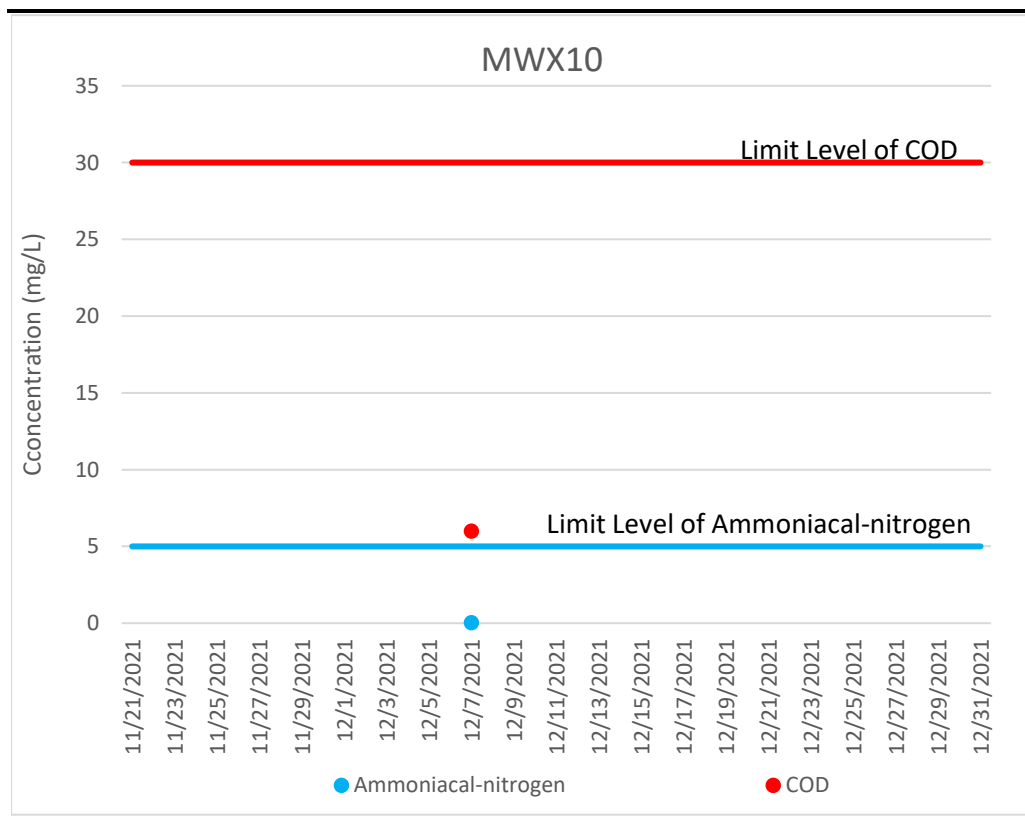


Figure F5.11 Graphical Presentation for Groundwater Monitoring (MWX-11)

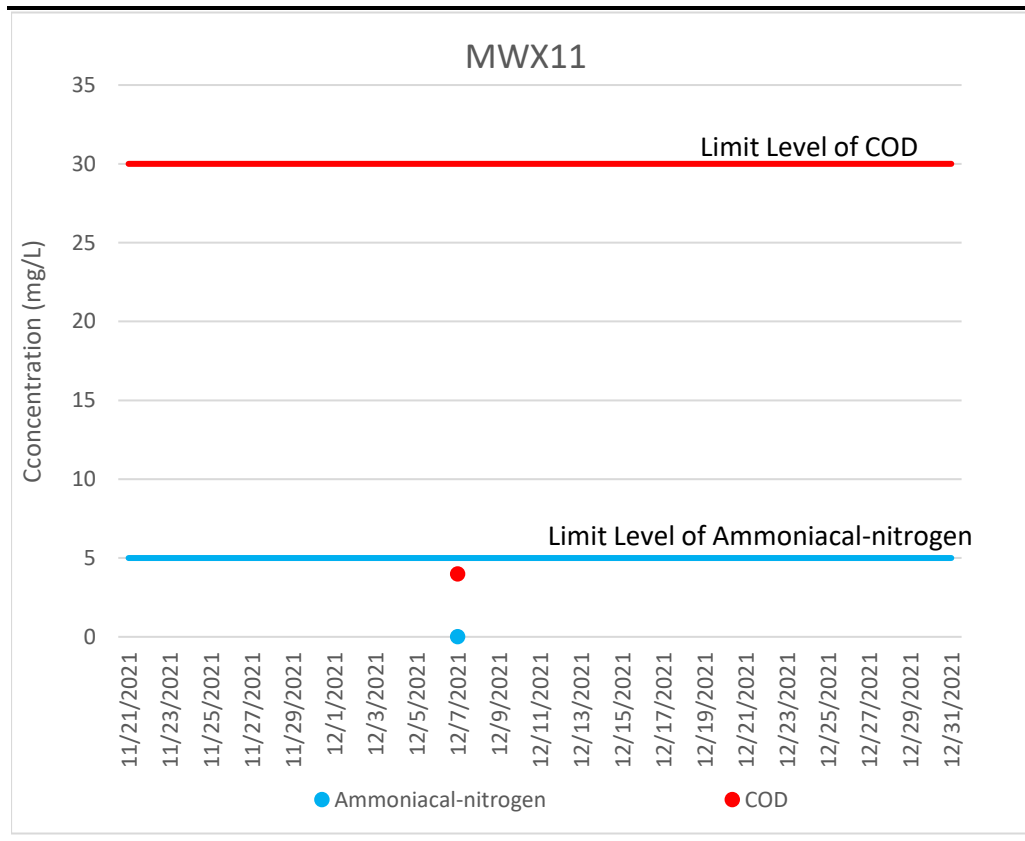


Figure F5.12 Graphical Presentation for Groundwater Monitoring (MWX-12)

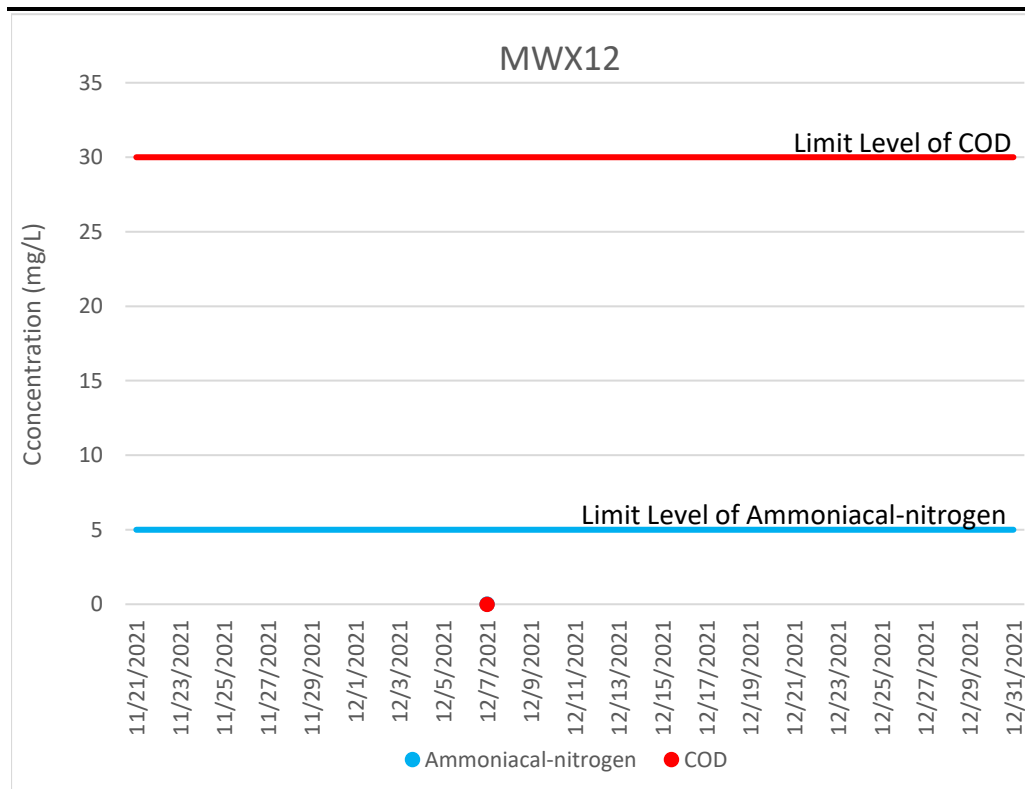




Figure F5.13 Graphical Presentation for Groundwater Monitoring (MWX-13)

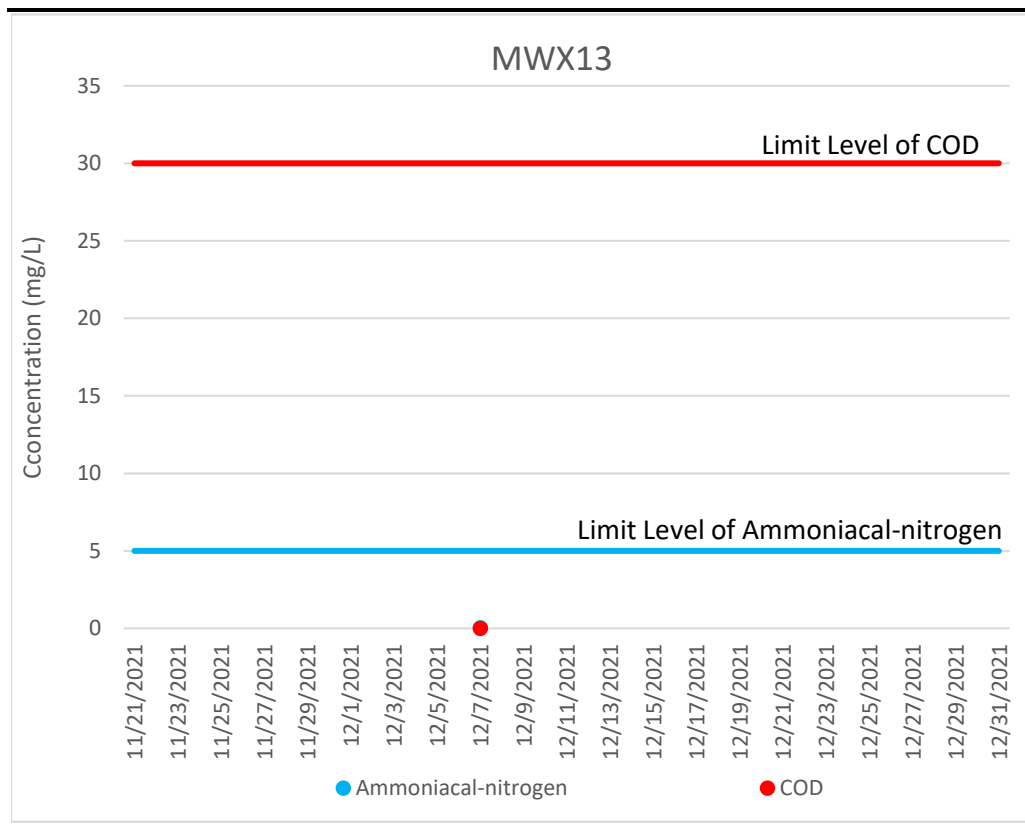


Figure F5.14 Graphical Presentation for Groundwater Monitoring (MWX-14)

