

CHROMIUM 6

Gideon Kracov On Chromium 6: How the State Legislature Ought To Respond

The issue of groundwater contamination has received increased attention in recent months, and in Southern California, the debate over what are acceptable levels of contaminants has erupted over Chromium 6. MIR is pleased to present the following article by Gideon Kracov,

Esq. on what the legislative response should be to regulate groundwater in a sensible and efficient manner. Mr. Kracov represents individual and institutional clients in environmental litigation and regulatory compliance matters at Rose, Klein & Marias LLP in Downtown LA.

Drinking Water in Southern California: The Lessons of Chromium 6

Recently, routine tests of public drinking water wells throughout Southern California revealed elevated levels of hexavalent chromium ("chromium 6"). These well-publicized test results turned attention to the quality of our drinking water. After all, quality is just as important a constraint on water use as quantity. The discovery of chromium 6 in Southern California wells has helped us better understand how



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to protect the quality of our water supply through more efficient management and a precautionary approach to public health.

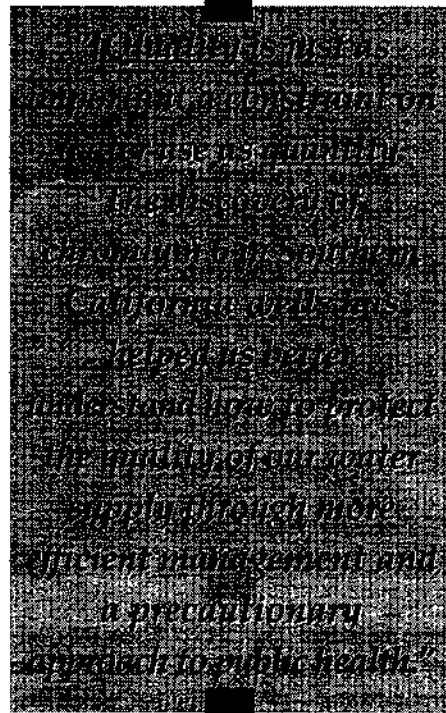
Background on Drinking Water

Southern California drinking water comes from numerous sources. Some is imported by the mighty public works projects so critical to Southern California's history. However, we also depend on natural groundwater present in aquifers hundreds of feet below us. We pump this resource to the surface, especially in times of scarcity or seasonal shortage. A substantial 25 to 40% of our water supply comes from groundwater aquifers.

Unfortunately, the drinking water supply in Southern California is vulnerable to man-made pollution. Heavy industry, agriculture, and land disposal have left a legacy of contamination, as chemicals and pesticide residue leak through the soil to groundwater aquifers. This problem is pervasive; for example, more than 5,000 industrial sites in Los Angeles County contain leaking underground storage tanks.

To safeguard public health, drinking wa-

ter must meet the requirements of federal and California Safe Drinking Water laws. These laws require the State Department of Health Services ("DHS") to oversee testing of drinking water to ensure compliance with numerical limits called maximum contaminant levels (MCLs). Water which exceeds a MCL for a particular contaminant is not suitable for drinking water.



The MCLs are conservative, health-protective standards with a wide margin of safety established through rigorous scientific review. Using human epidemiology and animal studies, toxicologists compute the risk to an adult ingesting two liters of water a day for 70 years. The MCLs exist for dozens of chemical and mineral contaminants and generally are expressed by parts per billion (1×10^9).

In Southern California, numerous wells draw water from groundwater aquifers that

exceed drinking water MCLs. Some of these wells are taken off-line. For others, treatment technologies are available at considerable expense which remove contaminants before the water is supplied to consumers.

What Is Chromium 6?

Chromium is a naturally occurring element; however, it also is generated as waste from metal finishing, petroleum refining and wood preserving. It most commonly occurs as non-toxic trivalent chromium (chromium 3) or chromium 6 which is acutely toxic and mobile in the environment. The dumping of chromium waste was brought to the attention of the Los Angeles Bureau of Water Works and Supply in 1941. The Bureau discovered that several plants in the San Fernando Valley discharged chromium waste into adjacent washes and the Los Angeles River.

Chromium 6 is considered a cancer-causing agent via inhalation in air, but experts are unsure of the appropriate standard for chromium 6 when ingested via drinking water. Thus, the DHS has set no MCL for chromium 6. While DHS does have a MCL of 50 ppb for total chromium in drinking water, another State agency set a non-binding public health goal of 2.5 ppb for total chromium based on information that chromium 6 causes cancer when ingested via drinking water. This suggests that the current MCL of 50 ppb for total chromium is too lenient.

Chromium 6 in Southern California

The scientific deliberation on chromium 6 came under public scrutiny last year when drinking water samples in Southern California revealed concentrations of chromium above MCLs and, more specifically, elevated levels of chromium 6. Tests in the San Fernando Valley and Glendale showed that chromium 6 drinking water levels have been

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Kracov: Remedy to Chromium 6 Is Smarter Regulation

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increasing and are expected to continue to rise. Subsequently, routine testing of wells in Bell Gardens and South Gate tested as high as 408 ppb of chromium 6. Numerous wells regulated by the County of Los Angeles in Antelope Valley also showed the presence of chromium 6. These findings, coupled with a popular Julia Roberts movie based on a true story of a working mother's effort to cleanup drinking water in Hinckley, California, tainted Southern Californians' confidence in the healthfulness of our water supply.

The chromium 6 controversy caused a flurry of activity. The DHS for the first time required testing of all regulated drinking water wells for chromium 6 and promised to set a drinking water MCL for chromium 6. To do this, the DHS asked the University of California at Berkeley to appoint a blue-ribbon panel. The panel will study the link between ingestion of chromium 6 and cancer as well as test assumptions about the chemical relationship between total chromium and its chromium 6 component. In Sacramento, pending legislation SB 351 (Ortiz) requires the DHS to set its MCL for chromium 6 by 2003. The federal National Toxicology program also has been asked to review chromium 6.

To address the specific concerns of Southern Californians, Governor Davis signed SB 2127 (Schiff) in September 2000. The law requires a report by 2002 on the levels of chromium 6 contamination supplied by public water systems in the San Fernando basin and a discussion of potential health risks. In addition, the Los Angeles County Board of Supervisors ordered additional testing of County wells. In Glendale, the City now blends its municipal water with imported supplies to ensure a low chromium 6 content. Throughout the region, regulatory agencies are investigating chromium 6 sources. However, as a recent *Los Angeles Times* headline suggested, "tracking pollution may be tough." More than 1,200 sources may have contributed to the chromium 6 problem in Southern California.

Lessons from Chromium 6

The chromium 6 controversy reminds Southern Californians yet again of the fragility of our water supply resource. It also

illustrates the need for thoughtful regulatory reform and renewed commitment to a precautionary approach to water quality. Water is regulated heavily, but inefficiently. A maze of different agencies monitor the water supply, which leads to inconsistent enforcement. Under the circumstances, too many cooks spoil the brew. An example of this is southeast Los Angeles County, where numerous wells regularly test positive for chemical contaminants, including chromium 6. There, more than a dozen different public utilities and private purveyors supply drinking wa-

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ter to the public. The DHS oversees the quality of the drinking water but not the groundwater—two municipal water districts and a water replenishment district share that responsibility. Various other agencies, however, oversee cleanup of the groundwater including the federal Environmental Protection Agency, the State Department of Toxic Substances Control, the Regional Water Quality Control Board, the County of Los Angeles and a host of local city fire departments.

Not surprisingly, forward-thinking commentators are critical of this byzantine regulatory scheme. The Natural Resource Defense Council's April 2001 report

California's Contaminated Groundwater: Is the State Minding the Store? concludes that there is no comprehensive groundwater quality monitoring in California and little coordination among regulatory agencies. While many agencies are diligent, the report identifies a "not my department" attitude and incomplete data on the scope of threats to drinking water sources. Chromium 6 concerns in southeast L.A. illustrate this. Despite the bevy of oversight agencies, a local water official recently commented in a published report that "no one knows the magnitude of the source of contamination at this point."

The remedy for this is not deregulation, but smarter regulation. One noteworthy proposal is AB 599 (Liu), pending in the California Legislature. The bill requires the State Water Resources Control Board to implement a comprehensive groundwater monitoring program throughout the state and design a system to increase coordination among the agencies that regulate California water quality. This reform will benefit California businesses by streamlining agency oversight and helping boost public confidence in the quality of our drinking water.

Emerging concern about chromium 6 also highlights the importance of a precautionary approach to protecting health. While there are risks to everything we do, few dispute that we must take special care with our water supply. This is why the Federal and State drinking water laws apply conservative MCL standards with a wide margin of safety. A precautionary approach recognizes that our understanding of human health, and cancer specifically, is evolving.

We should recommit to a precautionary approach with regard to chromium 6. Until there is full confidence in an appropriate drinking water MCL, regulators should take precautionary measures. Any well which tests positive for chromium 6 should be scrutinized to determine whether it should be taken off-line or treated to remove the contaminant. Treatment, while costly, is a feasible alternative in most cases. During this process great care must be taken to communicate information to the public. The public must be informed, not frightened. Risk must not be exaggerated, especially when health-protective measures are in place. This is the prudent course until a drinking water MCL is set for chromium 6. **MIR**