Ohio Environmental Protection Agency

Ambient Ground Water Quality Monitoring Program

# Ground Water Quality Results

Inorganic results from raw, untreated Ambient well water

| Charge Balance Error | Analyte Count on Sheet | Analyte Detected Count |
|---|---|---|
| +3.9% | 31 | -1 |

**Station Name** Cortland Wellfield **Well Num** 5 **Ambient Well ID** 39TRU00438 **Samp. Status** Active36Cycle **PWS ID** OH7800512

**Sample Num** 19102103-0: **Sample Date/Time** 10/22/2019 13:10:0C **Sampler** Eyerdom, Timothy **Sample Type** Inorganic **QC Code** None

**Chem. Sheet ID** 14962 **Matrix** Ground Water **Sheet Status** SampleImported **County** Trumbull **District** NEDO **Well Log #** 379495

**Well Depth (ft)** 318 **Casing Length (ft)** 195 **Lith. Open Section** Shale **Major Lith.** Sandstone **Aquifer Name** Pymatuning

## FieldParameter

| | Result/Unit | Reporting Limit | Primary/Secondary/ Action Lim. Benchmarks | Health Advisory Benchmarks | Lab Remark | Lab Method |
|---|---|---|---|---|---|---|
| Oxidation Reduction Potential (ORP) | -27 | N/A | | | ValueBetweenQL-Std | |
| pH | 8.13 | N/A | | | | |
| Specific Conductance | 825 | N/A | | | | |
| Temperature, water | 12.4 | N/A | | | ValueBelowQCStandard | |
| Total Dissolved Solids (TDS), Field | 588 | N/A | | | | |

## Metals-ICP

| | Result/Unit | Reporting Limit | Primary/Secondary/ Action Lim. Benchmarks | Health Advisory Benchmarks | Lab Remark | Lab Method |
|---|---|---|---|---|---|---|
| Aluminum | ND | 200 ug/L | | | ValueBelowQCStandard | 401.1 (200.7/6010) |
| Barium | 248 | 15 ug/L | | | | 401.1 (200.7/6010) |
| Boron | 345 | 200 ug/L | | | | 401.1 (200.7/6010) |
| Calcium | 19.5 | 2 mg/L | | | | 401.1 (200.7/6010) |
| Chromium | ND | 2 ug/L | | | ValueBelowQCStandard | 460.1 (200.8/6020) |
| Copper | 2.53 | 2 ug/L | | | | 460.1 (200.8/6020) |
| Hardness, Ca + Mg | 78.5 | 10 mg/L | | | | 401.1 (200.7/6010) |
| Iron | 126 | 50 ug/L | | | | 401.1 (200.7/6010) |
| Lead | ND | 2 ug/L | | | ValueBelowQCStandard | 460.1 (200.8/6020) |
| Magnesium | 7.25 | 1 mg/L | | | | 401.1 (200.7/6010) |
| Manganese | 10.2 | 10 ug/L | | | | 401.1 (200.7/6010) |
| Nickel | ND | 2 ug/L | | | ValueBetweenQL-Std | 460.1 (200.8/6020) |
| Potassium | 2.28 | 2 mg/L | | | | 401.1 (200.7/6010) |
| Sodium | 212 | 25 mg/L | | | | 401.1 (200.7/6010) |
| Strontium | 396 | 30 ug/L | | | | 401.1 (200.7/6010) |
| Zinc | ND | 10 ug/L | | | ValueBetweenQL-Std | 401.1 (200.7/6010) |

## Metals-ICPMS

| | Result/Unit | Reporting Limit | Primary/Secondary/ Action Lim. Benchmarks | Health Advisory Benchmarks | Lab Remark | Lab Method |
|---|---|---|---|---|---|---|
| Arsenic | ND | 2 ug/L | | | ValueBetweenQL-Std | 460.1 (200.8/6020) |
| Cadmium | ND | 0.2 ug/L | | | ValueBelowQCStandard | 460.1 (200.8/6020) |
| Selenium | 2.34 | 2 ug/L | | | | 460.1 (200.8/6020) |

## Nutrients-Demand

| | Result/Unit | Reporting Limit | Primary/Secondary/ Action Lim. Benchmarks | Health Advisory Benchmarks | Lab Remark | Lab Method |
|---|---|---|---|---|---|---|
| Ammonia | 0.73 | 0.05 mg/L | | | | 250.4 (350.1) |
| Carbon, Total Organic (TOC) | ND | 2 mg/L | | | ValueBetweenQL-Std | 335.3 (SM 5310C) |
| Chemical Oxygen Demand (COD) | ND | 20 mg/L | | | ValueBetweenQL-Std | 320.4 (SM 5220D) |
| Nitrate+Nitrite | ND | 0.1 mg/L | | | ValueBelowQCStandard | 250.8 (USEPA Redu |
| Nitrogen, Total Kjeldahl (TKN) | 0.672 | 0.3 mg/L | | | | 250.6 (351.2) |
| Phosphorus | ND | 0.01 mg/L | | | ValueBelowQCStandard | 260.8 (365.4) |

## Unpreserved

| | Result/Unit | Reporting Limit | Primary/Secondary/ Action Lim. Benchmarks | Health Advisory Benchmarks | Lab Remark | Lab Method |
|---|---|---|---|---|---|---|
| Alkalinity, Total | 413 | 5 mg/L | | | | 220.1 (310.1) |
| Bromide | 399 | 20 ug/L | | | | 290.1 (300.1) |
| Chloride | 58.9 | 5 mg/L | | | | 230.2 (325.1) |
| Fluoride | 0.24 | 0.2 mg/L | | | | 280.1 (SM 4500-FC |
| Sulfate | ND | 5 mg/L | | | ValueBelowQCStandard | 270.3 (375.2) |
| Total Dissolved Solids | 550 | 10 mg/L | > SMCL (500 mg/L) | | | 130.2 (USGS I-175C |

**Field Comments**

End of sample # 19102103-03

**Explanations**

ND: Non Detect
QL: Quantition Limit
N/A: Not Applicable

**Results color fields**

Colored fields highlight results greater than Drinking Water compliance thresholds. Since Ambient samples are not used for compliance evaluations, these thresholds are shown for comparison purposes only.

| | |
|---|---|
| Sky Blue | Organic samples only: indicates a detect |
| Tan | Exceeds Action Level (lead and copper only) |
| Violet | Exceeds Secondary MCL |
| Brick Red | Exceeds Primary MCL |
| Yellow | CBE exceeds +/- 5% |

* LT = Life Time Health Advisory Exceedance

^ 1_10 = One and Ten Day Health Advisory Exceedance

Ambient Ground Water Quality Monitoring Program

# Ground Water Quality Results

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Ohio Environmental Protection Agency

| Charge Balance Error | N/A |
|---|---|
| Analyte Count on Sheet | 67 |
| Analyte Detected Count | -1 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Station Name | Cortland Wellfield | Well Num | 5 | Ambient Well ID | 39TRU00438 | Samp. Status | Active36Cycle | PWS ID | OH7800512 |
| Sample Num | 19102103-0: | Sample Date/Time | 10/22/2019 13:10:0C | Sampler | Eyerdom, Timothy | Sample Type | Organic | QC Code | None |
| Chem. Sheet ID | 14963 | Matrix | Ground Water | Sheet Status | OutOfRangeResults | County | Trumbull | District | NEDO |
| Well Log # | 379495 | Well Depth (ft) | 318 | Casing Length (ft) | 195 | Lith. Open Section | Shale | Major Lith. | Sandstone |
| Aquifer Name | Pymatuning | | | | | | | | |

## VolatileOrganic

| | Result/Unit | Reporting Limit | | Primary/Secondary/ Action Lim. Benchmarks | Health Advisory Benchmarks | Lab Remark | Lab Method |
|---|---|---|---|---|---|---|---|
| 1,2-Dibromo-3-chloropropane (DBCP) | ND | 0.5 | ug/L | | | ValueBelowQCStandard | 530.2 (524.2/624/8 |
| 2-Butanone | ND | 1 | ug/L | | | ValueBelowQCStandard | 530.2 (524.2/624/8 |
| 4-Methyl-2-pentanone | ND | 1 | ug/L | | | ValueBelowQCStandard | 530.2 (524.2/624/8 |
| Acetone | ND | 5 | ug/L | | | ValueBelowQCStandard | 530.2 (524.2/624/8 |
| Acrylonitrile | ND | 1 | ug/L | | | ValueBelowQCStandard | 530.2 (524.2/624/8 |
| Benzene | ND | 0.5 | ug/L | | | ValueBelowQCStandard | 530.2 (524.2/624/8 |
| Bromoform | ND | 0.5 | ug/L | | | ValueBelowQCStandard | 530.2 (524.2/624/8 |
| Butyl benzene | ND | 0.5 | ug/L | | | ValueBelowQCStandard | 530.2 (524.2/624/8 |
| Butylbenzene, sec- | ND | 0.5 | ug/L | | | ValueBelowQCStandard | 530.2 (524.2/624/8 |
| Butylbenzene, tert- | ND | 0.5 | ug/L | | | ValueBelowQCStandard | 530.2 (524.2/624/8 |
| Carbon disulfide | ND | 1 | ug/L | | | ValueBelowQCStandard | 530.2 (524.2/624/8 |
| Carbon tetrachloride | ND | 2 | ug/L | | | ValueBelowQCStandard | 530.2 (524.2/624/8 |
| Chlorobenzene | ND | 0.5 | ug/L | | | ValueBelowQCStandard | 530.2 (524.2/624/8 |
| Chlorobromomethane | ND | 0.5 | ug/L | | | ValueBelowQCStandard | 530.2 (524.2/624/8 |
| Chlorodibromomethane | ND | 0.5 | ug/L | | | ValueBelowQCStandard | 530.2 (524.2/624/8 |
| Chloroethane | ND | 0.5 | ug/L | | | ValueBelowQCStandard | 530.2 (524.2/624/8 |
| Chloroform | ND | 0.5 | ug/L | | | ValueBelowQCStandard | 530.2 (524.2/624/8 |
| Chlorotoluene, 2- | ND | 0.5 | ug/L | | | ValueBelowQCStandard | 530.2 (524.2/624/8 |
| Chlorotoluene, 4- | ND | 0.5 | ug/L | | | ValueBelowQCStandard | 530.2 (524.2/624/8 |
| Cumene | ND | 0.5 | ug/L | | | ValueBelowQCStandard | 530.2 (524.2/624/8 |
| Cymene | ND | 0.5 | ug/L | | | ValueBelowQCStandard | 530.2 (524.2/624/8 |
| Dibromomethane | ND | 0.5 | ug/L | | | ValueBelowQCStandard | 530.2 (524.2/624/8 |
| Dichlorobenzene, 1,2- | ND | 0.5 | ug/L | | | ValueBelowQCStandard | 530.2 (524.2/624/8 |
| Dichlorobenzene, 1,3- | ND | 0.5 | ug/L | | | ValueBelowQCStandard | 530.2 (524.2/624/8 |
| Dichlorobenzene, 1,4- | ND | 0.5 | ug/L | | | ValueBelowQCStandard | 530.2 (524.2/624/8 |
| Dichlorobromomethane | ND | 0.5 | ug/L | | | ValueBelowQCStandard | 530.2 (524.2/624/8 |
| Dichlorodifluoromethane | ND | 0.5 | ug/L | | | ValueBelowQCStandard | 530.2 (524.2/624/8 |
| Dichloroethane, 1,1- | ND | 0.5 | ug/L | | | ValueBelowQCStandard | 530.2 (524.2/624/8 |
| Dichloroethane, 1,2- | ND | 0.5 | ug/L | | | ValueBelowQCStandard | 530.2 (524.2/624/8 |
| Dichloroethene, trans-1,2- | ND | 0.5 | ug/L | | | ValueBelowQCStandard | 530.2 (524.2/624/8 |
| Dichloroethylene, 1,1- | ND | 0.5 | ug/L | | | ValueBelowQCStandard | 530.2 (524.2/624/8 |
| Dichloroethylene, cis-1,2- | ND | 0.5 | ug/L | | | ValueBelowQCStandard | 530.2 (524.2/624/8 |
| Dichloropropane, 1,2- | ND | 0.5 | ug/L | | | ValueBelowQCStandard | 530.2 (524.2/624/8 |
| Dichloropropane, 1,3- | ND | 0.5 | ug/L | | | ValueBelowQCStandard | 530.2 (524.2/624/8 |
| Dichloropropane, 2,2- | ND | 0.5 | ug/L | | | ValueBelowQCStandard | 530.2 (524.2/624/8 |
| Dichloropropene, 1,1- | ND | 0.5 | ug/L | | | ValueBelowQCStandard | 530.2 (524.2/624/8 |
| Dichloropropene, 1,3 cis- | ND | 0.5 | ug/L | | | ValueBelowQCStandard | 530.2 (524.2/624/8 |
| Dichloropropene, 1,3 trans- | ND | 0.5 | ug/L | | | ValueBelowQCStandard | 530.2 (524.2/624/8 |
| Ethyl benzene | ND | 0.5 | ug/L | | | ValueBelowQCStandard | 530.2 (524.2/624/8 |
| Ethylene dibromide (EDB) | ND | 0.5 | ug/L | | | ValueBelowQCStandard | 530.2 (524.2/624/8 |
| Hexanone, 2- | ND | 1 | ug/L | | | ValueBelowQCStandard | 530.2 (524.2/624/8 |
| Iodomethane | ND | 1 | ug/L | | | ValueBelowQCStandard | 530.2 (524.2/624/8 |
| Methyl bromide | ND | 0.5 | ug/L | | | ValueBelowQCStandard | 530.2 (524.2/624/8 |
| Methyl chloride | ND | 0.5 | ug/L | | | ValueBelowQCStandard | 530.2 (524.2/624/8 |
| Methyl tertiary butyl ether (MTBE) | 0.535 | 0.5 | ug/L | | | | 530.2 (524.2/624/8 |
| Methylene chloride | ND | 0.5 | ug/L | | | ValueBelowQCStandard | 530.2 (524.2/624/8 |
| Monobromobenzene | ND | 0.5 | ug/L | | | ValueBelowQCStandard | 530.2 (524.2/624/8 |
| Propylbenzene, n- | ND | 0.5 | ug/L | | | ValueBelowQCStandard | 530.2 (524.2/624/8 |
| Styrene | ND | 0.5 | ug/L | | | ValueBelowQCStandard | 530.2 (524.2/624/8 |
| Tetrachloroethane, 1,1,1,2- | ND | 0.5 | ug/L | | | ValueBelowQCStandard | 530.2 (524.2/624/8 |

Ambient Ground Water Quality Monitoring Program

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Ohio Environmental Protection Agency

| Charge Balance Error | Analyte Count on Sheet | Analyte Detected Count |
|---|---|---|
| N/A | 67 | -1 |

**Station Name** Cortland Wellfield **Well Num** 5 **Ambient Well ID** 39TRU00438 **Samp. Status** Active36Cycle **PWS ID** OH7800512

**Sample Num** 19102103-0: **Sample Date/Time** 10/22/2019 13:10:0C **Sampler** Eyerdom, Timothy **Sample Type** Organic **QC Code** None

**Chem. Sheet ID** 14963 **Matrix** Ground Water **Sheet Status** OutOfRangeResults **County** Trumbull **District** NEDO **Well Log #** 379495

**Well Depth (ft)** 318 **Casing Length (ft)** 195 **Lith. Open Section** Shale **Major Lith.** Sandstone **Aquifer Name** Pymatuning

## VolatileOrganic

| | Result/Unit | Reporting Limit | Primary/Secondary/ Action Lim. Benchmarks | Health Advisory Benchmarks | Lab Remark | Lab Method |
|---|---|---|---|---|---|---|
| Tetrachloroethane, 1,1,2,2- | ND | 0.5 ug/L | | | ValueBelowQCStandard | 530.2 (524.2/624/8 |
| Tetrachloroethylene | ND | 0.5 ug/L | | | ValueBelowQCStandard | 530.2 (524.2/624/8 |
| Toluene | ND | 0.5 ug/L | | | ValueBelowQCStandard | 530.2 (524.2/624/8 |
| Trans-1,4-Dichloro-2-butene | ND | 1 ug/L | | | ValueBelowQCStandard | 530.2 (524.2/624/8 |
| Trichlorobenzene, 1,2,3- | ND | 0.5 ug/L | | | ValueBelowQCStandard | 530.2 (524.2/624/8 |
| Trichloroethane, 1,1,1- | ND | 0.5 ug/L | | | ValueBelowQCStandard | 530.2 (524.2/624/8 |
| Trichloroethane, 1,1,2- | ND | 0.5 ug/L | | | ValueBelowQCStandard | 530.2 (524.2/624/8 |
| Trichloroethylene | ND | 0.5 ug/L | | | ValueBelowQCStandard | 530.2 (524.2/624/8 |
| Trichlorofluoromethane | ND | 0.5 ug/L | | | ValueBelowQCStandard | 530.2 (524.2/624/8 |
| Trichloropropane, 1,2,3- | ND | 0.5 ug/L | | | ValueBelowQCStandard | 530.2 (524.2/624/8 |
| Trihalomethanes (unspecified mix) | ND | 0.5 ug/L | | | ValueBelowQCStandard | 530.2 (524.2/624/8 |
| Trimethylbenzene, 1,2,4- | ND | 0.5 ug/L | | | ValueBelowQCStandard | 530.2 (524.2/624/8 |
| Trimethylbenzene, 1,3,5- | ND | 0.5 ug/L | | | ValueBelowQCStandard | 530.2 (524.2/624/8 |
| Vinyl acetate | ND | 1 ug/L | | | ValueBelowQCStandard | 530.2 (524.2/624/8 |
| Vinyl chloride | ND | 0.5 ug/L | | | ValueBelowQCStandard | 530.2 (524.2/624/8 |
| Xylene, o- | ND | 0.5 ug/L | | | ValueBelowQCStandard | 530.2 (524.2/624/8 |
| Xylenes, m- & p- Mix | ND | 1 ug/L | | | ValueBelowQCStandard | 530.2 (524.2/624/8 |

**Field Comments**

End of sample # 19102103-03

**Explanations**

ND: Non Detect
QL: Quantition Limit
N/A: Not Applicable

**Results color fields**

Colored fields highlight results greater than Drinking Water compliance thresholds. Since Ambient samples are not used for compliance evaluations, these thresholds are shown for comparison purposes only.

- Sky Blue: Organic samples only: indicates a detect
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- Violet: Exceeds Secondary MCL
- Brick Red: Exceeds Primary MCL
- Yellow: CBE exceeds +/- 5%

* LT = Life Time Health Advisory Exceedance

^ 1_10 = One and Ten Day Health Advisory Exceedance