**Section 611.301 Revised MCLs for Inorganic Chemical Contaminants**

a) This subsection corresponds with 40 CFR 141.62(a), reserved by USEPA. This statement maintains structural consistency with USEPA rules.

b) The MCLs in the following table apply to CWSs. Except for fluoride, the MCLs also apply to NTNCWSs. The MCLs for nitrate, nitrite, and total nitrate and nitrite also apply to transient non-CWSs.

|  |  |  |
| --- | --- | --- |
| Contaminant | MCL | Units |
|  |  |  |
| Antimony | 0.006 | mg/L |
| Arsenic | 0.010 | mg/L |
| Asbestos | 7 | MFL |
| Barium | 2 | mg/L |
| Beryllium | 0.004 | mg/L |
| Cadmium | 0.005 | mg/L |
| Chromium | 0.1 | mg/L |
| Cyanide (as free CN-) | 0.2 | mg/L |
| Fluoride | 4.0 | mg/L |
| Mercury | 0.002 | mg/L |
| Nitrate (as N) | 10 | mg/L |
| Nitrite (as N) | 1 | mg/L |
| Total Nitrate and Nitrite (as N) | 10 | mg/L |
| Selenium | 0.05 | mg/L |
| Thallium | 0.002 | mg/L |

BOARD NOTE: See Section 611.300(d) for an elevated nitrate level for non-CWSs. USEPA removed and reserved the MCL for nickel on June 29, 1995, at 60 Fed. Reg. 33932, as a result of a judicial order in Nickel Development Institute v. EPA, No. 92-1407, and Specialty Steel Industry of the U.S. v. Browner, No. 92-1410 (D.C. Cir. Feb. 23 & Mar. 6, 1995), while retaining the contaminant, analytical methodology, and detection limit entries for this contaminant.

c) USEPA identifies specific treatment technologies as BAT for achieving compliance with the IOC MCLs, except for fluoride:

|  |  |
| --- | --- |
| Contaminant | BATs |
|  |  |
| Antimony | C/F  RO |
|  |  |
| Arsenic (BATs for AsV. Pre-oxidation may be required to convert AsIII to AsV.) | AAL |
| C/F |
| IX |
| LIME |
| RO |
| ED |
| O/F (to obtain high removals, the iron to arsenic ratio must be at least 20:1) |
|  |  |
| Asbestos | C/F |
|  | DDF |
|  | CC |
|  |  |
| Barium | IX |
|  | LIME |
|  | RO |
|  | ED |
|  |  |
| Beryllium | AA |
|  | C/F |
|  | IX |
|  | LIME |
|  | RO |
|  |  |
| Cadmium | C/F |
|  | IX |
|  | LIME |
|  | RO |
|  |  |
| Chromium | C/F |
|  | IX |
|  | LIME (for CrIII only) |
|  | RO |
|  |  |
| Cyanide | IX |
|  | RO |
|  | ALK Cl2 |
|  |  |
| Mercury | C/F (only if influent Hg concentrations less than or equal to 10 μg/L) |
|  | GAC |
|  | LIME (only if influent Hg concentrations less than or equal to 10 μg/L) |
|  | RO (only if influent Hg concentrations less than or equal to 10 μg/L) |
|  |  |
| Nickel | IX |
|  | LIME |
|  | RO |
|  |  |
| Nitrate | IX |
|  | RO |
|  | ED |
|  |  |
| Nitrite | IX |
|  | RO |
|  |  |
| Selenium | AAL |
|  | C/F (for SeIV only) |
|  | LIME |
|  | RO |
|  | ED |
|  |  |
| Thallium | AAL |
|  | IX |

|  |  |
| --- | --- |
| Abbreviations |  |
|  |  |
| AAL | Activated alumina |
| ALK Cl2 | Alkaline chlorination (pH ≥ 8.5) |
| C/F | Coagulation/filtration (not BAT for a system having fewer than 500 service connections) |
| CC | Corrosion control |
| Cl2 | Oxidation (chlorine) |
| DDF | Direct and diatomite filtration |
| ED | Electrodialysis |
| GAC | Granular activated carbon |
| IX | Ion exchange |
| LIME | Lime softening |
| O/F | Oxidation/filtration |
| RO | Reverse osmosis |
| UV | Ultraviolet irradiation |

d) At 40 CFR 141.62(d), USEPA identified the affordable technology, treatment technique, or other means available to systems serving 10,000 persons or fewer for achieving compliance with the MCL for arsenic:

|  |  |
| --- | --- |
| Small System Compliance Technologies (SSCTs)1 for Arsenic2 | |
| Small system compliance technology | Affordable for listed small system categories3 |
| Activated alumina (centralized) | All size categories |
| Activated alumina (point-of-use)4 | All size categories |
| Coagulation/filtration5 | 501 to 3,300 persons,  3,301 to 10,000 persons |
| Coagulation-assisted microfiltration | 501 to 3,300 persons,  3,301 to 10,000 persons |
| Electrodialysis reversal6 | 501 to 3,300 persons,  3,301 to 10,000 persons |
| Enhanced coagulation/filtration | All size categories |
| Enhanced lime softening (pH >10.5) | All size categories |
| Ion exchange | All size categories |
| Lime softening5 | 501 to 3,300 persons,  3,301 to 10,000 persons |
| Oxidation/filtration7 | All size categories |
| Reverse osmosis (centralized)6 | 501 to 3,300 persons,  3,301 to 10,000 persons |
| Reverse osmosis (point-of-use)4 | All size categories |

1 Section 1412(b)(4)(E)(i) through (iii) of SDWA (42 U.S.C. 300g-1(b)(4)(E)(i) through (iii)) specifies that SSCTs must be affordable and technically feasible for a small system supplier.

2 SSCTs for AsV. Pre-oxidation may be required to convert AsIII to AsV.

3 SDWA specifies three categories of small system suppliers: (1) those serving 25 or more, but fewer than 501 persons, (2) those serving more than 500 but fewer than 3,301 persons, and (3) those serving more than 3,300 but fewer than 10,001 persons. 42 U.S.C. 300g-1(b)(4)(E)(ii).

4 When a supplier uses POU or POE devices for compliance, the supplier must provide programs to ensure proper long-term operation, maintenance, and monitoring to ensure adequate performance.

5 A supplier will not likely install this technology solely for arsenic removal. This technology may require pH adjustment to optimal range to obtain high removals.

6 This technology rejects a large volume of water and may not be appropriate for areas where water quantity is an issue.

7 To obtain high removals using this technology, the iron to arsenic ratio must be at least 20:1.

BOARD NOTE: This Section derives from 40 CFR 141.62.

(Source: Amended at 47 Ill. Reg. 16486, effective November 2, 2023)