



Update on Chromium 6

Engineering and Operations Committee

Item 6a

October 10, 2011

Chromium 6 Regulatory Review

- July 27, 2011 - Office of Environmental Health Hazard Assessment (OEHHA) set a public health goal (PHG) of 0.02 ppb
 - PHG is NOT enforceable and only represents non-mandatory goal
- No drinking water standard for chromium 6, but total chromium is regulated at 50 ppb in California
- Maximum Contaminant Level (MCL) process
 - MCLs are drinking water standards established by the California Department of Public Health (CDPH)
 - Must consider cost and feasibility of treatment
 - Final MCL anticipated by 2015

Regulatory Concerns

- Value of on-going health effects studies recognized by USEPA peer review panel
- OEHHA considered on-going health effects studies but did not wait for final publication
- Metropolitan and other stakeholders expressed concern to OEHHA
- CDPH is obligated to use PHG in the MCL process

Chromium 6 Issues in California

- Chromium 6 occurrence in the environment:
 - Natural sources
 - Industrial contamination
- Chromium 6 occurrence in Metropolitan's source waters (2010 data)
 - State Water Project: ND (<0.03) – 0.45 ppb
 - Colorado River: ND – 0.04 ppb

Chromium 6 Issues in California (cont.)

- City of Glendale treatment studies
 - Metropolitan partnered with Glendale to submit a WaterSMART grant to USBR
 - Glendale received \$400,000 award
 - Can remove chromium 6 down to 2 ppb
 - Project to be completed in 2012

Hexavalent Chromium Information Exchange Forum, August 18-19, 2011

- Sponsored by Water Research Foundation and hosted by Metropolitan
- Attended by 220 participants either in person or remotely via webcast
- Experts exchanged state-of-the-science information about chromium 6
- Identified additional information to develop a “Research Roadmap”

Water Research Foundation: Research Roadmap (2011-2015)

- Analytical Methods: *Reliably measure low levels of chromium 6*
 - Review sample preservation and analytical detection procedures
- Occurrence: *Characterize national occurrence of total chromium and chromium 6*
 - Analyze existing data
 - Perform national occurrence survey
 - Low level chromium 6 and total chromium
 - May be conducted by USEPA

Water Research Foundation: Research Roadmap (2011-2015) (con't)

- Communication: *Improve communications with consumers and within the industry*
 - Consolidate and have information about:
 - Health effects studies
 - Treatment efficacy and costs
 - Communications resources
 - Develop strategies for communication with consumers
 - Conduct quarterly webinars

Water Research Foundation: Research Roadmap (2011-2015) (con't)

- Distribution System Issues: *Understand changes in chromium 6 chemistry in treated water distribution systems*
 - Conduct studies to assess chromium transformation in treated drinking water distribution systems
 - Conduct surveys to assess relationship between corrosion and chromium 6 occurrence in distribution systems and household pipes

Water Research Foundation: Research Roadmap (2011-2015) (con't)

- Treatment and Cost: *Understand feasibility and cost to reduce chromium 6 to potential MCL levels*
 - Perform pilot-scale treatment evaluations at several utilities with different source waters
 - Analyze costs associated of treatment modifications at affected utilities
 - Assess contribution of chromium 6 from water treatment chemicals
 - Conduct bench-scale testing of novel ion exchange treatment

Next Steps

- Participate in relevant chromium 6 studies
- Continue to provide technical support to on-going Glendale study
- Participate in legislative and regulatory activities
- Work with CDPH and other stakeholders in the chromium 6 regulatory process

