

Table 3-1. Analytical Methods for Constituents

| Class | Constituent | Sample Type | Method | DL | PQL | Units | Preservation | Holding Time | ME | LU |
|--------------------|------------------------|-------------|----------|------|------|-----------|--|--------------|----|----|
| Conventional | | | | | | | | | | |
| | Cyanide | Grab | A335.2 | 0.01 | 0.01 | mg/l | NaOH, ascorbic acid | 14 days | x | |
| | TPH | Grab | A418.1 | 1.0 | 1.0 | mg/l | - | 28 days | x | |
| | Oil and Grease | Grab | A413.1 | 1.0 | 1.0 | mg/l | - | 28 days | x | |
| | Total Phenols | Grab | A420.1 | 0.1 | 0.1 | mg/l | Na ₂ S ₂ O ₃ | 7 days | x | |
| Indicator Bacteria | | | | | | | | | | |
| | Total Coliform | Grab | | 20 | 20 | MPN/100ml | - | 6 hours | x | |
| | Fecal Coliform | Grab | | 20 | 20 | MPN/100ml | - | 6 hours | x | |
| | Fecal Streptococcus | Grab | | 20 | 20 | MPN/100ml | - | 6 hours | x | |
| General | | | | | | | | | | |
| | Ammonia | Comp | A350.3 | 0.1 | 0.1 | mg/l | H ₂ SO ₄ | 28 days | x | x |
| | Calcium | Comp | A215.2 | 1.0 | 1.0 | mg/l | HNO ₃ | 6 months | x | x |
| | Magnesium | Comp | C3500MgD | 1.0 | 1.0 | mg/l | HNO ₃ | 6 months | x | x |
| | Potassium | Comp | A258.1 | 1.0 | 1.0 | mg/l | HNO ₃ | 6 months | x | x |
| | Sodium | Comp | A273.1 | 1.0 | 1.0 | mg/l | HNO ₃ | 6 months | x | x |
| | Bicarbonate | Comp | A310.1 | 2.0 | 2.0 | mg/l | - | 14 days | x | x |
| | Carbonate | Comp | A310.1 | 2.0 | 2.0 | mg/l | - | 14 days | x | x |
| | Chloride | Comp | B429 | 2.0 | 2.0 | mg/l | - | 28 days | x | x |
| | Fluoride | Comp | B429 | 0.1 | 0.1 | mg/l | - | 28 days | x | x |
| | Nitrate | Comp | B429 | 0.1 | 0.1 | mg/l | - | 48 hours | x | x |
| | Sulfate | Comp | B429 | 0.1 | 0.1 | mg/l | - | 48 hours | x | x |
| | Alkalinity | Comp | A310.1 | 4.0 | 4.0 | mg/l | - | 14 days | x | x |
| | Hardness | Comp | A130.2 | 2.0 | 2.0 | mg/l | HNO ₃ or H ₂ SO ₄ | 6 months | x | x |
| | Dissolved Phosphorus | Comp | A365.2 | 0.05 | 0.05 | mg/l | - | 48 hours | x | x |
| | Total Phosphorus | Comp | A365.2 | 0.05 | 0.05 | mg/l | H ₂ SO ₄ | 28 days | x | x |
| | COD | Comp | A410.4 | 5 | 5 | mg/l | H ₂ SO ₄ | 28 days | x | x |
| | pH | Comp | A150.1 | na | na | | - | immed. | x | x |
| | NH3-N | Comp | A350.3 | 0.1 | 0.1 | mg/l | H ₂ SO ₄ | 28 days | x | x |
| | Nitrate-N | Comp | C4110B | 0.1 | 0.1 | mg/l | - | 48 hours | x | x |
| | Nitrite-N | Comp | C4110B | 0.1 | 0.1 | mg/l | - | 48 hours | x | x |
| | TKN | Comp | A351.4 | 0.1 | 0.1 | mg/l | H ₂ SO ₄ | 28 days | x | x |
| | Specific Conductance | Comp | A120.1 | 1 | 1 | umhos/cm | - | immed. | x | x |
| | Total Dissolved Solids | Comp | A160.1 | 2.0 | 2.0 | mg/l | - | 7 days | x | x |
| | Turbidity | Comp | A180.1 | 0.1 | 0.1 | NTU | - | 48 hours | x | x |
| | Suspended Solids | Comp | A160.2 | 2.0 | 2.0 | mg/l | - | 7 days | x | x |
| | Vol. Sus. Solids | Comp | 160.4 | 1.0 | 1.0 | mg/l | - | 7 days | x | x |
| | MBAS | Comp | A425.1 | 0.05 | 0.05 | mg/l | - | 48 hours | x | x |
| | Total Organic Carbon | Comp | A415.1 | 1.0 | 1.0 | mg/l | HCl, H ₂ SO ₄ , or H ₃ PO ₄ | 28 days | x | x |
| | BOD ₅ | Comp | A405.1 | 2.0 | 2.0 | mg/l | - | 48 hours | x | x |
| Metals | | | | | | | | | | |
| | Dissolved Aluminum | Comp | A202.2 | 1000 | 1000 | µg/l | HNO ₃ | 6 months | x | x |
| | Total Aluminum | Comp | A202.2 | 1000 | 1000 | µg/l | HNO ₃ | 6 months | x | x |
| | Dissolved Antimony | Comp | A204.2 | 5 | 5 | µg/l | HNO ₃ | 6 months | x | x |
| | Total Antimony | Comp | A204.2 | 5 | 5 | µg/l | HNO ₃ | 6 months | x | x |
| | Dissolved Arsenic | Comp | A206.2 | 5 | 5 | µg/l | HNO ₃ | 6 months | x | x |
| | Total Arsenic | Comp | A206.2 | 5 | 5 | µg/l | HNO ₃ | 6 months | x | x |
| | Dissolved Barium | Comp | A208.2 | 10 | 10 | µg/l | HNO ₃ | 6 months | x | x |
| | Total Barium | Comp | A208.2 | 10 | 10 | µg/l | HNO ₃ | 6 months | x | x |

DL = Detection limit

PQL = Practical quantitation limit

ME = Constituents marked analyzed for mass emission stations.

LU = Constituents marked analyzed for land use stations.

"-" = No preservation required other than cooling the sample to 4° C.

na = not applicable

Table 3-1. Analytical Methods for Constituents

| Class | Constituent | Sample Type | Method | DL | PQL | Units | Preservation | Holding Time | ME | LU |
|------------------------|--------------------------------------|-------------|---------|------------|------------|-------|---|--------------|----|----|
| Metals (cont.) | | | | | | | | | | |
| | Dissolved Beryllium | Comp | A210.2 | 1 | 1 | µg/l | HNO ₃ | 6 months | x | x |
| | Total Beryllium | Comp | A210.2 | 1 | 1 | µg/l | HNO ₃ | 6 months | x | x |
| | Dissolved Boron | Comp | A212.3 | 100 | 100 | µg/l | HNO ₃ | 6 months | x | x |
| | Total Boron | Comp | A212.3 | 100 | 100 | µg/l | HNO ₃ | 6 months | x | x |
| | Dissolved Cadmium | Comp | A213.2 | 1 | 1 | µg/l | HNO ₃ | 6 months | x | x |
| | Total Cadmium | Comp | A213.2 | 1 | 1 | µg/l | HNO ₃ | 6 months | x | x |
| | Dissolved Chromium | Comp | A218.2 | 5 | 5 | µg/l | HNO ₃ | 6 months | x | x |
| | Total Chromium | Comp | A218.2 | 5 | 5 | µg/l | HNO ₃ | 6 months | x | x |
| | Dissolved Chromium +6 | Comp | | 10 | 10 | µg/l | - | 24 hours | x | x |
| | Total Chromium +6 | Comp | | 10 | 10 | µg/l | - | 24 hours | x | x |
| | Dissolved Copper | Comp | A220.1 | 5 | 5 | µg/l | HNO ₃ | 6 months | x | x |
| | Total Copper | Comp | A220.1 | 5 | 5 | µg/l | HNO ₃ | 6 months | x | x |
| | Dissolved Iron | Comp | A236.1 | 100 | 100 | µg/l | HNO ₃ | 6 months | x | x |
| | Total Iron | Comp | A236.1 | 100 | 100 | µg/l | HNO ₃ | 6 months | x | x |
| | Dissolved Lead | Comp | A239.2 | 5 | 5 | µg/l | HNO ₃ | 6 months | x | x |
| | Total Lead | Comp | A239.2 | 5 | 5 | µg/l | HNO ₃ | 6 months | x | x |
| | Dissolved Manganese | Comp | A243.1 | 100 | 100 | µg/l | HNO ₃ | 6 months | x | x |
| | Total Manganese | Comp | A243.1 | 100 | 100 | µg/l | HNO ₃ | 6 months | x | x |
| | Dissolved Mercury | Comp | A245.1 | 1 | 1 | µg/l | HNO ₃ | 28 days | x | x |
| | Total Mercury | Comp | A245.1 | 1 | 1 | µg/l | HNO ₃ | 28 days | x | x |
| | Dissolved Nickel | Comp | A249.2 | 5 | 5 | µg/l | HNO ₃ | 6 months | x | x |
| | Total Nickel | Comp | A249.2 | 5 | 5 | µg/l | HNO ₃ | 6 months | x | x |
| | Dissolved Selenium | Comp | A270.2 | 5 | 5 | µg/l | HNO ₃ | 6 months | x | x |
| | Total Selenium | Comp | A270.2 | 5 | 5 | µg/l | HNO ₃ | 6 months | x | x |
| | Dissolved Silver | Comp | A272.2 | 1 | 1 | µg/l | HNO ₃ | 6 months | x | x |
| | Total Silver | Comp | A272.2 | 1 | 1 | µg/l | HNO ₃ | 6 months | x | x |
| | Dissolved Thallium | Comp | A279.2 | 5 | 5 | µg/l | HNO ₃ | 6 months | x | x |
| | Total Thallium | Comp | A279.2 | 5 | 5 | µg/l | HNO ₃ | 6 months | x | x |
| | Dissolved Zinc | Comp | A289.1 | 50 | 50 | µg/l | HNO ₃ | 6 months | x | x |
| | Total Zinc | Comp | A289.1 | 50 | 50 | µg/l | HNO ₃ | 6 months | x | x |
| Semi-Volatile Organics | | | | | | | | | | |
| | Bis(2-ethylhexyl)phthalate | Comp | 625 | 3.0 | 3.0 | µg/l | - | 7 days | x | x |
| | All other SVOCs | Comp | 625 | 0.5 - 5.0 | 0.5 - 5.0 | µg/l | - | 7 days | x | x |
| Pesticides | | | | | | | | | | |
| | Organochlorine Pesticides & PCBs | Comp | D608 | 0.05 - 1.0 | 0.05 - 1.1 | µg/l | - | 7 days | x | x |
| | Diazinon | Comp | 8141SOP | 0.01 | 0.01 | µg/l | - | 7 days | x | x |
| | Chlorpyrifos | Comp | 8141SOP | 0.05 | 0.1 | µg/l | - | 7 days | x | x |
| | Other N- and P-Containing Pesticides | Comp | 507 | 1.0 - 2.0 | 1.0 - 2.0 | µg/l | - | 7 days | x | x |
| | Carbofuran | Comp | 531.1 | 5.0 | 5.0 | µg/l | - | 7 days | x | x |
| | Chlorinated Herbicides & Bentazon | | | | | | | | | |
| | 2,4-D | Comp | 515.1 | 10.0 | 10.0 | µg/l | - | 7 days | x | x |
| | 2,4,5-TP | Comp | 515.1 | 1.0 | 1.0 | µg/l | - | 7 days | x | x |
| | Bentazon | Comp | 515.1 | 2.0 | 2.0 | µg/l | - | 7 days | x | x |
| | Glyphosate | Comp | 547 | 25 | 25 | µg/l | Na ₂ S ₂ O ₃ | 14 days | x | x |

DL = Detection limit

PQL = Practical quantitation limit

ME = Constituents marked analyzed for mass emission stations.

LU = Constituents marked analyzed for land use stations.

"-" = No preservation required other than cooling the sample to 4° C.

na = not applicable