



SCV
WATER

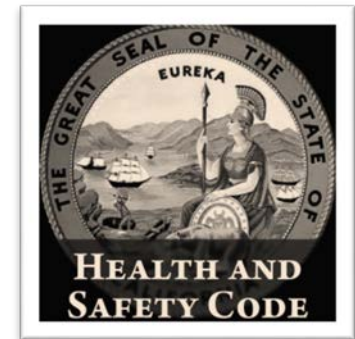
August 6, 2019

2019 Public Health Goals Reports of Compliance

SCV Water Board Meeting

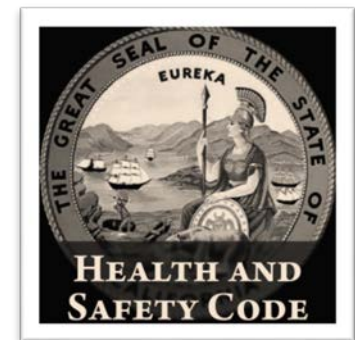
Public Water System Responsibilities

- All water systems with >10,000 connections must:
- Prepare a brief written report every 3 years
- Hold a public meeting explaining the report
- Compliance with Health and Safety Code, Section 116470(b)



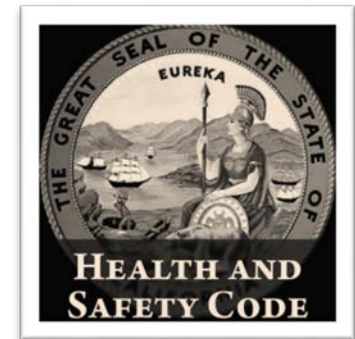
Purpose of Report

- Provide information about levels of contaminants found in a drinking water supply that are above the Public Health Goals (PHG)



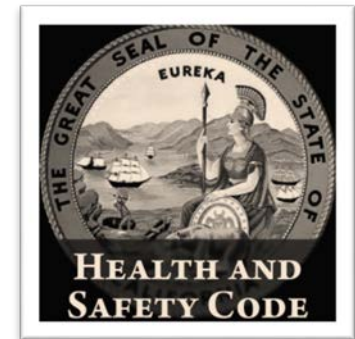
Public Health Goals (PHGs)

- PHGs are non-enforceable, health-based goals established by the Office of Environmental Health Hazard Assessment (OEHHA)
- Health risks based are set at the No Observable Adverse Effects Level (NOAEL) and are often theoretical with assumptions and mathematical extrapolations
- Compliance with PHG levels is NOT required



Maximum Contaminant Levels (MCLs)

- The highest level of a contaminant that is allowed in drinking water
- MCLs are set as close to MCLGs as feasible using the best available treatment technology and taking cost into consideration
- MCLs are enforceable standards



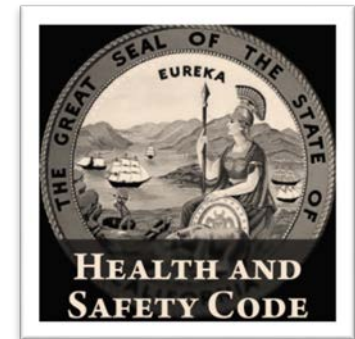
Health Effects Based on MCLs

- USEPA identified a lifetime “reference risk range” of 1 in 10,000 to 1 in 1,000,000
- Maximum Contaminant Levels are set within this range
- USEPA considers these levels to be safe and protective to human health



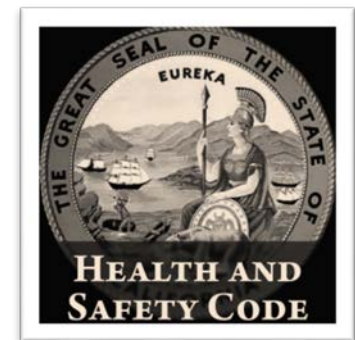
Maximum Contaminant Level Goal (MCLG)

- The level of a contaminant in drinking water below which there is no known or expected risk to health
- MCLGs allow for a margin of safety and are non-enforceable public health goals



Other Definitions

- **AL**= Action Level
- **BAT** = Best Available Technology
- **DLR** = Detection Limit for Reporting



Contents of the Report

- List contaminants that have been detected above the PHG
- List contaminants that have been detected above the MCLG where no PHG currently exists
- Explain the potential health effects
- Discuss the “BAT” for bringing levels below the corresponding PHG or MCLG
- Give a cost estimate for bringing levels below the corresponding PHG or MCLG

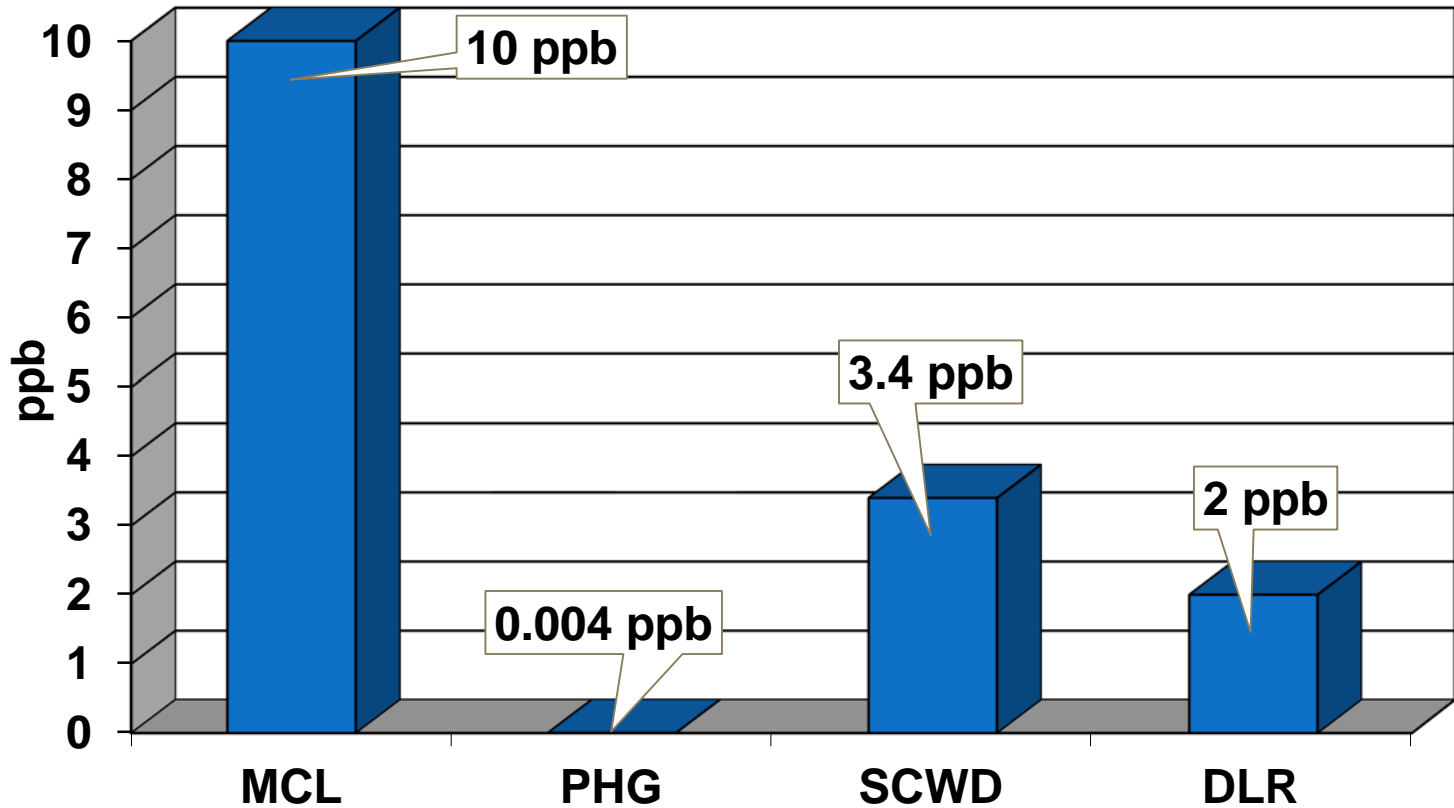


Santa Clarita Valley Water PHGs

- Arsenic
- Lead & Copper
- Total Coliform
- Radiolonuclides
- Hexavalent Chromium

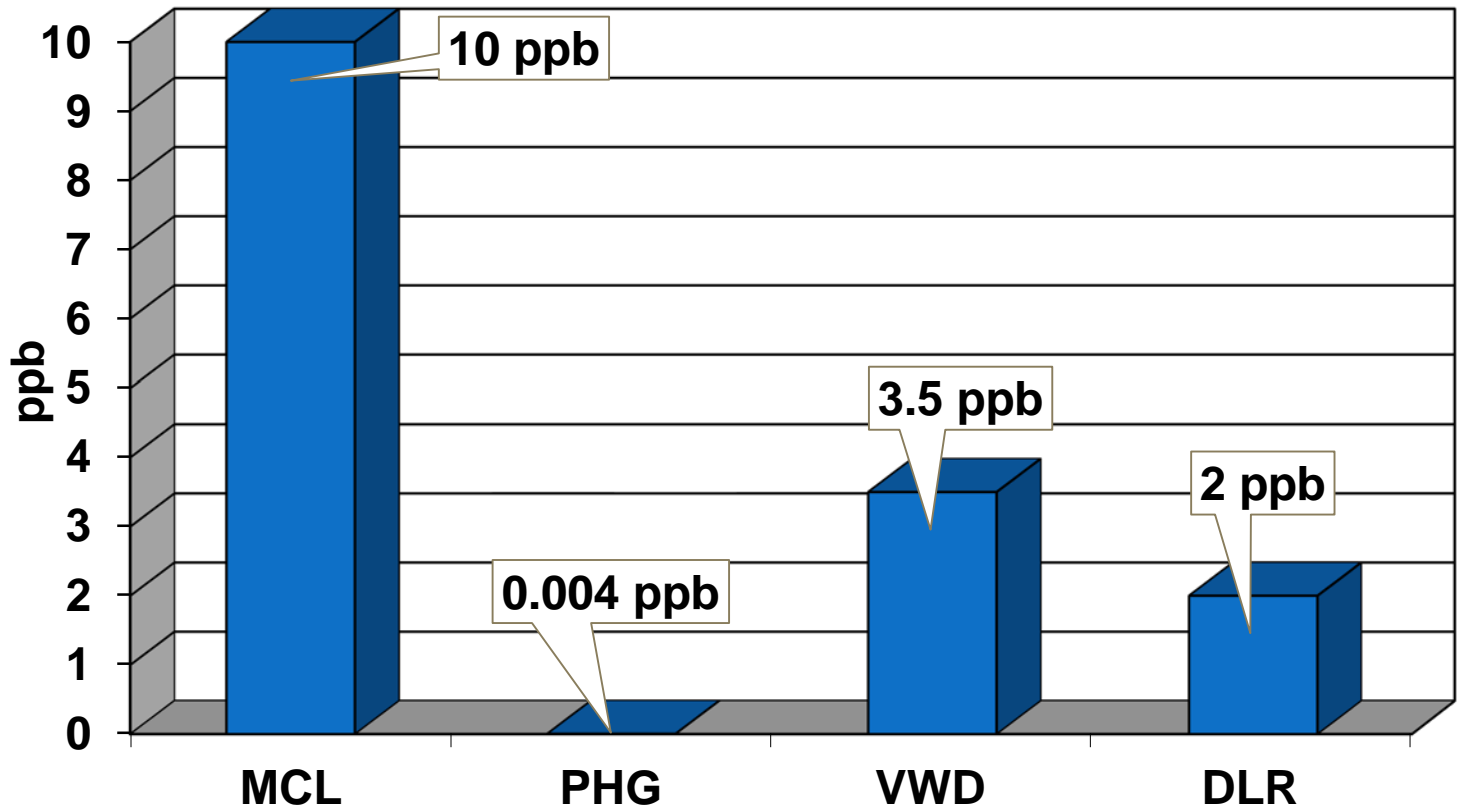
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MCL vs. PHG for Arsenic



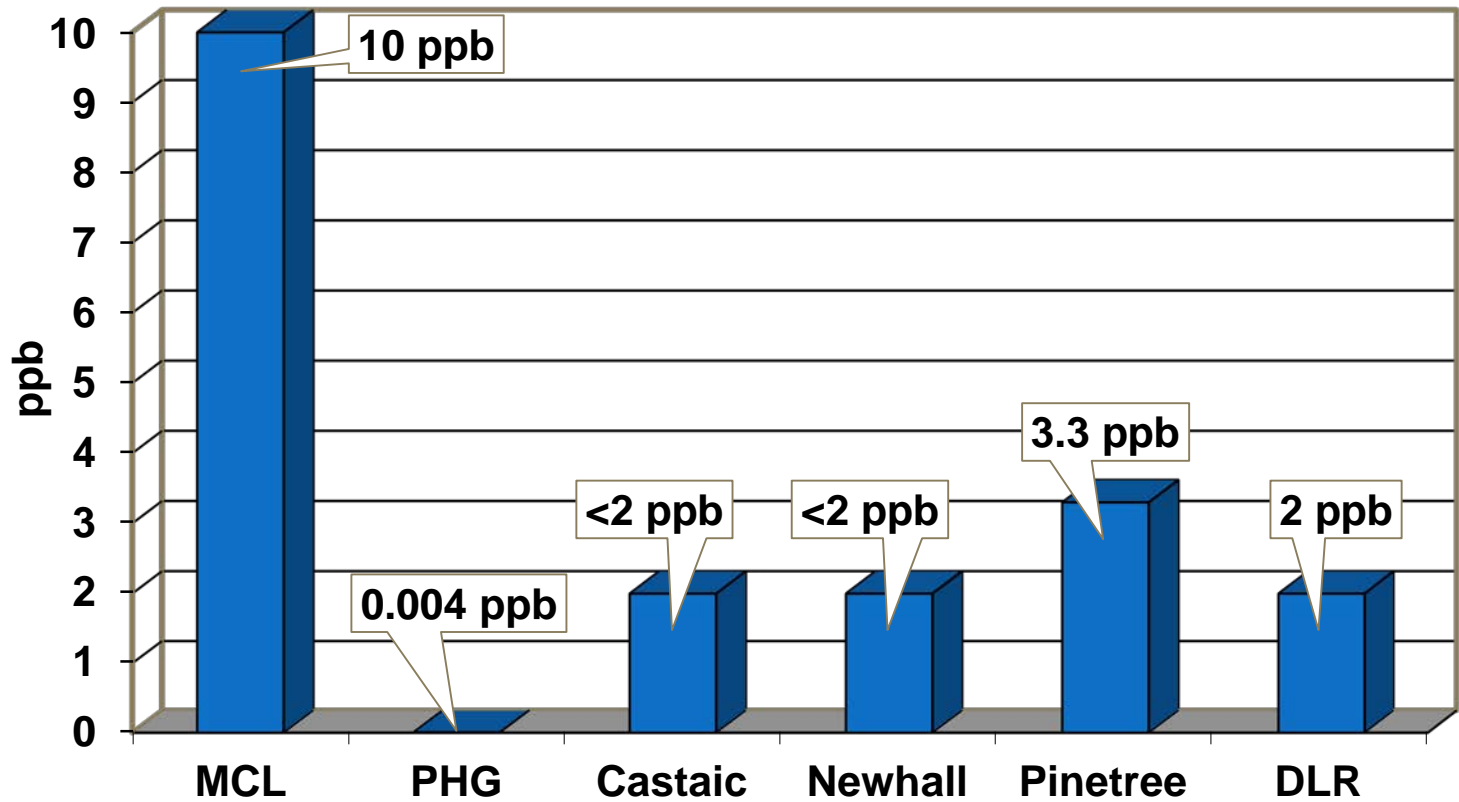
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MCL vs. PHG for Arsenic



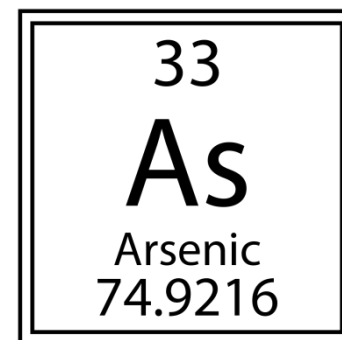
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MCL vs. PHG for Arsenic



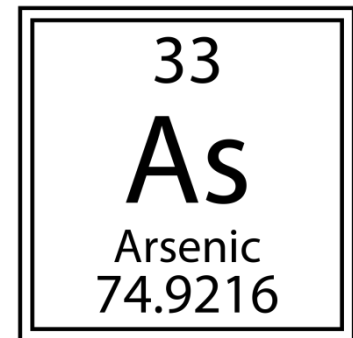
Potential Health Effects: Arsenic

- Exposure to arsenic over many years can cause cancer of the bladder, lungs, skin, kidneys, nasal passages, liver and prostate



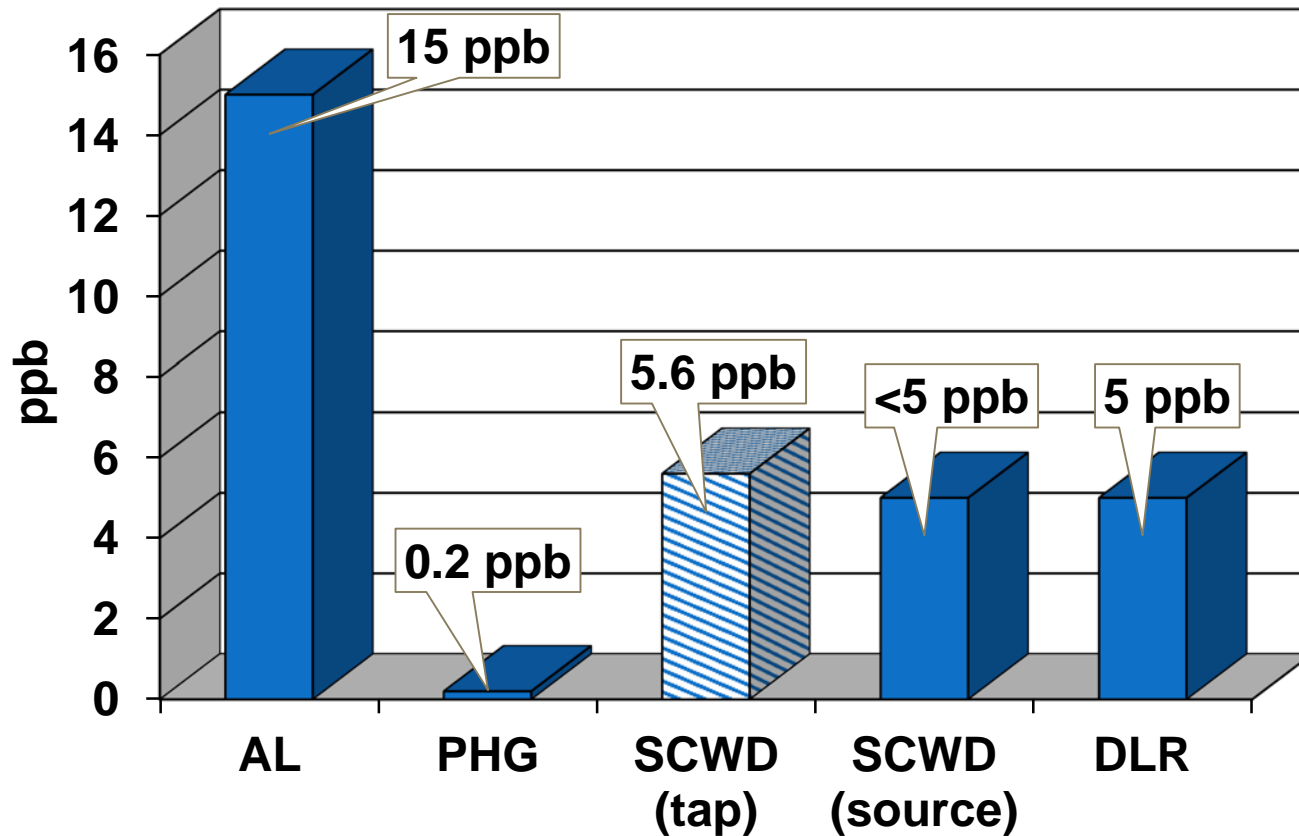
BAT for Arsenic

- Controls for arsenic include:
 - Reverse osmosis
 - Ion Exchange
 - Coagulation and filtration with ferric sulfate



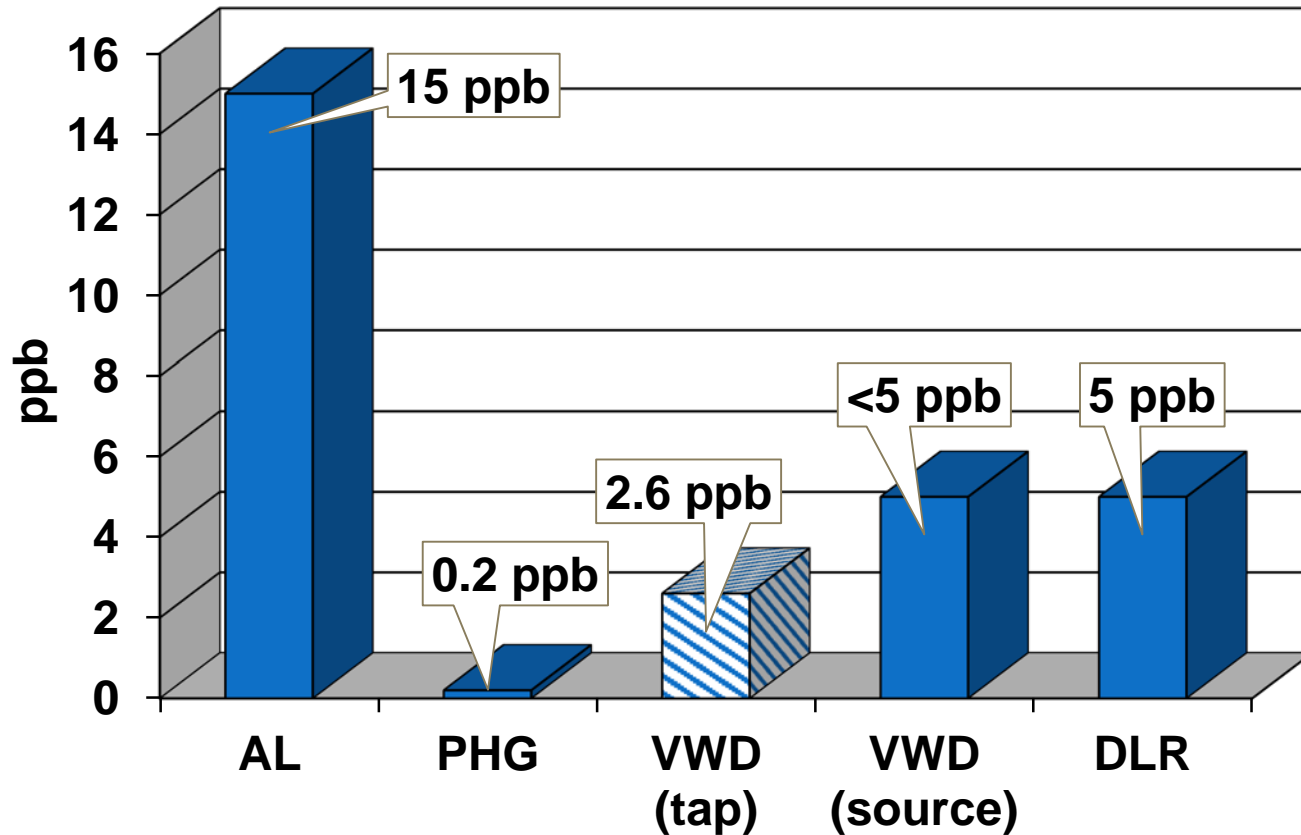
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AL vs. PHG for Lead



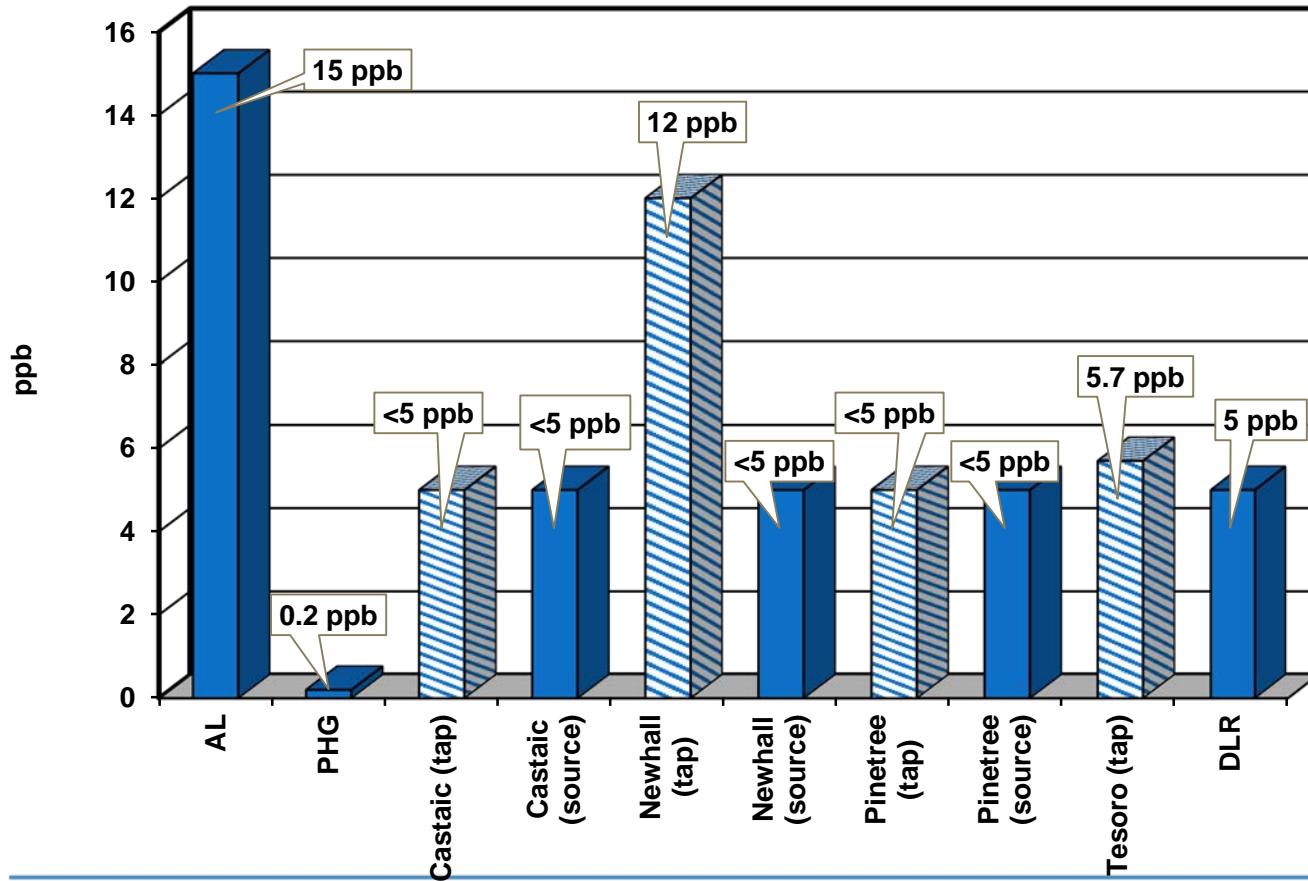
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AL vs. PHG for Lead



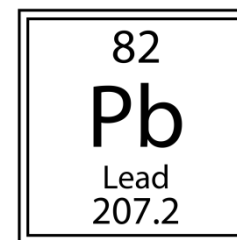
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AL vs. PHG for Lead



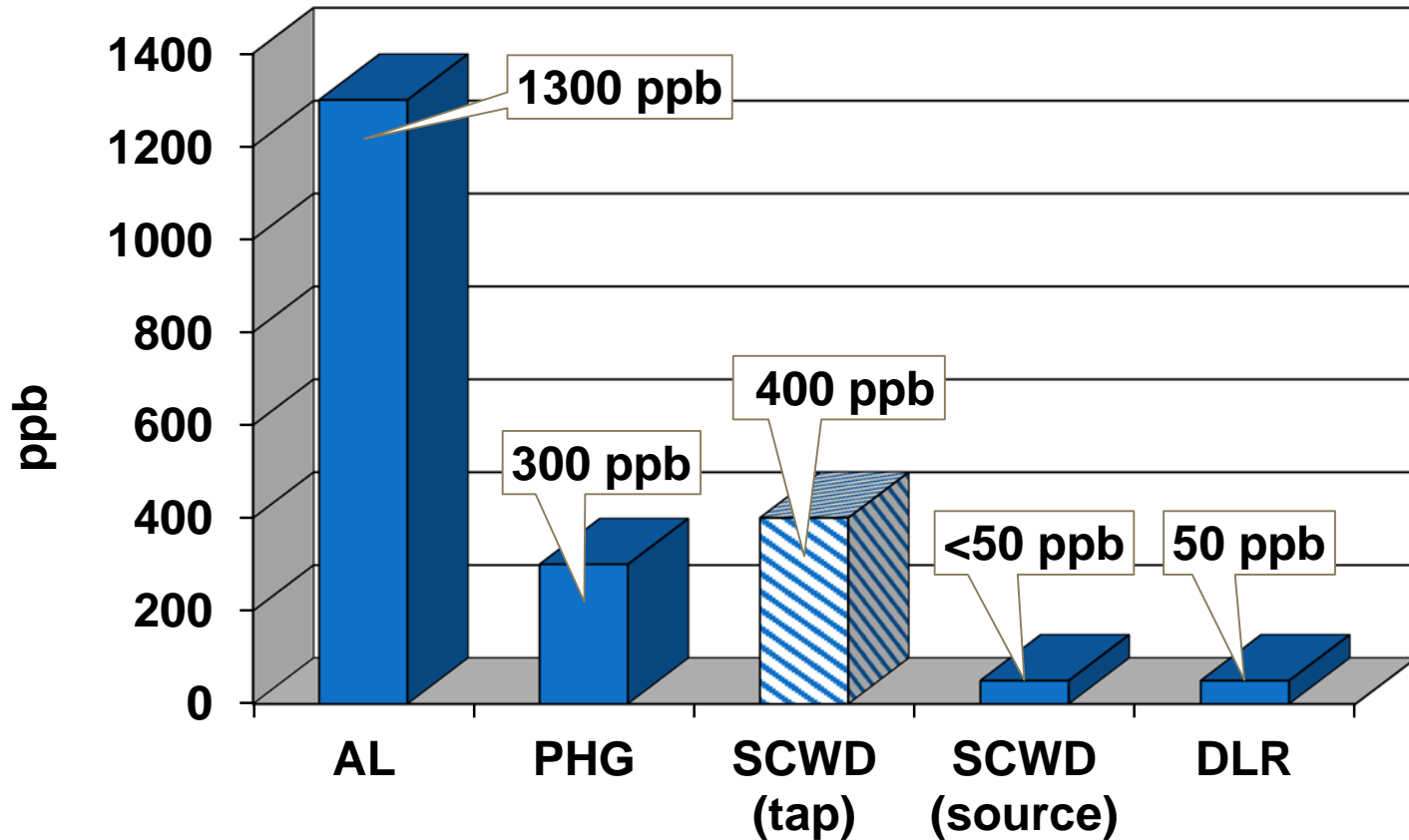
Potential Health Effects: Lead

- Infants and children who drink water containing lead in excess of the AL could experience delays in their physical and mental development
- Adults who drink water containing lead over many years could develop kidney problems, high blood pressure, and may be at an increased risk of getting cancer
- DDW states that lead in the drinking water is rarely the cause of lead poisoning



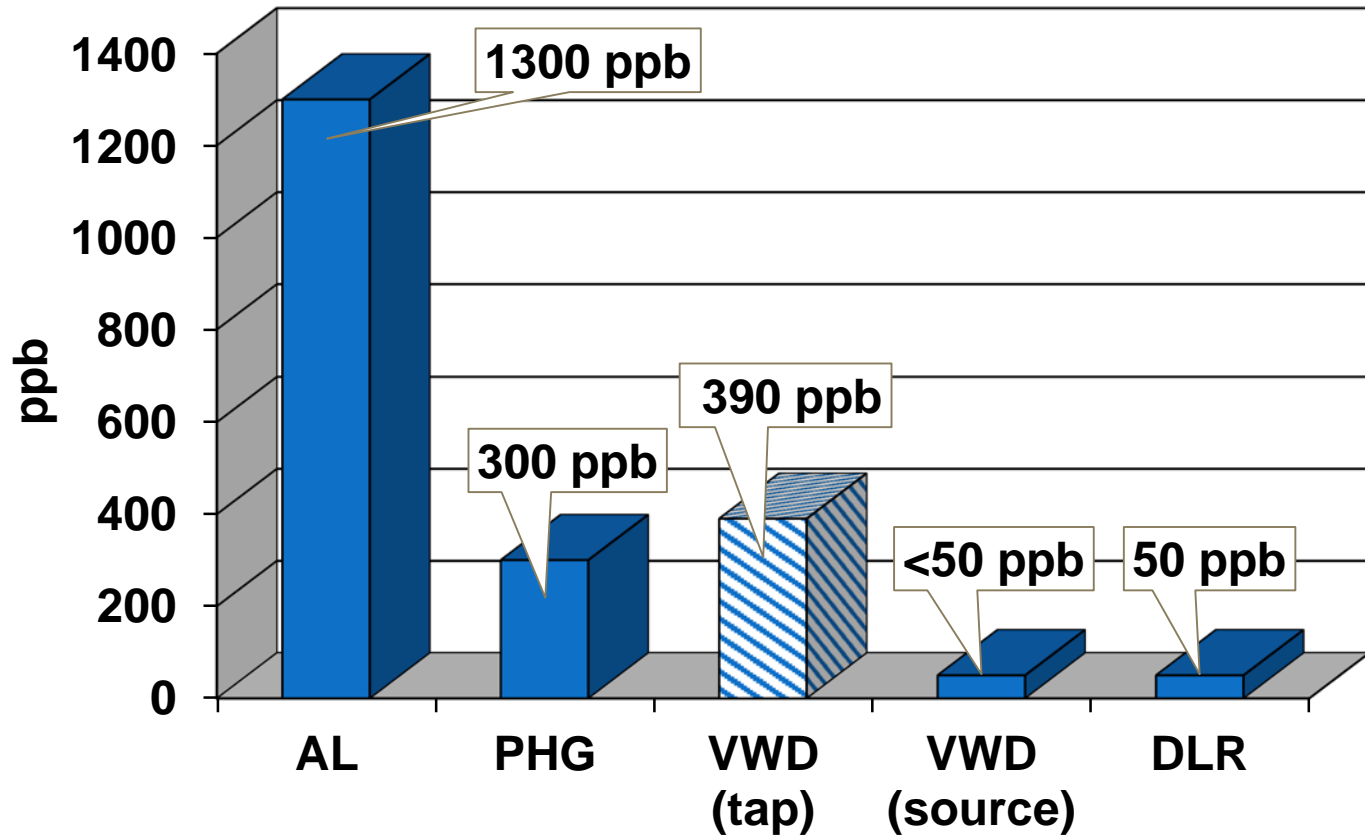
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AL vs. PHG for Copper



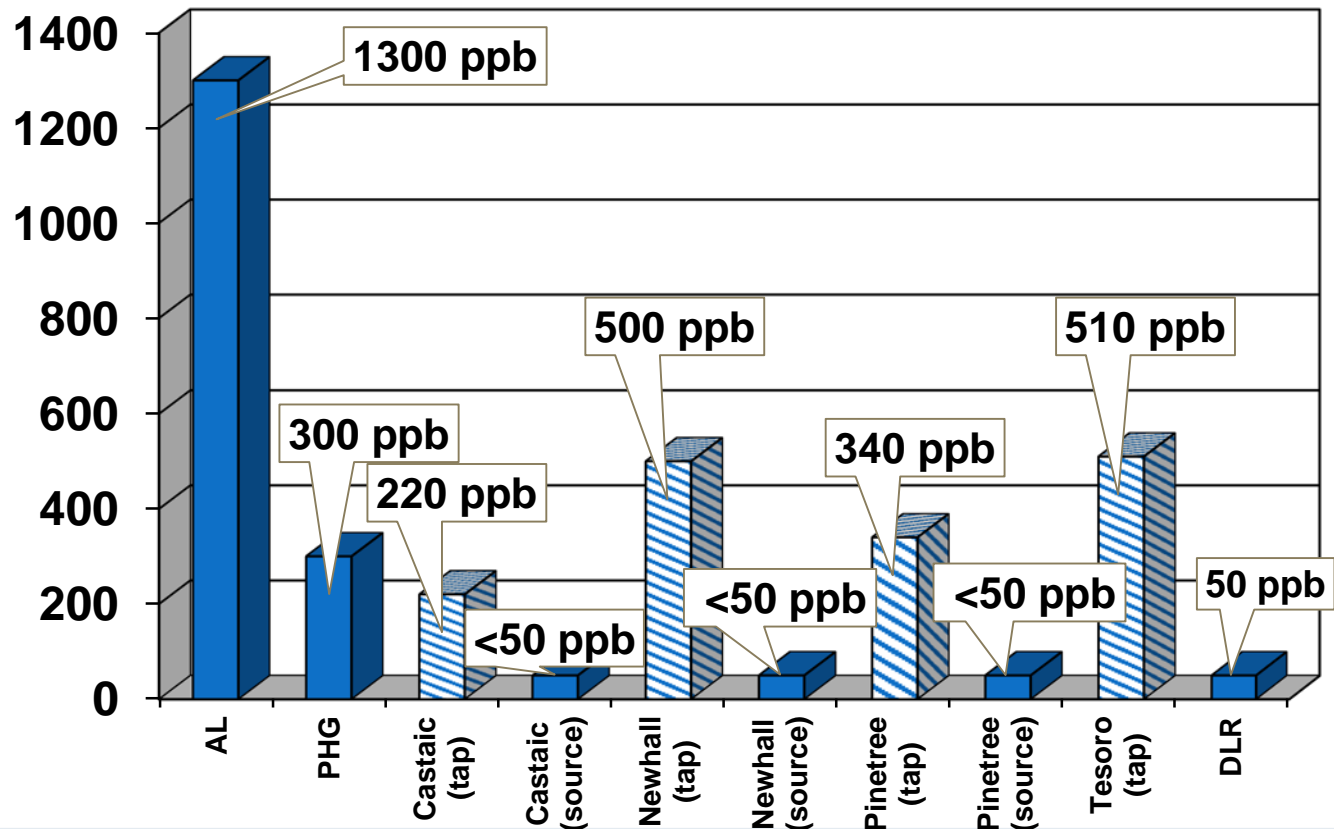
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AL vs. PHG for Copper



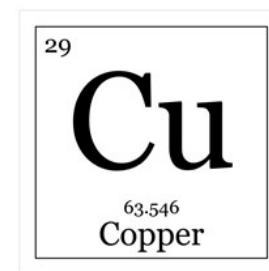
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AL vs. PHG for Copper



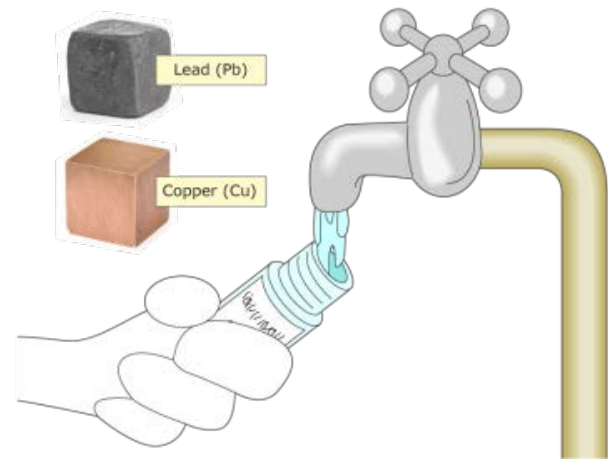
Potential Health Effects: Copper

- Copper is an essential nutrient required by humans
- People who drink water with very high amounts of copper could experience intestinal upset, liver damage or kidney damage



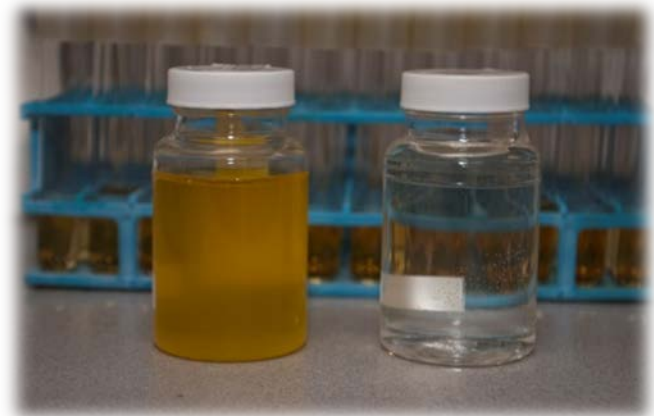
BAT for Lead and Copper

- Corrosion Control Treatment
- SCV Water supplies water characterized as:
 - *Non-aggressive*
 - *Non-corrosive*
- SCV Water has “optimized corrosion control” as determined by DDW



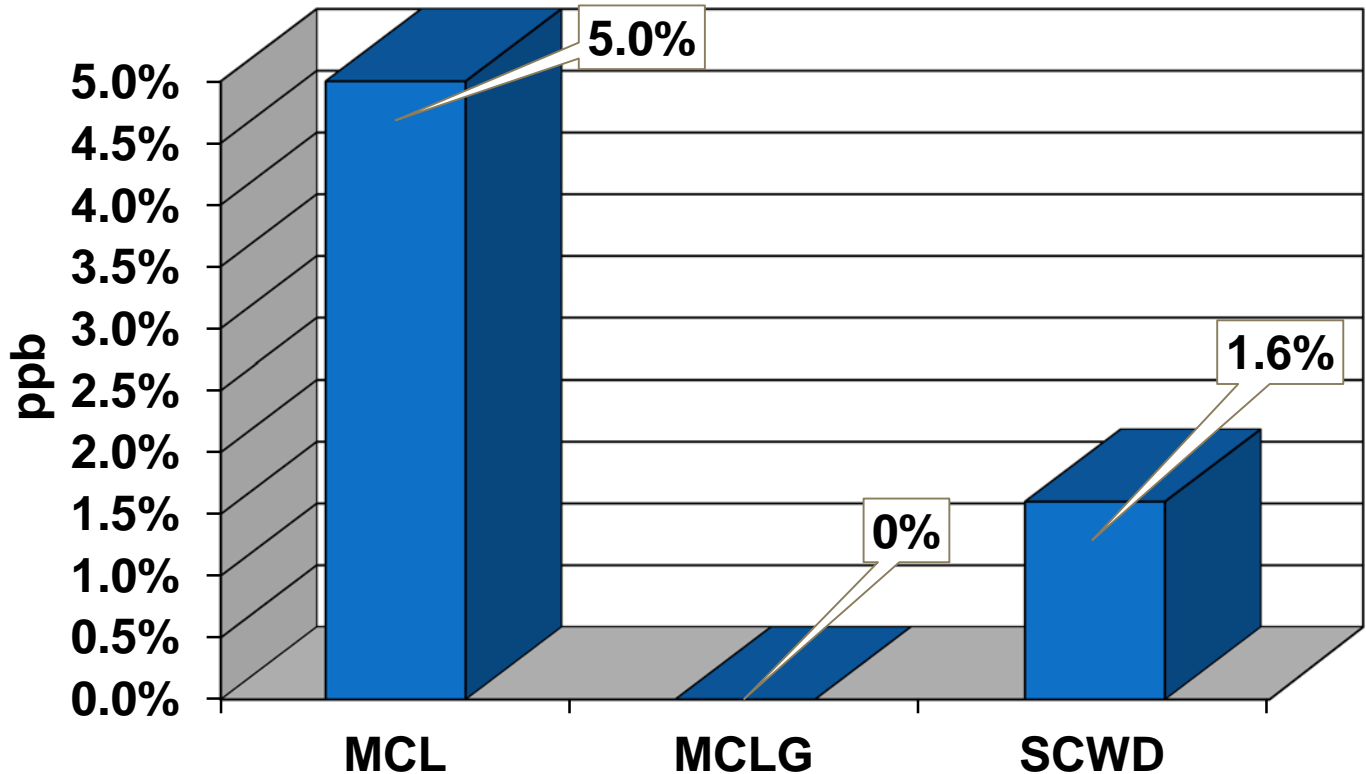
Total Coliform

- Group of bacteria which are naturally present in the environment
- Commonly found in soil and plant material
- Usually not harmful
- Good indicator for the potential presence of pathogens
- If total coliforms are present, must test for *E. coli*



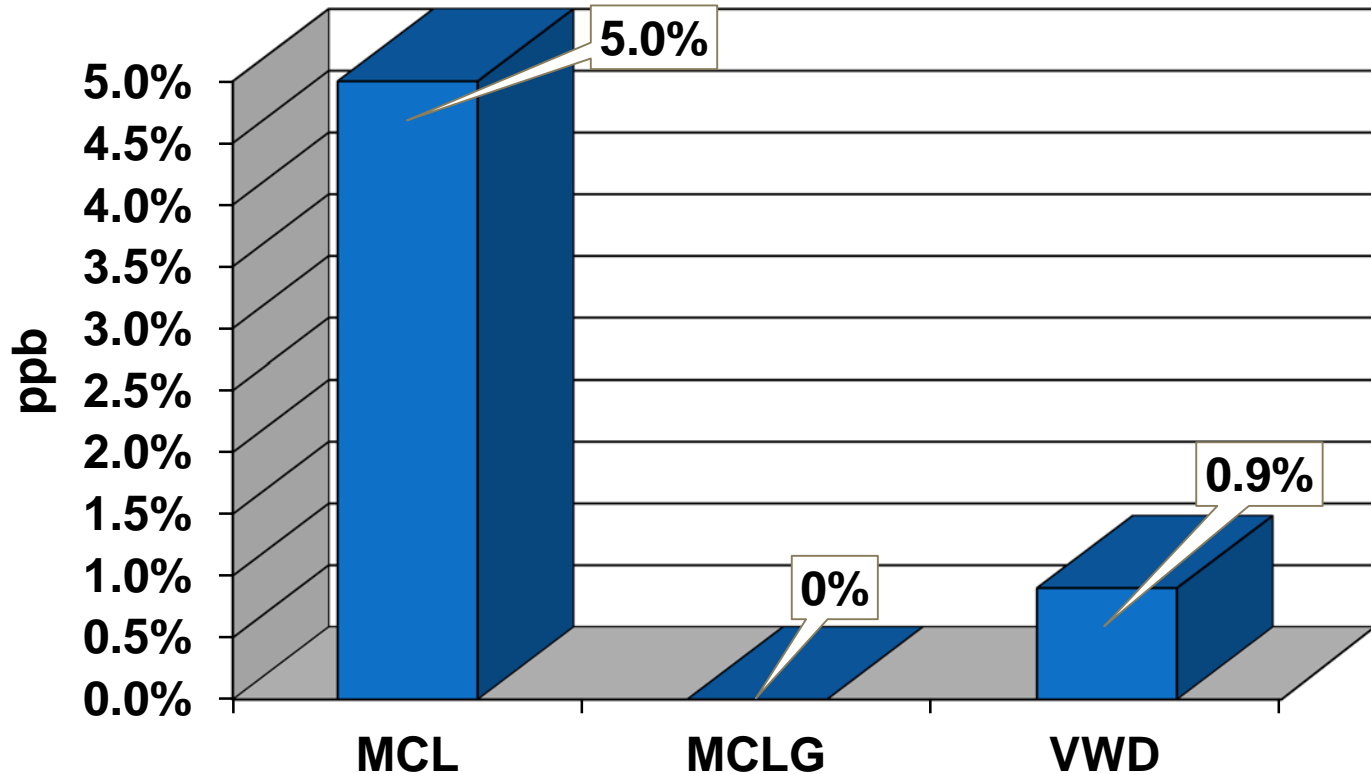
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MCL vs. MCLG for Total Coliform



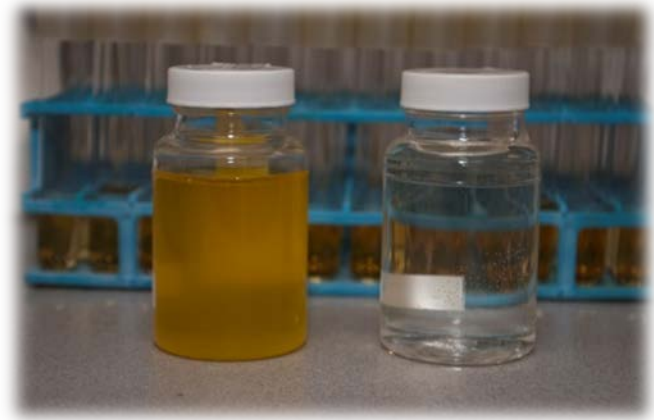
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MCL vs. MCLG for Total Coliform



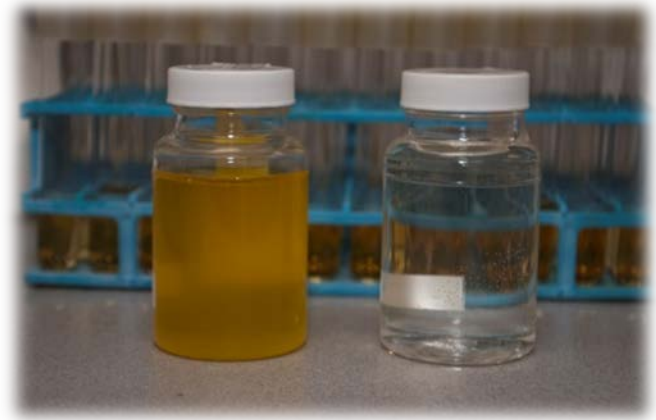
Potential Health Effects: Total Coliform

- Usually not harmful
- Pathogens associated with TC can cause:
 - Diarrhea
 - Cramps
 - Nausea
 - Headaches
 - Fatigue



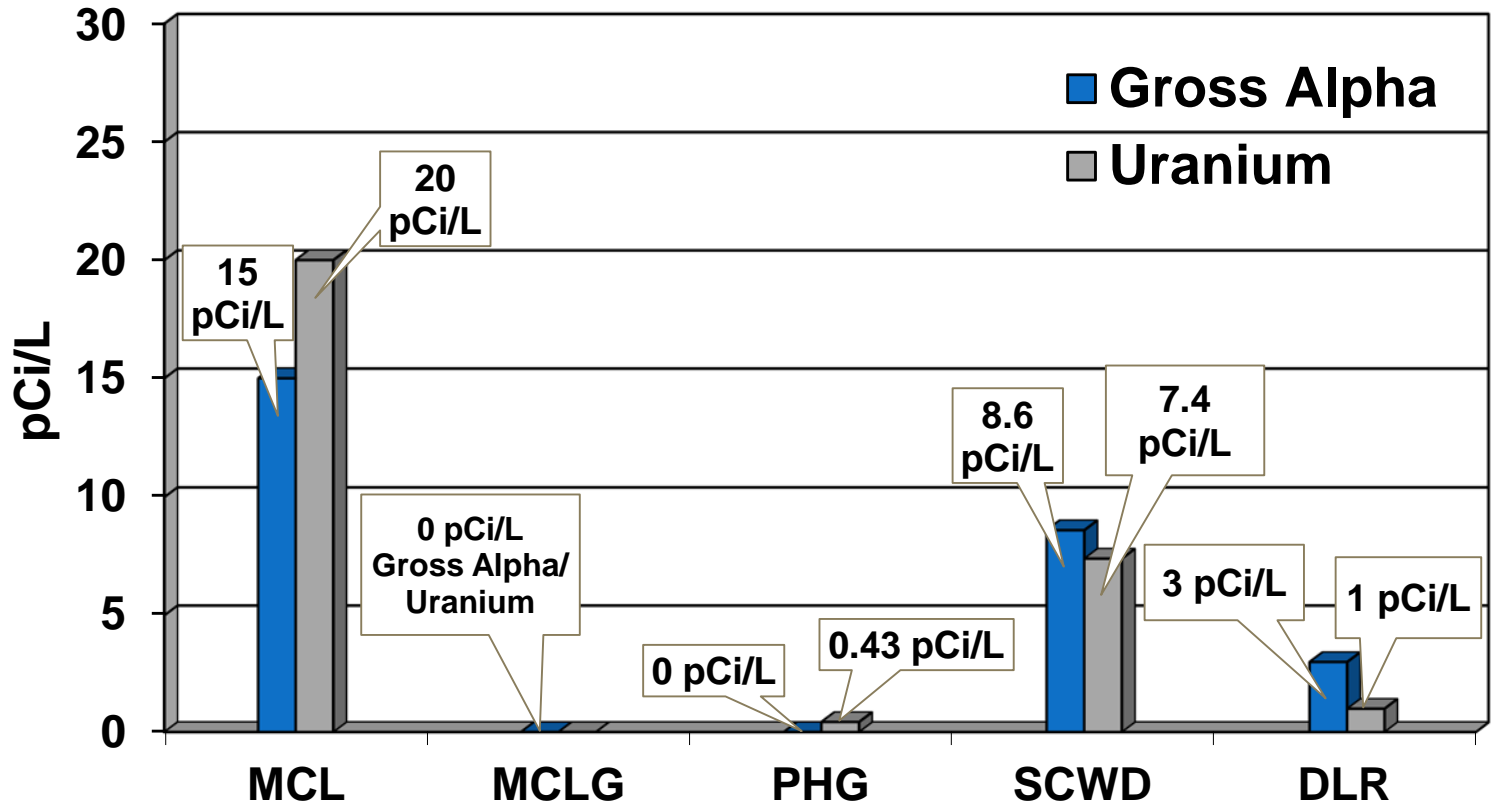
Controlling Total Coliforms

- Placement & construction of wells
- Disinfection of groundwater
- Maintaining disinfectant residual in distribution system
- Maintenance of distribution system



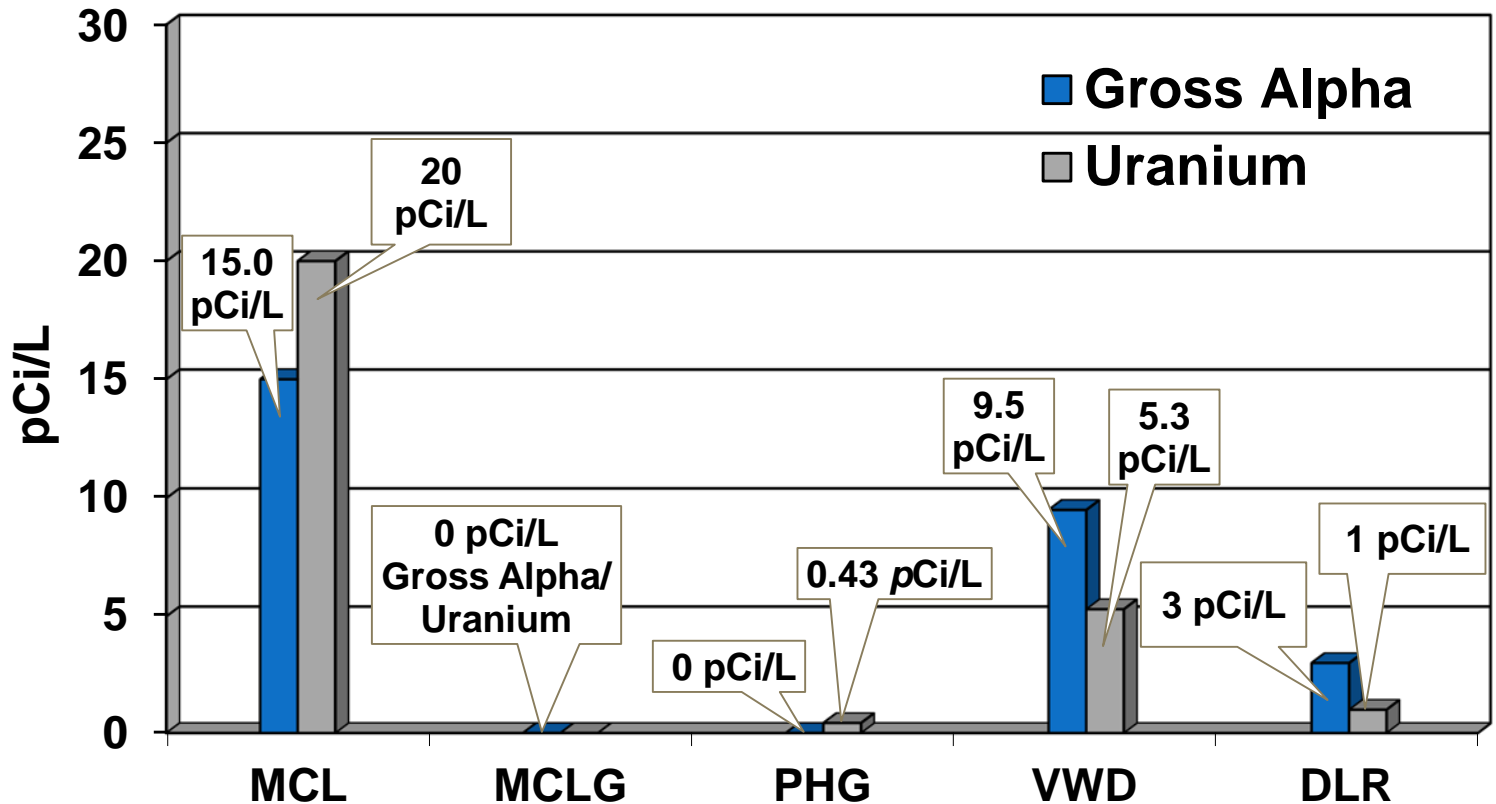
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MCL vs. PHG for Radionuclides



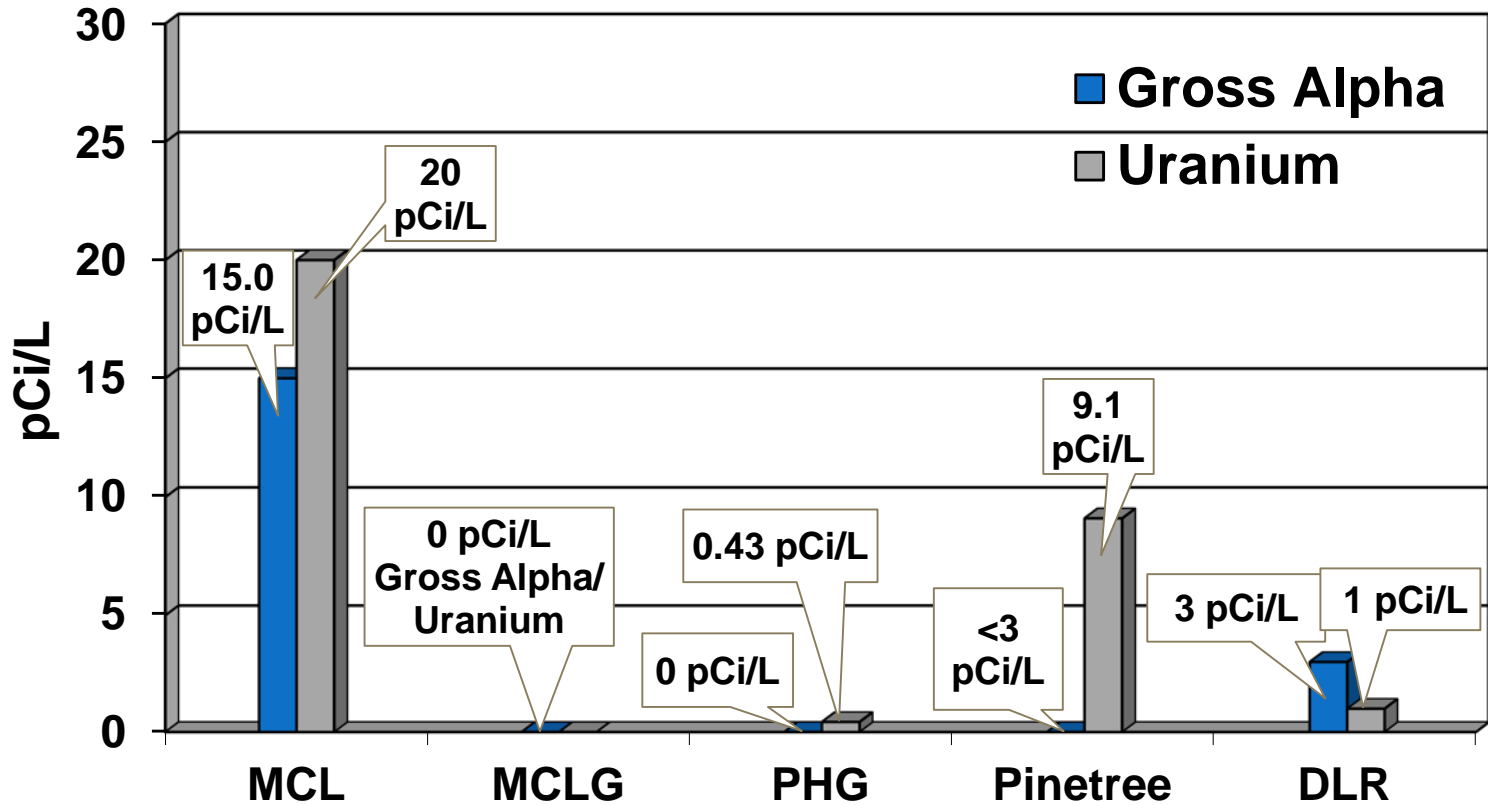
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MCL vs. PHG for Radionuclides



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MCL vs. PHG for Radionuclides



Potential Health Effects: Radionuclides

- Some people who drink water containing alpha/beta emitters or uranium in excess of the MCL over many years may have an increased risk of getting cancer



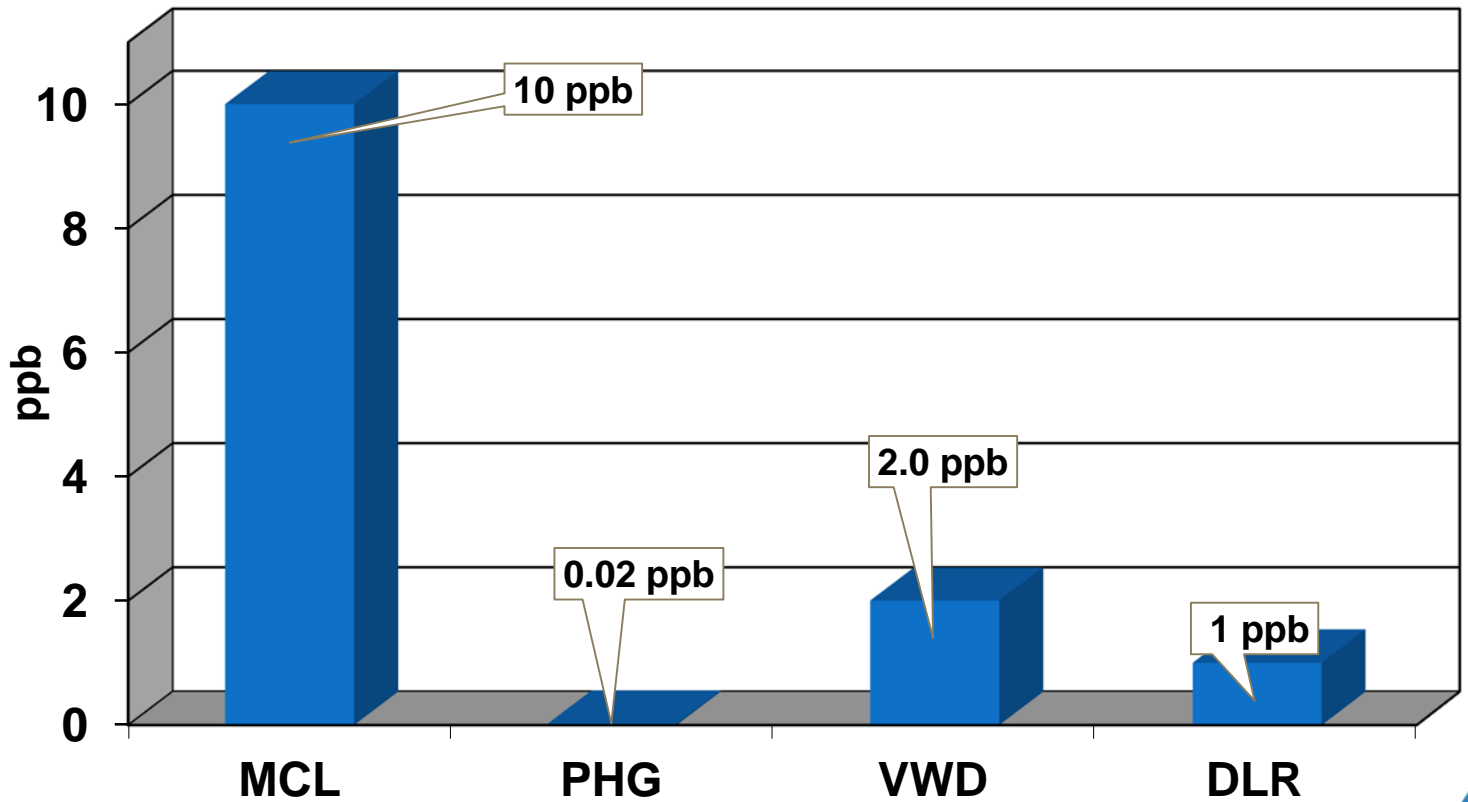
BAT for Radionuclides

- Controls for Radionuclides include:
 - *Ion exchange*
 - *Reverse osmosis*



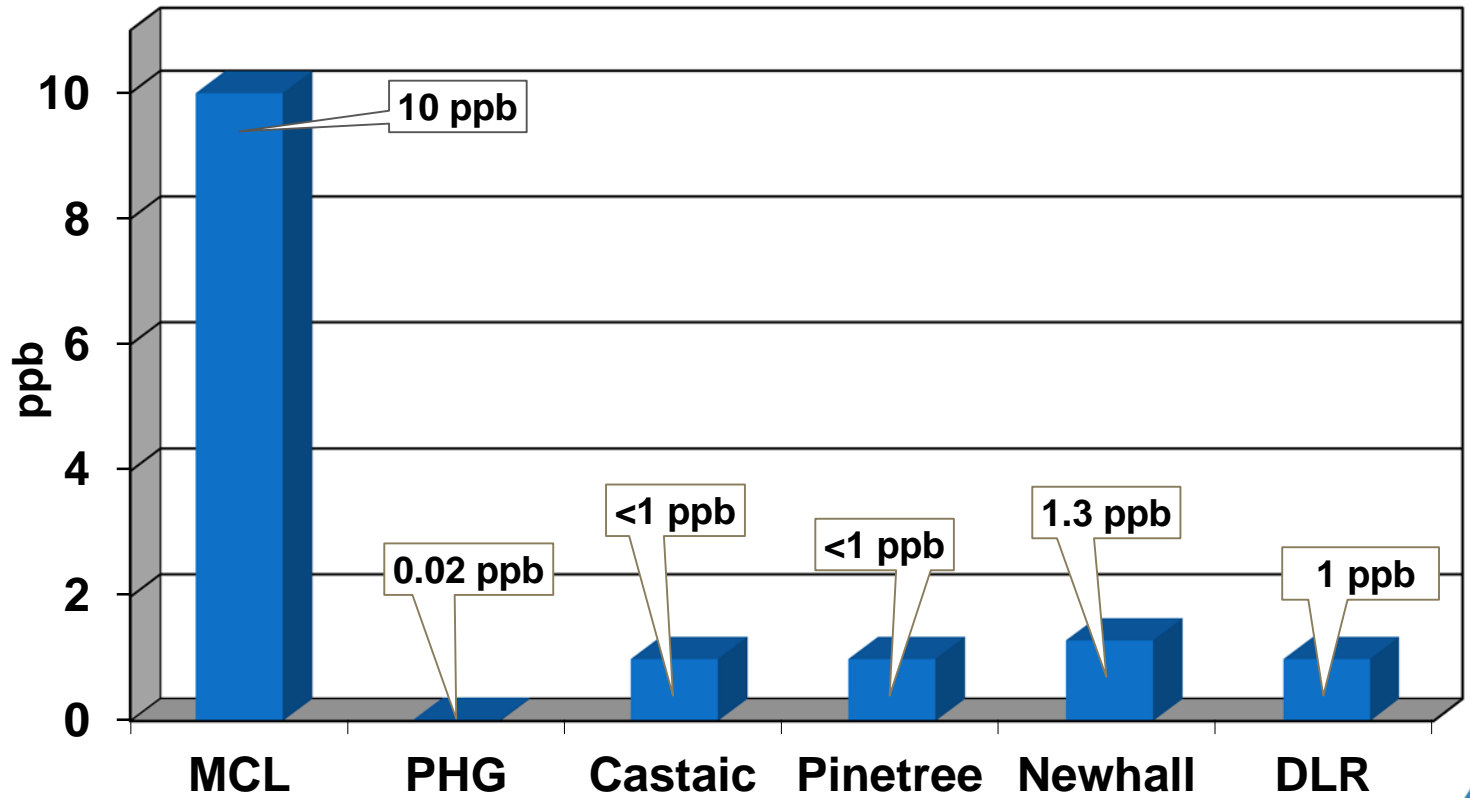
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MCL vs. PHG for Hexavalent Chromium



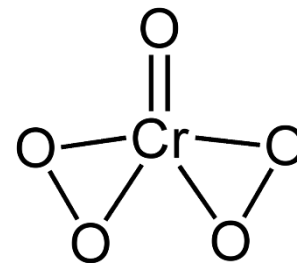
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MCL vs. PHG for Hexavalent Chromium



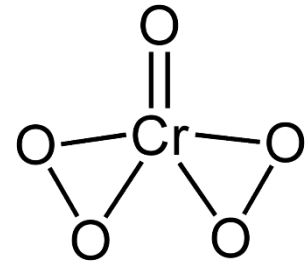
Potential Health Effects: Hexavalent Chromium

- Hexavalent Chromium is a potent carcinogen when inhaled
- Found to cause cancer in rats and mice that were exposed through drinking water



BAT for Hexavalent Chromium

- Controls for Hexavalent Chromium include:
 - *Ion exchange*
 - *Coagulation/filtration*
 - *Reverse osmosis*
 - *Lime softening*





Thank you!
Questions?