

AFPC

Sample

2013-03

Grade

18-46-0

| | AOAC Ref. | Method # | # of Labs. | Grand Median | Std Dev |
|---|------------|----------|------------|--------------|---------|
| AMMONIACAL NITROGEN | | | | | |
| Ammoniacal Nitrogen, Other | | 001.99 | 8 | 18.41 | 0.14 |
| Method Group 001.XX PCT | | | 8 | 18.41 | 0.17 |
| TOTAL NITROGEN | | | | | |
| Total Nitrogen, Modified Comprehensive | 978.02 | 010.11 | 3 | 18.54 | 0.02 |
| Total Nitrogen, Salicylic | 955.04d | 010.12 | 1 | 18.42 | 0.00 |
| Total Nitrogen, Combustion | 993.13 | 010.60 | 10 | 18.58 | 0.10 |
| Total Nitrogen, Other | | 010.99 | 8 | 18.39 | 0.11 |
| Method Group 010.XX PCT | | | 22 | 18.51 | 0.18 |
| TOTAL PHOSPHATE | | | | | |
| Total Phosphate, Gravimetric Quimociac | | 020.10 | 1 | 47.66 | 0.00 |
| Total Phosphate, Spectrometric | 978.02 | 020.20 | 14 | 47.58 | 0.11 |
| Total Phosphate, ICP, Lithium | 970.02 | 020.50 | 1 | 47.86 | 0.00 |
| Total Phosphate, Other | 993.13 | 020.99 | 2 | 47.33 | 0.25 |
| Method Group 020.XX PCT | | | 18 | 47.62 | 0.15 |
| INSOLUBLE PHOSPHATE | | | | | |
| Insoluble Phosphate, Spectrometric | 963.03C(b) | 030.20 | 9 | 0.03 | 0.00 |
| Insoluble Phosphate, Automated | 978.01 | 030.40 | 2 | 0.06 | 0.00 |
| Insoluble Phosphate, Other | | 030.99 | 2 | 0.09 | 0.01 |
| Method Group 030.XX PCT | | | 13 | 0.03 | 0.04 |
| INDIRECT AVAILABLE PHOSPHATE | | | | | |
| Indirect Available Phosphate, Spectrometric | 960.02 | 040.20 | 9 | 47.50 | 0.06 |
| Indirect Available Phosphate, Other | | 040.99 | 5 | 47.79 | 0.14 |
| Method Group 040.XX PCT | | | 14 | 47.52 | 0.15 |
| DIRECT AVAILABLE PHOSPHATE | | | | | |
| Direct Available Phosphate, Gravimetric Quimociac | 960.03E | 041.10 | 3 | 47.26 | 0.25 |
| Direct Available Phosphate, Automated | 978.01 | 041.40 | 2 | 46.01 | 0.10 |
| Direct Available Phosphate, ICP | | 041.50 | 2 | 46.46 | 0.46 |
| Direct Available Phosphate, EDTA Extract | 993.01 | 041.60 | 3 | 47.52 | 1.02 |

| | | | | | |
|--|-----------|--------|----|-------|------|
| Method Group 041.XX PCT | | | 10 | 47.04 | 0.94 |
| WATER SOLUBLE PHOSPHATE | | | | | |
| Water Soluble Phosphate, Spectrometric | 970.01 | 048.20 | 9 | 44.34 | 0.35 |
| Water Soluble Phosphate, Other | | 048.99 | 4 | 44.71 | 0.39 |
| Method Group 048.XX PCT | | | 13 | 44.63 | 0.44 |
| SOLUBLE POTASH AS K₂O | | | | | |
| Soluble Potash, ICP(Oxalate) | | 050.50 | 2 | 0.16 | 0.00 |
| Soluble Potash, Other | | 050.99 | 7 | 0.16 | 0.01 |
| Method Group 050.XX PCT | | | 9 | 0.16 | 0.00 |
| FREE WATER | | | | | |
| Free Water, Vacuum Oven | 965.08B | 060.00 | 11 | 1.54 | 0.10 |
| Free Water, Vacuum Desiccate | 965.08A | 060.10 | 2 | 1.99 | 0.10 |
| Method Group 060.XX PCT | | | 13 | 1.55 | 0.15 |
| ACID SOLUBLE CALCIUM AS CaO | | | | | |
| Acid Soluble Calcium, Atomic Absorption | 945.04 | 101.00 | 1 | 0.07 | 0.00 |
| Acid Soluble Calcium, ICP | | 101.30 | 12 | 0.11 | 0.01 |
| Method Group 101.XX PCT | | | 13 | 0.11 | 0.02 |
| ACID SOLUBLE MAGNESIUM AS MgO | | | | | |
| Acid Soluble Magnesium, Atomic Absorption | 984.01 | 121.00 | 1 | 0.73 | 0.00 |
| Acid Soluble Magnesium, ICP | | 121.30 | 13 | 0.95 | 0.03 |
| Method Group 121.XX PCT | | | 14 | 0.95 | 0.05 |
| SULFATE SULFUR (S) | | | | | |
| Sulfur, Gravimetric | 980.02(a) | 144.01 | 3 | 2.01 | 0.08 |
| Sulfur, Other | | 144.99 | 9 | 2.16 | 0.02 |
| Method Group 144.XX PCT | | | 12 | 2.15 | 0.12 |
| TOTAL SULFUR (S) | | | | | |
| Sulfur, Other | | 145.99 | 3 | 2.14 | 0.02 |
| Method Group 145.XX PCT | | | 3 | 2.14 | 0.03 |
| TOTAL ARSENIC | | | | | |
| Total Arsenic, ICP | 980.02(b) | 151.02 | 4 | 12 | 0.6 |
| Method Group 151.XX PPM | | | 4 | 12 | 0.8 |
| TOTAL CADMIUM | | | | | |
| Total Cadmium, ICP | | 181.30 | 5 | 27 | 1.3 |
| Method Group 181.XX PPM | | | 5 | 27 | 1.5 |
| ALUMINUM AS Al₂O₃ | | | | | |

| | | | | | |
|---|---------|--------|----|-------|------|
| ICP, % | | | 12 | 0.81 | 0.01 |
| Method Group 190.XX PCT | | | 12 | 0.81 | 0.02 |
| TOTAL CHROMIUM | | | | | |
| Total Chromium, ICP | | 191.30 | 5 | 248 | 6.0 |
| Method Group 191.XX PPM | | | 5 | 248 | 7.3 |
| ACID SOLUBLE COBALT | | | | | |
| Acid Soluble Cobalt, ICP | | 202.30 | 4 | 2 | 0.0 |
| Method Group 202.XX PPM | | | 4 | 2 | 0.0 |
| ACID SOLUBLE COPPER | | | | | |
| Acid Soluble Copper, Atomic Absorption | 975.01 | 221.00 | 1 | 1 | 0.0 |
| Acid Soluble Copper, ICP | | 221.30 | 5 | 6 | 3.0 |
| Method Group 221.XX PPM | | | 5 | 6 | 3.6 |
| ACID SOLUBLE IRON AS Fe₂O₃ | | | | | |
| Acid Soluble Iron, ICP | | 241.30 | 13 | 0.67 | 0.02 |
| Method Group 241.XX PCT | | | 14 | 0.67 | 0.02 |
| TOTAL LEAD | | | | | |
| Total Lead, ICP | | 251.30 | 2 | 1 | 0.0 |
| Method Group 251.XX PPM | | | 2 | 1 | 0.0 |
| ACID SOLUBLE MANGANESE | | | | | |
| Acid Soluble Manganese, Atomic Absorption | 972.02b | 261.11 | 1 | 109 | 0.0 |
| Acid Soluble Manganese, ICP | 972.02a | 261.30 | 1 | 110 | 0.0 |
| Acid Soluble Manganese, Other | | 261.99 | 4 | 114 | 8.0 |
| Method Group 261.XX PPM | | | 6 | 110 | 7.7 |
| TOTAL MOLYBDENUM | | | | | |
| Total Molybdenum, ICP | | 289.30 | 5 | 4 | 0.4 |
| Method Group 289.XX PPM | | | 5 | 4 | 0.5 |
| TOTAL NICKEL | | | | | |
| Total Nickel, ICP | | 291.30 | 5 | 37 | 2.2 |
| Method Group 291.XX PPM | | | 5 | 37 | 2.7 |
| SODIUM AS Na₂O | | | | | |
| Sodium, Atomic Absorbtion | 983.04 | 311.00 | 1 | 0.14 | 0.00 |
| Sodium, Other | | 311.99 | 7 | 0.14 | 0.02 |
| Method Group 311.XX PCT | | | 8 | 0.14 | 0.02 |
| ACID SOLUBLE ZINC | | | | | |
| Acid Soluble Zinc, Atomic Absorption | 975.02 | 321.00 | 1 | 299.3 | 0.0 |

| | | | | |
|--------------------------|--------|----|-------|------|
| Acid Soluble Zinc, ICP | 321.30 | 3 | 302.5 | 2.1 |
| Acid Soluble Zinc, Other | 321.99 | 2 | 277.5 | 1.1 |
| Method Group 321.XX PPM | | 6 | 299.2 | 16.1 |
| <hr/> | | | | |
| FLUORIDE | | | | |
| Volumetric | 325.10 | 8 | 0.40 | 0.02 |
| Distilled/Electrode | 325.99 | 2 | 0.41 | 0.01 |
| Method Group 325.XX PCT | | 10 | 0.40 | 0.02 |
| <hr/> | | | | |

| 001.99 Ammoniacal Nitrogen | | |
|----------------------------|-------|--------|
| Lab | | Other |
| 24 | 18.60 | -1.322 |
| 24 | 18.57 | -1.076 |
| Std Dev | 18.55 | -1.000 |
| 34 | 18.53 | -0.829 |
| 61 | 18.44 | -0.194 |
| Median | 18.41 | 0.000 |
| 32 | 18.39 | 0.194 |
| 61 | 18.37 | 0.300 |
| 38 | 18.29 | 0.899 |
| Std Dev | 18.27 | 1.000 |
| 32 | 18.14 | 1.922 |

| 001.XX Ammoniacal Nitrogen | | |
|----------------------------|-------|--------------|
| Lab | | Total Method |
| 24 | 18.60 | -1.322 |
| 24 | 18.57 | -1.076 |
| Std Dev | 18.55 | -1.000 |
| 34 | 18.53 | -0.829 |
| 61 | 18.44 | -0.194 |
| Median | 18.41 | 0.000 |
| 32 | 18.39 | 0.194 |
| 61 | 18.37 | 0.300 |
| 38 | 18.29 | 0.899 |
| Std Dev | 18.27 | 1.000 |
| 32 | 18.14 | 1.922 |

| 010.11 Total Nitrogen | | |
|-----------------------|-------|------------------------|
| Lab | | Modified Comprehensive |
| 43 | 18.56 | -1.218 |
| Std Dev | 18.56 | -1.000 |
| 219 | 18.54 | 0.000 |
| Median | 18.54 | 0.000 |
| Std Dev | 18.51 | 1.000 |
| 43 | 18.51 | 1.462 |

| 010.12 Total Nitrogen | | |
|-----------------------|-------|-----------|
| Lab | | Salicylic |
| 107 | 18.42 | 0.000 |
| Median | 18.42 | 0.000 |

| 010.60 Total Nitrogen | | |
|-----------------------|--|------------|
| Lab | | Combustion |

| | | |
|---------|-------|--------|
| 24 | 18.77 | -1.958 |
| 24 | 18.70 | -1.237 |
| Std Dev | 18.68 | -1.000 |
| 219 | 18.66 | -0.773 |
| 47 | 18.65 | -0.670 |
| 49 | 18.60 | -0.206 |
| Median | 18.58 | 0.000 |
| 79 | 18.56 | 0.206 |
| 9 | 18.53 | 0.515 |
| 66 | 18.52 | 0.618 |
| Std Dev | 18.48 | 1.000 |
| 39 | 18.28 | 3.092 |
| 103 | 17.87 | 7.318 |

| 010.99 Total Nitrogen | | |
|-----------------------|-------|--------|
| Lab | | Other |
| 34 | 18.59 | -1.824 |
| Std Dev | 18.50 | -1.000 |
| 99 | 18.43 | -0.383 |
| 23 | 18.43 | -0.338 |
| 23 | 18.39 | -0.023 |
| Median | 18.39 | 0.000 |
| 32 | 18.39 | 0.023 |
| 110 | 18.30 | 0.788 |
| Std Dev | 18.28 | 1.000 |
| 40 | 18.21 | 1.599 |
| 32 | 18.14 | 2.230 |

| 010.XX Total Nitrogen | | |
|-----------------------|-------|--------------|
| Lab | | Total Method |
| 24 | 18.77 | -1.758 |
| 24 | 18.70 | -1.280 |
| Std Dev | 18.66 | -1.000 |
| 219 | 18.66 | -0.973 |
| 47 | 18.65 | -0.905 |
| 49 | 18.60 | -0.597 |
| 34 | 18.59 | -0.529 |
| 43 | 18.56 | -0.324 |
| 79 | 18.56 | -0.324 |
| 219 | 18.54 | -0.154 |
| 9 | 18.53 | -0.119 |
| 66 | 18.52 | -0.051 |
| Median | 18.51 | 0.000 |
| 43 | 18.51 | 0.051 |

| | | |
|---------|-------|-------|
| 99 | 18.43 | 0.563 |
| 23 | 18.43 | 0.597 |
| 107 | 18.42 | 0.632 |
| 23 | 18.39 | 0.836 |
| 32 | 18.39 | 0.871 |
| Std Dev | 18.37 | 1.000 |
| 110 | 18.30 | 1.451 |
| 39 | 18.28 | 1.588 |
| 40 | 18.21 | 2.065 |
| 32 | 18.14 | 2.543 |
| 103 | 17.87 | 4.387 |

| 020.10 Total Phosphate | | |
|------------------------|-------|-----------------------|
| Lab | | Gravimetric Quimociac |
| 40 | 47.66 | 0.000 |
| Median | 47.66 | 0.000 |

| 020.20 Total Phosphate | | |
|------------------------|-------|---------------|
| Lab | | Spectrometric |
| 38 | 48.20 | -5.461 |
| 32 | 47.86 | -2.394 |
| 9 | 47.75 | -1.428 |
| Std Dev | 47.70 | -1.000 |
| 34 | 47.65 | -0.593 |
| 23 | 47.62 | -0.330 |
| 61 | 47.62 | -0.330 |
| 79 | 47.62 | -0.286 |
| Median | 47.58 | 0.000 |
| 61 | 47.55 | 0.286 |
| 23 | 47.54 | 0.373 |
| 24 | 47.52 | 0.549 |
| 24 | 47.48 | 0.901 |
| Std Dev | 47.47 | 1.000 |
| 43 | 47.03 | 4.899 |
| 32 | 46.96 | 5.470 |
| 43 | 46.48 | 9.688 |

| 020.50 Total Phosphate | | |
|------------------------|-------|-------|
| Lab | | ICP |
| 9 | 47.86 | 0.000 |
| Median | 47.86 | 0.000 |

| 020.99 Total Phosphate | | |
|------------------------|--|-------|
| Lab | | Other |

| | | |
|---------|-------|--------|
| 99 | 47.66 | -1.340 |
| Std Dev | 47.57 | -1.000 |
| Median | 47.33 | 0.000 |
| Std Dev | 47.08 | 1.000 |
| 110 | 47.00 | 1.340 |

| 020.XX Total Phosphate | | |
|------------------------|-------|--------------|
| Lab | | Total Method |
| 38 | 48.20 | -4.763 |
| 9 | 47.86 | -1.929 |
| 32 | 47.86 | -1.929 |
| 9 | 47.75 | -1.035 |
| Std Dev | 47.74 | -1.000 |
| 40 | 47.66 | -0.305 |
| 99 | 47.66 | -0.305 |
| 34 | 47.65 | -0.264 |
| 23 | 47.62 | -0.020 |
| 61 | 47.62 | -0.020 |
| Median | 47.62 | 0.000 |
| 79 | 47.62 | 0.020 |
| 61 | 47.55 | 0.548 |
| 23 | 47.54 | 0.629 |
| 24 | 47.52 | 0.792 |
| Std Dev | 47.49 | 1.000 |
| 24 | 47.48 | 1.117 |
| 43 | 47.03 | 4.812 |
| 110 | 47.00 | 5.055 |
| 32 | 46.96 | 5.340 |
| 43 | 46.48 | 9.238 |

| 030.20 Insoluble Phosphate | | |
|----------------------------|------|---------------|
| Lab | | Spectrometric |
| 61 | 0.11 | -16.492 |
| 61 | 0.10 | -15.462 |
| Std Dev | 0.03 | -1.000 |
| 43 | 0.03 | -0.309 |
| 43 | 0.03 | -0.206 |
| 23 | 0.03 | 0.000 |
| 23 | 0.03 | 0.000 |
| Median | 0.03 | 0.000 |
| Std Dev | 0.02 | 1.000 |
| 24 | 0.02 | 1.031 |
| 24 | 0.02 | 1.031 |
| 79 | 0.01 | 3.092 |

| 030.40 Insoluble Phosphate | | |
|----------------------------|-----------|--------|
| Lab | Automated | |
| 9 | 0.06 | -1.340 |
| Std Dev | 0.06 | -1.000 |
| Median | 0.06 | 0.000 |
| Std Dev | 0.05 | 1.000 |
| 34 | 0.05 | 1.340 |

| 030.99 Insoluble Phosphate | | |
|----------------------------|-------|--------|
| Lab | Other | |
| 32 | 0.11 | -1.340 |
| Std Dev | 0.10 | -1.000 |
| Median | 0.09 | 0.000 |
| Std Dev | 0.07 | 1.000 |
| 32 | 0.07 | 1.340 |

| 030.XX Insoluble Phosphate | | |
|----------------------------|--------------|--------|
| Lab | Total Method | |
| 32 | 0.11 | -2.338 |
| 61 | 0.11 | -2.338 |
| 61 | 0.10 | -2.189 |
| 32 | 0.07 | -1.295 |
| Std Dev | 0.06 | -1.000 |
| 9 | 0.06 | -0.998 |
| 34 | 0.05 | -0.700 |
| 43 | 0.03 | 0.000 |
| Median | 0.03 | 0.000 |
| 43 | 0.03 | 0.015 |
| 23 | 0.03 | 0.045 |
| 23 | 0.03 | 0.045 |
| 24 | 0.02 | 0.194 |
| 24 | 0.02 | 0.194 |
| 79 | 0.01 | 0.491 |

| 040.20 Indirect Available Phosphate | | |
|-------------------------------------|---------------|--------|
| Lab | Spectrometric | |
| 79 | 47.61 | -1.876 |
| 23 | 47.60 | -1.697 |
| Std Dev | 47.56 | -1.000 |
| 61 | 47.52 | -0.357 |
| 23 | 47.52 | -0.268 |
| 24 | 47.50 | 0.000 |
| Median | 47.50 | 0.000 |

| | | |
|---------|-------|--------|
| 24 | 47.46 | 0.715 |
| 61 | 47.45 | 0.983 |
| Std Dev | 47.44 | 1.000 |
| 43 | 47.00 | 8.933 |
| 43 | 46.46 | 18.671 |

| 040.99 Indirect Available Phosphate | | |
|-------------------------------------|-------|--------|
| Lab | Other | |
| 9 | 47.80 | -0.071 |
| 9 | 47.80 | -0.071 |
| 32 | 47.79 | 0.000 |
| Median | 47.79 | 0.000 |
| Std Dev | 47.65 | 1.000 |
| 34 | 47.61 | 1.269 |
| 32 | 46.85 | 6.629 |

| 040.XX Indirect Available Phosphate | | |
|-------------------------------------|--------------|--------|
| Lab | Total Method | |
| 9 | 47.80 | -2.366 |
| 9 | 47.80 | -2.366 |
| 32 | 47.79 | -2.282 |
| Std Dev | 47.64 | -1.000 |
| 34 | 47.61 | -0.775 |
| 79 | 47.61 | -0.733 |
| 23 | 47.60 | -0.649 |
| 61 | 47.52 | -0.021 |
| Median | 47.52 | 0.000 |
| 23 | 47.52 | 0.021 |
| 24 | 47.50 | 0.147 |
| 24 | 47.46 | 0.482 |
| 61 | 47.45 | 0.607 |
| Std Dev | 47.40 | 1.000 |
| 43 | 47.00 | 4.334 |
| 32 | 46.85 | 5.590 |
| 43 | 46.46 | 8.898 |

| 041.10 Direct Available Phosphate | | |
|-----------------------------------|-----------------------|--------|
| Lab | Gravimetric Quimociac | |
| 47 | 47.33 | -0.282 |
| 219 | 47.26 | 0.000 |
| Median | 47.26 | 0.000 |
| Std Dev | 47.01 | 1.000 |
| 107 | 46.66 | 2.398 |

| 041.40 Direct Available Phosphate | | |
|-----------------------------------|-----------|--------|
| Lab | Automated | |
| 103 | 46.14 | -1.340 |
| Std Dev | 46.11 | -1.000 |
| Median | 46.01 | 0.000 |
| Std Dev | 45.91 | 1.000 |
| 39 | 45.88 | 1.340 |

| 041.50 Direct Available Phosphate | | |
|-----------------------------------|-------|--------|
| Lab | ICP | |
| 66 | 47.08 | -1.340 |
| Std Dev | 46.92 | -1.000 |
| Median | 46.46 | 0.000 |
| Std Dev | 46.00 | 1.000 |
| 47 | 45.84 | 1.340 |

| 041.60 Direct Available Phosphate | | |
|-----------------------------------|--------------|--------|
| Lab | EDTA Extract | |
| 49 | 49.73 | -2.174 |
| Std Dev | 48.53 | -1.000 |
| 219 | 47.52 | 0.000 |
| Median | 47.52 | 0.000 |
| 29 | 47.00 | 0.506 |

| 041.XX Direct Available Phosphate | | |
|-----------------------------------|--------------|--------|
| Lab | Total Method | |
| 49 | 49.73 | -3.474 |
| Std Dev | 47.81 | -1.000 |
| 219 | 47.52 | -0.613 |
| 47 | 47.33 | -0.368 |
| 219 | 47.26 | -0.278 |
| 66 | 47.08 | -0.052 |
| Median | 47.04 | 0.000 |
| 29 | 47.00 | 0.052 |
| 107 | 46.66 | 0.491 |
| Std Dev | 46.27 | 1.000 |
| 103 | 46.14 | 1.162 |
| 39 | 45.88 | 1.498 |
| 47 | 45.84 | 1.550 |

| 048.20 Water Soluble Phosphate | | |
|--------------------------------|---------------|--------|
| Lab | Spectrometric | |
| 79 | 44.98 | -1.839 |
| 23 | 44.79 | -1.283 |

| | | |
|---------|-------|--------|
| 23 | 44.75 | -1.169 |
| Std Dev | 44.69 | -1.000 |
| 43 | 44.63 | -0.827 |
| 61 | 44.34 | 0.000 |
| Median | 44.34 | 0.000 |
| 61 | 44.33 | 0.029 |
| 43 | 44.28 | 0.171 |
| 24 | 44.25 | 0.242 |
| 24 | 44.19 | 0.413 |

| 048.99 Water Soluble Phosphate | | |
|--------------------------------|-------|--------|
| Lab | Other | |
| 9 | 45.23 | -1.321 |
| Std Dev | 45.10 | -1.000 |
| 32 | 44.76 | -0.128 |
| Median | 44.71 | 0.000 |
| 34 | 44.66 | 0.128 |
| Std Dev | 44.32 | 1.000 |
| 32 | 43.44 | 3.270 |

| 048.XX Water Soluble Phosphate | | |
|--------------------------------|--------------|--------|
| Lab | Total Method | |
| 9 | 45.23 | -1.658 |
| Std Dev | 44.99 | -1.000 |
| 79 | 44.98 | -0.981 |
| 23 | 44.79 | -0.442 |
| 32 | 44.76 | -0.373 |
| 23 | 44.75 | -0.332 |
| 34 | 44.66 | -0.097 |
| 43 | 44.63 | 0.000 |
| Median | 44.63 | 0.000 |
| 61 | 44.34 | 0.801 |
| 61 | 44.33 | 0.829 |
| 43 | 44.28 | 0.967 |
| Std Dev | 44.26 | 1.000 |
| 24 | 44.25 | 1.036 |
| 24 | 44.19 | 1.202 |
| 32 | 43.44 | 3.288 |

| 050.50 %K ₂ O Soluble Potash | | |
|---|--------------|-------|
| Lab | ICP(Oxalate) | |
| 23 | 0.16 | 0.000 |
| 23 | 0.16 | 0.000 |
| Median | 0.16 | 0.000 |

| 050.99 Soluble Potash | | |
|-----------------------|-------------------|---------------|
| Lab | %K ₂ O | Other |
| 43 | 0.18 | -3.821 |
| 99 | 0.17 | -1.592 |
| Std Dev | 0.17 | -1.000 |
| 61 | 0.16 | 0.000 |
| 61 | 0.16 | 0.000 |
| Median | 0.16 | 0.000 |
| 43 | 0.16 | 0.292 |
| 24 | 0.16 | 0.796 |
| Std Dev | 0.15 | 1.000 |
| 24 | 0.15 | 1.592 |

| 050.XX Soluble Potash | | |
|-----------------------|-------------------|---------------|
| Lab | %K ₂ O | Total Method |
| 43 | 0.18 | -17.518 |
| 99 | 0.17 | -7.298 |
| Std Dev | 0.16 | -1.000 |
| 23 | 0.16 | 0.000 |
| 23 | 0.16 | 0.000 |
| 61 | 0.16 | 0.000 |
| 61 | 0.16 | 0.000 |
| Median | 0.16 | 0.000 |
| Std Dev | 0.16 | 1.000 |
| 43 | 0.16 | 1.340 |
| 24 | 0.16 | 3.649 |
| 24 | 0.15 | 7.298 |

| 060.00 Free Water | | |
|-------------------|-------------|--------------|
| Lab | Vacuum Oven | |
| 23 | 1.62 | -0.718 |
| 79 | 1.60 | -0.526 |
| 32 | 1.58 | -0.335 |
| 24 | 1.57 | -0.287 |
| 23 | 1.55 | -0.096 |
| 34 | 1.54 | 0.000 |
| Median | 1.54 | 0.000 |
| 24 | 1.50 | 0.383 |
| Std Dev | 1.44 | 1.000 |
| 32 | 1.44 | 1.005 |
| 9 | 1.43 | 1.053 |
| 43 | 1.33 | 2.058 |
| 43 | 1.30 | 2.297 |

| 060.10 Free Water | | |
|-------------------|------------------|---------------|
| Lab | Vacuum Desiccate | |
| 61 | 2.13 | -1.340 |
| Std Dev | 2.09 | -1.000 |
| Median | 1.99 | 0.000 |
| Std Dev | 1.88 | 1.000 |
| 61 | 1.85 | 1.340 |

| 060.XX Free Water | | |
|-------------------|--------------|---------------|
| Lab | Total Method | |
| 61 | 2.13 | -4.816 |
| 61 | 1.85 | -2.471 |
| Std Dev | 1.67 | -1.000 |
| 23 | 1.62 | -0.544 |
| 79 | 1.60 | -0.377 |
| 32 | 1.58 | -0.209 |
| 24 | 1.57 | -0.168 |
| 23 | 1.55 | 0.000 |
| Median | 1.55 | 0.000 |
| 34 | 1.54 | 0.084 |
| 24 | 1.50 | 0.419 |
| 32 | 1.44 | 0.963 |
| Std Dev | 1.43 | 1.000 |
| 9 | 1.43 | 1.005 |
| 43 | 1.33 | 1.884 |
| 43 | 1.30 | 2.094 |

| 101.00 Acid Soluble Calcium | | |
|-----------------------------|-------------|-------------------|
| Lab | %CaO | Atomic Absorption |
| 219 | 0.07 | 0.000 |
| Median | 0.07 | 0.000 |

| 101.30 Acid Soluble Calcium | | |
|-----------------------------|-------------|---------------|
| Lab | %CaO | ICP |
| 24 | 0.14 | -1.914 |
| 61 | 0.13 | -1.149 |
| Std Dev | 0.12 | -1.000 |
| 61 | 0.12 | -0.766 |
| 32 | 0.12 | -0.383 |
| 23 | 0.11 | 0.000 |
| 32 | 0.11 | 0.000 |
| 34 | 0.11 | 0.000 |
| Median | 0.11 | 0.000 |

| | | |
|----------------|-------------|--------------|
| 23 | 0.10 | 0.766 |
| 24 | 0.10 | 0.766 |
| Std Dev | 0.10 | 1.000 |
| 9 | 0.10 | 1.149 |
| 43 | 0.09 | 1.266 |
| 43 | 0.09 | 1.448 |

| 101.XX Acid Soluble Calcium | | |
|-----------------------------|-------------|---------------|
| Lab | %CaO | Total Method |
| 24 | 0.14 | -1.675 |
| 61 | 0.13 | -1.005 |
| Std Dev | 0.12 | -1.000 |
| 61 | 0.12 | -0.670 |
| 32 | 0.12 | -0.335 |
| 23 | 0.11 | 0.000 |
| 32 | 0.11 | 0.000 |
| 34 | 0.11 | 0.000 |
| Median | 0.11 | 0.000 |
| 23 | 0.10 | 0.670 |
| 24 | 0.10 | 0.670 |
| Std Dev | 0.10 | 1.000 |
| 9 | 0.10 | 1.005 |
| 43 | 0.09 | 1.108 |
| 43 | 0.09 | 1.267 |
| 219 | 0.07 | 2.747 |

| 121.00 Acid Soluble Magnesium | | |
|-------------------------------|-------------|-------------------|
| Lab | %MgO | Atomic Absorption |
| 219 | 0.73 | 0.000 |
| Median | 0.73 | 0.000 |

| 121.30 Acid Soluble Magnesium | | |
|-------------------------------|-------------|--------------|
| Lab | %MgO | ICP |
| 34 | 0.98 | -0.893 |
| 24 | 0.98 | -0.744 |
| 61 | 0.97 | -0.596 |
| 24 | 0.96 | -0.298 |
| 61 | 0.96 | -0.149 |
| 9 | 0.95 | 0.000 |
| 23 | 0.95 | 0.000 |
| 23 | 0.95 | 0.000 |
| Median | 0.95 | 0.000 |
| 32 | 0.94 | 0.447 |
| Std Dev | 0.92 | 1.000 |

| | | |
|----|------|-------|
| 32 | 0.92 | 1.042 |
| 38 | 0.90 | 1.489 |
| 43 | 0.87 | 2.382 |
| 43 | 0.87 | 2.382 |

| 121.XX Acid Soluble Magnesium | | |
|-------------------------------|-------------|--------------|
| Lab | %MgO | Total Method |
| 34 | 0.98 | -0.731 |
| 24 | 0.98 | -0.609 |
| 61 | 0.97 | -0.487 |
| 24 | 0.96 | -0.244 |
| 61 | 0.96 | -0.122 |
| 9 | 0.95 | 0.000 |
| 23 | 0.95 | 0.000 |
| 23 | 0.95 | 0.000 |
| Median | 0.95 | 0.000 |
| 32 | 0.94 | 0.365 |
| 32 | 0.92 | 0.853 |
| Std Dev | 0.91 | 1.000 |
| 38 | 0.90 | 1.218 |
| 43 | 0.87 | 1.949 |
| 43 | 0.87 | 1.949 |
| 219 | 0.73 | 5.250 |

| 144..01 Sulfate Sulfur (S) | | |
|----------------------------|-------------|---------------|
| Lab | Gravimetric | |
| 219 | 2.22 | -2.680 |
| Std Dev | 2.09 | -1.000 |
| 61 | 2.01 | 0.000 |
| 61 | 2.01 | 0.000 |
| Median | 2.01 | 0.000 |

| 144.99 Sulfate Sulfur (S) | | |
|---------------------------|-------------|---------------|
| Lab | Other | |
| 38 | 2.28 | -5.360 |
| 34 | 2.20 | -1.787 |
| Std Dev | 2.18 | -1.000 |
| 23 | 2.17 | -0.447 |
| 24 | 2.16 | 0.000 |
| 24 | 2.16 | 0.000 |
| Median | 2.16 | 0.000 |
| 9 | 2.14 | 0.893 |
| 23 | 2.14 | 0.893 |
| Std Dev | 2.14 | 1.000 |

| | | |
|----|------|-------|
| 32 | 2.06 | 4.467 |
| 32 | 2.02 | 6.253 |

| 144.XX Sulfate Sulfur (S) | | |
|---------------------------|--------------|--------|
| Lab | Total Method | |
| 38 | 2.28 | -1.366 |
| Std Dev | 2.25 | -1.000 |
| 219 | 2.22 | -0.736 |
| 34 | 2.20 | -0.525 |
| 23 | 2.17 | -0.210 |
| 24 | 2.16 | -0.105 |
| 24 | 2.16 | -0.105 |
| Median | 2.15 | 0.000 |
| 9 | 2.14 | 0.105 |
| 23 | 2.14 | 0.105 |
| 32 | 2.06 | 0.946 |
| Std Dev | 2.05 | 1.000 |
| 32 | 2.02 | 1.366 |
| 61 | 2.01 | 1.524 |
| 61 | 2.01 | 1.524 |

| 145.99 Total Sulfur (S) | | |
|-------------------------|-------|--------|
| Lab | Other | |
| 43 | 2.16 | -0.893 |
| 9 | 2.14 | 0.000 |
| Median | 2.14 | 0.000 |
| Std Dev | 2.12 | 1.000 |
| 43 | 2.10 | 1.787 |

| 145.XX Total Sulfur (S) | | |
|-------------------------|--------------|--------|
| Lab | Total Method | |
| 43 | 2.16 | -0.893 |
| 9 | 2.14 | 0.000 |
| Median | 2.14 | 0.000 |
| Std Dev | 2.12 | 1.000 |
| 43 | 2.10 | 1.787 |

| 151.30 Total Arsenic | | |
|----------------------|-------|--------|
| Lab | ICP | |
| 61 | 14.55 | -4.769 |
| Std Dev | 12.16 | -1.000 |
| 43 | 11.55 | -0.039 |
| Median | 11.53 | 0.000 |
| 9 | 11.50 | 0.039 |

| | | |
|----|-------|-------|
| 43 | 11.30 | 0.355 |
|----|-------|-------|

| 151.XX Total Arsenic | | |
|----------------------|--------------|--------|
| Lab | Total Method | |
| 61 | 14.55 | -4.769 |
| Std Dev | 12.16 | -1.000 |
| 43 | 11.55 | -0.039 |
| Median | 11.53 | 0.000 |
| 9 | 11.50 | 0.039 |
| 43 | 11.30 | 0.355 |

| 181.30 Total Cadmium | | |
|----------------------|-------|--------|
| Lab | PPM | ICP |
| 9 | 27.50 | -0.399 |
| 61 | 27.50 | -0.399 |
| 61 | 27.00 | 0.000 |
| Median | 27.00 | 0.000 |
| 43 | 25.82 | 0.941 |
| 43 | 25.80 | 0.961 |

| 181.XX Total Cadmium | | |
|----------------------|-------|--------------|
| Lab | PPM | Total Method |
| 9 | 27.50 | -0.399 |
| 61 | 27.50 | -0.399 |
| 61 | 27.00 | 0.000 |
| Median | 27.00 | 0.000 |
| 43 | 25.82 | 0.941 |
| 43 | 25.80 | 0.961 |

| 190.00 Aluminum | | |
|-----------------|---------------------------------|--------|
| Lab | %Al ₂ O ₃ | ICP |
| 9 | 0.85 | -2.848 |
| 34 | 0.83 | -1.508 |
| Std Dev | 0.82 | -1.000 |
| 24 | 0.82 | -0.837 |
| 32 | 0.82 | -0.837 |
| 23 | 0.81 | -0.167 |
| 32 | 0.81 | -0.167 |
| Median | 0.81 | 0.000 |
| 43 | 0.81 | 0.168 |
| 61 | 0.81 | 0.168 |
| 23 | 0.80 | 0.503 |
| 24 | 0.80 | 0.503 |
| 43 | 0.80 | 0.503 |

| | | |
|---------|------|-------|
| Std Dev | 0.79 | 1.000 |
| 61 | 0.79 | 1.173 |

| 190.XX Aluminum | | |
|-----------------|---------------------------------|--------------|
| Lab | %Al ₂ O ₃ | Total Method |
| 9 | 0.85 | -2.848 |
| 34 | 0.83 | -1.508 |
| Std Dev | 0.82 | -1.000 |
| 24 | 0.82 | -0.837 |
| 32 | 0.82 | -0.837 |
| 23 | 0.81 | -0.167 |
| 32 | 0.81 | -0.167 |
| Median | 0.81 | 0.000 |
| 43 | 0.81 | 0.168 |
| 61 | 0.81 | 0.168 |
| 23 | 0.80 | 0.503 |
| 24 | 0.80 | 0.503 |
| 43 | 0.80 | 0.503 |
| Std Dev | 0.79 | 1.000 |
| 61 | 0.79 | 1.173 |

| 191.30 Total Chromium | | |
|-----------------------|--------|--------|
| Lab | ICP | |
| 61 | 254.50 | -1.089 |
| Std Dev | 253.97 | -1.000 |
| 61 | 249.00 | -0.168 |
| 9 | 248.00 | 0.000 |
| Median | 248.00 | 0.000 |
| Std Dev | 242.03 | 1.000 |
| 43 | 241.00 | 1.173 |
| 43 | 240.50 | 1.256 |

| 191.XX Total Chromium | | |
|-----------------------|--------|--------------|
| Lab | PPM | Total Method |
| 61 | 254.50 | -1.089 |
| Std Dev | 253.97 | -1.000 |
| 61 | 249.00 | -0.168 |
| 9 | 248.00 | 0.000 |
| Median | 248.00 | 0.000 |
| Std Dev | 242.03 | 1.000 |
| 43 | 241.00 | 1.173 |
| 43 | 240.50 | 1.256 |

| 202.30 Acid Soluble Cobalt | | |
|----------------------------|------|-------|
| Lab | PPM | ICP |
| 43 | 2.00 | 0.000 |
| 43 | 2.00 | 0.000 |
| 61 | 2.00 | 0.000 |
| 61 | 2.00 | 0.000 |
| Median | 2.00 | 0.000 |

| 202.XX Acid Soluble Cobalt | | |
|----------------------------|------|--------------|
| Lab | PPM | Total Method |
| 43 | 2.00 | 0.000 |
| 43 | 2.00 | 0.000 |
| 61 | 2.00 | 0.000 |
| 61 | 2.00 | 0.000 |
| Median | 2.00 | 0.000 |

| 221.00 Acid Soluble Copper | | |
|----------------------------|-------------------|-------|
| Lab | Atomic Absorption | |
| 219 | 0.66 | 0.000 |
| Median | 0.66 | 0.000 |

| 221.30 Acid Soluble Copper | | |
|----------------------------|------|--------|
| Lab | PPM | ICP |
| 9 | 6.00 | -0.168 |
| 61 | 6.00 | -0.168 |
| 61 | 5.50 | 0.000 |
| Median | 5.50 | 0.000 |
| Std Dev | 2.51 | 1.000 |
| 43 | 2.00 | 1.173 |
| 43 | 2.00 | 1.173 |

| 221.XX Acid Soluble Copper | | |
|----------------------------|------|--------------|
| Lab | PPM | Total Method |
| 9 | 6.00 | -0.168 |
| 61 | 6.00 | -0.168 |
| 61 | 5.50 | 0.000 |
| Median | 5.50 | 0.000 |
| Std Dev | 2.51 | 1.000 |
| 43 | 2.00 | 1.173 |
| 43 | 2.00 | 1.173 |

| 241.30 Acid Soluble Iron | | |
|--------------------------|---------------------------------|--------|
| Lab | %Fe ₂ O ₃ | ICP |
| 32 | 0.72 | -2.233 |

| | | |
|---------|------|--------|
| Std Dev | 0.69 | -1.000 |
| 24 | 0.69 | -0.893 |
| 34 | 0.69 | -0.893 |
| 9 | 0.67 | 0.000 |
| 23 | 0.67 | 0.000 |
| 23 | 0.67 | 0.000 |
| 24 | 0.67 | 0.000 |
| 61 | 0.67 | 0.000 |
| Median | 0.67 | 0.000 |
| 61 | 0.66 | 0.447 |
| Std Dev | 0.65 | 1.000 |
| 32 | 0.64 | 1.340 |
| 38 | 0.64 | 1.340 |
| 43 | 0.64 | 1.340 |
| 43 | 0.64 | 1.563 |

| 241.XX | Lab | %Fe ₂ O ₃ | Acid Soluble Iron Total Method |
|---------|------|---------------------------------|-----------------------------------|
| | 32 | 0.72 | -2.653 |
| | 24 | 0.69 | -1.061 |
| | 34 | 0.69 | -1.061 |
| Std Dev | 0.69 | -1.000 | |
| | 9 | 0.67 | 0.000 |
| | 23 | 0.67 | 0.000 |
| | 23 | 0.67 | 0.000 |
| | 24 | 0.67 | 0.000 |
| | 61 | 0.67 | 0.000 |
| Median | 0.67 | 0.000 | |
| | 61 | 0.66 | 0.531 |
| | 219 | 0.66 | 0.584 |
| Std Dev | 0.65 | 1.000 | |
| | 32 | 0.64 | 1.592 |
| | 38 | 0.64 | 1.592 |
| | 43 | 0.64 | 1.592 |
| | 43 | 0.64 | 1.857 |

| 251.30 | Lab | PPM | Total Lead ICP |
|--------|------|-------|-------------------|
| | 61 | <1.8 | 0.000 |
| | 61 | <1.8 | 0.000 |
| | 43 | 1.00 | 0.000 |
| | 43 | 1.00 | 0.000 |
| Median | 1.00 | 0.000 | |

| 251.XX | Lab | PPM | Total Lead Total Method |
|--------|------|-------|----------------------------|
| | 61 | <1.8 | 0.000 |
| | 61 | <1.8 | 0.000 |
| | 43 | 1.00 | 0.000 |
| | 43 | 1.00 | 0.000 |
| Median | 1.00 | 0.000 | |

| 261.11 | Lab | PPM | Acid Soluble Manganese Atomic Absorption |
|--------|--------|--------|---|
| | 219 | 108.50 | 0.000 |
| Median | 108.50 | 0.000 | |

| 261.30 | Lab | PPM | Acid Soluble Manganese ICP |
|--------|--------|--------|-------------------------------|
| | 9 | 110.00 | 0.000 |
| Median | 110.00 | 0.000 | |

| 261.99 | Lab | PPM | Acid Soluble Manganese Other |
|--------|--------|--------|---------------------------------|
| | 43 | 120.00 | -0.717 |
| | 43 | 119.50 | -0.654 |
| Median | 114.25 | 0.000 | |
| | 61 | 109.00 | 0.654 |
| | 61 | 108.50 | 0.717 |

| 261.XX | Lab | PPM | Acid Soluble Manganese Total Method |
|---------|--------|--------|--|
| | 43 | 120.00 | -1.655 |
| | 43 | 119.50 | -1.576 |
| Std Dev | 115.84 | -1.000 | |
| | 9 | 110.00 | -0.079 |
| Median | 109.50 | 0.000 | |
| | 61 | 109.00 | 0.079 |
| | 61 | 108.50 | 0.158 |
| | 219 | 108.50 | 0.158 |

| 289.30 | Lab | PPM | Total Molybdenum ICP |
|--------|------|-------|-------------------------|
| | 61 | <1.8 | 0.000 |
| | 61 | <1.8 | 0.000 |
| | 43 | 1.00 | 0.000 |
| | 43 | 1.00 | 0.000 |
| Median | 1.00 | 0.000 | |

| 289.XX | Lab | PPM | Total Molybdenum Total Method |
|--------|-----|------|----------------------------------|
| | 61 | 5.00 | -2.680 |
| | 9 | 4.40 | -1.072 |

| | | |
|---------|------|--------|
| Std Dev | 4.37 | -1.000 |
| 61 | 4.00 | 0.000 |
| Median | 4.00 | 0.000 |
| 43 | 3.90 | 0.268 |
| 43 | 3.85 | 0.402 |

| 291.30 | Lab | PPM | Total Nickel ICP |
|---------|-------|-------|---------------------|
| | 9 | 38.00 | -0.447 |
| | 61 | 37.50 | -0.223 |
| | 61 | 37.00 | 0.000 |
| Median | 37.00 | 0.000 | |
| Std Dev | 34.76 | 1.000 | |
| | 43 | 34.50 | 1.117 |
| | 43 | 34.00 | 1.340 |

| 291.XX | Lab | PPM | Total Nickel Total Method |
|---------|-------|-------|------------------------------|
| | 9 | 38.00 | -0.447 |
| | 61 | 37.50 | -0.223 |
| | 61 | 37.00 | 0.000 |
| Median | 37.00 | 0.000 | |
| Std Dev | 34.76 | 1.000 | |
| | 43 | 34.50 | 1.117 |
| | 43 | 34.00 | 1.340 |

| 301.30 | Lab | PPM | Total Selenium ICP |
|--------|------|-------|-----------------------|
| | 61 | <1 | 0.000 |
| Median | 0.00 | 0.000 | |

| 301.XX | Lab | PPM | Total Selenium Total Mthod |
|--------|------|-------|-------------------------------|
| | 61 | <1 | 0.000 |
| Median | 0.00 | 0.000 | |

| 311.00 | Lab | %Na ₂ O | Sodium Atomic Absorbtion |
|--------|------|--------------------|-----------------------------|
| | 61 | 0.14 | 0.000 |
| Median | 0.14 | 0.000 | |

| 311.99 | Lab | %Na ₂ O | Sodium Other |
|--------|-----|--------------------|-----------------|
| | 23 | 0.17 | -1.133 |

| | | |
|---------|------|--------|
| 23 | 0.17 | -1.133 |
| Std Dev | 0.16 | -1.000 |
| 24 | 0.16 | -0.907 |
| 24 | 0.14 | 0.000 |
| 61 | 0.14 | 0.000 |
| Median | 0.14 | 0.000 |
| 43 | 0.13 | 0.640 |
| 43 | 0.13 | 0.646 |

| 311.XX | Lab | %Na ₂ O | Sodium Total Method |
|---------|------|--------------------|------------------------|
| | 23 | 0.17 | -1.352 |
| | 23 | 0.17 | -1.352 |
| | 24 | 0.16 | -1.082 |
| Std Dev | 0.16 | -1.000 | |
| | 24 | 0.14 | 0.000 |
| | 61 | 0.14 | 0.000 |
| | 61 | 0.14 | 0.000 |
| Median | 0.14 | 0.000 | |
| | 43 | 0.13 | 0.763 |
| | 43 | 0.13 | 0.771 |

| 321.00 | Lab | PPM | Acid Soluble Zinc Atomic Absorption |
|--------|--------|--------|--|
| | 219 | 299.30 | 0.000 |
| Median | 299.30 | 0.000 | |

| 321.30 | Lab | PPM | Acid Soluble Zinc ICP |
|---------|--------|--------|--------------------------|
| | 9 | 304.50 | -0.975 |
| | 61 | 302.50 | 0.000 |
| Median | 302.50 | 0.000 | |
| Std Dev | 300.45 | 1.000 | |
| | 61 | 299.00 | 1.705 |

| 321.99 | Lab | PPM | Acid Soluble Zinc Other |
|---------|--------|--------|----------------------------|
| | 43 | 279.00 | -1.340 |
| Std Dev | 278.62 | -1.000 | |
| Median | 277.50 | 0.000 | |
| Std Dev | 276.38 | 1.000 | |
| | 43 | 276.00 | 1.340 |

| 321.XX | | Acid Soluble Zinc |
|---------|--------|-------------------|
| Lab | PPM | Total Method |
| 9 | 304.50 | -0.405 |
| 61 | 302.50 | -0.254 |
| 219 | 299.30 | -0.011 |
| Median | 299.15 | 0.000 |
| 61 | 299.00 | 0.011 |
| Std Dev | 285.94 | 1.000 |
| 43 | 279.00 | 1.525 |
| 43 | 276.00 | 1.753 |

| 325.10 | | Fluoride |
|--------|------|-----------|
| Lab | % | Electrode |
| 32 | 0.46 | -2.808 |
| 32 | 0.46 | -2.808 |
| 23 | 0.40 | 0.000 |
| 23 | 0.40 | 0.000 |
| 24 | 0.40 | 0.000 |
| Median | 0.40 | 0.000 |
| 34 | 0.39 | 0.510 |
| 24 | 0.38 | 1.021 |
| 9 | 0.37 | 1.531 |

| 325.99 | | Fluoride |
|--------|------|----------|
| Lab | % | Other |
| 61 | 0.42 | -1.340 |
| Median | 0.41 | 0.000 |
| 61 | 0.39 | 1.340 |

| 325.XX | | Fluoride |
|--------|------|--------------|
| Lab | % | Total Method |
| 32 | 0.46 | -2.948 |
| 32 | 0.46 | -2.948 |
| 61 | 0.42 | -1.072 |
| 23 | 0.40 | 0.000 |
| 23 | 0.40 | 0.000 |
| 24 | 0.40 | 0.000 |
| Median | 0.40 | 0.000 |
| 34 | 0.39 | 0.536 |
| 61 | 0.39 | 0.536 |
| 24 | 0.38 | 1.072 |
| 9 | 0.37 | 1.608 |