

SECTION 7 RECENTLY ENACTED AND PENDING LEGISLATION AND REGULATION

I. FEDERAL

Legislation

At the federal level, Congress has responded to the problem of perchlorate contamination of drinking water by introducing several bills. The following is a brief description of the recent legislative efforts targeting the perchlorate problem in the U.S.¹ Bills introduced in the House of Representatives are designated as H.R. followed by the bill number. Bills introduced in the Senate are designated as S. followed by the bill number.

Recently enacted legislation

House of Representatives (H.R.) bill 1588, now Public Law (P.L.) 108-136, was enacted in 2004. This new law directs the DOD to provide for independent health studies of perchlorate in drinking water.

H.R. 2658 (P.L. 108-87), was enacted in 2004. This new law directs DOD with EPA to conduct a study of perchlorate groundwater pollution that threatens drinking water and irrigation water supplies in the Southwest.

Legislation introduced in Congress

H.R. 213, Safe Drinking Water for Healthy Communities Act of 2005, was introduced January 4, 2005. This bill would amend the Safe Drinking Water Act to require EPA to promulgate a national primary drinking water regulation for perchlorate.

H.R. 4200, The National Defense Authorization Act of 2005, includes a “sense of Congress” that DOD should develop a plan for remediating perchlorate contamination resulting from DOD activities when the contamination poses a human health hazard. DOD should continue evaluating contaminated sites, even in the absence of a drinking water standard.

H.R. 5344, the Safe Drinking Water for Healthy Communities Act of 2004, was introduced on October 8, 2004. The bill would amend the Safe Drinking Water Act to require EPA to promulgate a national primary drinking water regulation for perchlorate.

H.R. 5234, the Eastern Santa Clara River Basin Protection Act, was introduced on October 6, 2004. It requires the Secretary of the Army to participate in studies and other investigative activities and in the construction, planning, and design of projects determined by the Secretary to offer a long-term solution to groundwater perchlorate contamination in the Eastern Santa Clara River Basin in Santa Clarita, California.

Senate Bill (S.) 2550 was introduced on June 21, 2004. The bill would amend the Federal Water Pollution Control Act and the Safe Drinking Water Act to improve water and wastewater infrastructure in the United States. It requires the Secretary of the Interior, acting through the U.S. Geological Survey, to conduct a nationwide assessment of sites contaminated with perchlorate and report the results to Congress.

H.R. 2123, Preventing Perchlorate Pollution Act of 2003, was introduced on May 15, 2003. This bill would amend the Federal Water Pollution Control Act to require that information on the discharge and storage of perchlorate be reported to the EPA, and the appropriate State water pollution control agency. Imposes fines on violators, and requires that fines be deposited in a newly created Perchlorate Pollution Prevention Fund and used for loans to public water suppliers and private well owners to replace water contaminated by perchlorate.

S. 502 was introduced on March 3, 2003. It amends the Safe Drinking Water Act to require the EPA to designate perchlorate as a contaminant, and to establish a maximum contaminant level that provides an adequate margin of safety for vulnerable populations.

S. 820 was introduced on April 8, 2003. It amends the Federal Water Pollution Control Act to establish a perchlorate pollution prevention fund and to establish safety standards applicable to owners and operators of perchlorate storage facilities.

S. 1050, as amended by another bill on May 22, 2003, directs the DOD submit to a specified congressional committees a survey on perchlorate contamination at all active and closed DOD sites.

S. 2400, as amended by another bill on May 18, 2004 expresses a "sense of the Senate" that perchlorate contamination of ground and surface water is becoming increasingly problematic to the public health of people in the United States.

Regulatory Efforts

At the present time there is not drinking water regulation for perchlorate, but EPA and other federal agencies are working toward developing regulations to address perchlorate as a drinking water contaminant. EPA has not established a regulatory standard for perchlorate due to a lack of sufficient data regarding the human health risk resulting from exposure to low levels of perchlorate in drinking water.

In the early 1990s, perchlorate contamination was first detected in drinking water monitoring wells at California superfund sites. The extent of perchlorate contamination was not easily assessed until after 1997, when California's Department of Health Services developed an analytical method that could detect perchlorate in drinking water at levels as low as 4 ppb. Since the extent of

perchlorate determination became better understood, the EPA, together with other federal agencies has undertaken the following steps toward regulation of perchlorate.

In 1992, the EPA issued a provisional reference dose of 0.0001 mg/kg/day, which is equal to a drinking water concentration of 4 ppb. A reference dose is a scientific estimate of a daily exposure level that is not expected to cause adverse health effects in humans.² In 1995, the EPA revised the reference dose to 0.0001-0.0005 mg/kg/day (4 -18 ppb).

In 1998, the EPA increased the reference dose to 0.0009 mg/kg (equivalent to 32 ppb) because new data seemed to indicate that perchlorate was not as harmful as originally thought. Also in 1998, EPA placed perchlorate on its Contaminant Candidate List, which names unregulated contaminants that may pose a public health concern in drinking water. In December 1998, EPA released for review its draft document on perchlorate risk assessment, titled "Perchlorate Environmental Contamination: Toxicological Review and Risk Characterization". In 1999, EPA required drinking water monitoring for perchlorate under its Unregulated Contaminant Monitoring Rule³.

In January 2002, EPA's Office of Research and Development released for comment a revised draft of its earlier report "Perchlorate Environmental Contamination: Toxicological Review and Risk Characterization". The revised draft was based on peer reviews received by EPA on the earlier version, and additional data it had gathered. EPA convened a new peer review to review the revised document. Comments have been generated and are now being addressed by the EPA. The risk assessment document relied on various animal studies, and recommended a perchlorate reference dose for ingestion of 0.00003 mg/kg/day (equivalent to 1 ppb). This reference dose was aimed to protect against appreciable risk of adverse effects from perchlorate ingestion over a lifetime.

In March 2003 the EPA and other federal agencies such as DOD and DOE asked the National Academy of Sciences (NAS) to review EPA's draft risk assessment document and to advise EPA on questions related to the assessment. NAS established a committee which reviewed perchlorate related materials submitted by EPA, DOD, DOE, NASA, industry, and private individuals. NAS completed its review in January 2005, provided comments to EPA, and summarized its findings in a report, which is now in prepublication form and is expected to be published soon. The NAS report concluded that a daily ingestion dose of 0.0007 milligrams of perchlorate per kilogram of body weight would not threaten the health of even the most sensitive populations.^{2 above}

On Feb 18, 2005, EPA established an official reference dose of 0.0007 mg/kg/day for perchlorate. This level is consistent with the recommended reference dose included in the NAS January 2005 report. This dose level

assumes intakes from both food and water and aims to protect the sensitive subgroups within the population, including pregnant women, developing embryos, and young children.⁴

II. CALIFORNIA STATE

Regulations Legislation Recently Adopted

AB 826 (Jackson, ch. 608, stats 2003) enacted the Perchlorate Contamination Prevention Act, which requires DTSC to adopt best management practices regulations by December 31, 2005. The bill also requires the owner or operator of a perchlorate facility located within a 5-mile radius of a public drinking water well contaminated with perchlorate to submit to the CalEPA, a summary of any subsurface and any groundwater monitoring, investigation, or remediation work that has been performed at the facility. Finally, AB 826 requires the CalEPA Secretary to establish a statewide database and to work with the certified unified program agencies to develop a phased-in schedule for the electronic collection and submittal of information to be included in the statewide data base.

SB 922 (Soto, ch. 508, stats. 2003) revised the definition of "perchlorate" to mean all perchlorate-containing compounds, including ammonium, potassium, magnesium, and sodium perchlorate. The definition of perchlorate does not include perchlorate located in unused military munitions that were stored on or after January 1, 2004.

SB 1004 (Soto, ch. 614, stats. 2003) requires the reportable quantity for perchlorate to be 10 pounds or more by discharge to the receiving waters, unless a more restrictive reporting standard is adopted for a particular body of water. This bill requires the owner/operator of a storage facility that has stored in any calendar year since January 1, 1950, over 500 pounds of perchlorate to submit to the State Water Resources Control Board (SWRCB) certain information relating to that storage and authorizes the SWRCB to charge an annual fee to each owner of a storage facility that provides certain information to the board. Finally, the bill requires the SWRCB to submit the perchlorate storage information to the Secretary of CalEPA upon notification that a database is able to receive perchlorate inventory information.

SB 1822 (Sher, ch. 425, stats. 2002) required the Office of Environmental Health Hazard Assessment (OEHHA) to perform a risk assessment and, based upon that risk assessment, to adopt a public health goal based exclusively on public health consideration for perchlorate. As of March 11, 2004, OEHHA set the Public Health Goal at 6 ppb. The bill also required the Department of Health Services (DHS) to adopt a primary drinking water standard, officially known as a Maximum Contaminant Level (MCL), for perchlorate found in public water systems.

AB 1640 (Laird, ch. 696, stats. 2003) defines a "business" as any agency, department, office, board, commission, or bureau of a city, county, district, or the state, and the federal government for businesses required to prepare a business plan and submit an annual inventory pursuant to Health and Safety Code chapter 6.95.

AB 3041 (Committee on Environmental Safety and Toxic Material, ch. 686, stats. 2004) requires a business to prepare and submit business or inventory forms in accordance with the existing specified quantity requirements governing business plans for emergency response to a release or threatened release of a hazardous material.

California Legislation Pending

AB 342 (Baca, 2005) would authorize the DTSC to assess a fee on products that contain perchlorate and to expend those funds to treat drinking water wells contaminated with perchlorate.

AB 492 (Baca, 2005) would require a business concern that handles or uses perchlorate and is consequently required to submit a business plans to include information detailing the manner in which perchlorate waste is generated onsite and disposed or handled.

AB 1354 (Baca, 2005) would require the Department of Health Services to establish a maximum contaminant level for perchlorate of 6 ppb, to be phased in over a period of 2 years commencing January 1, 2006.

SB 977 (Ashburn, 2005) would specify that "perchlorate" does not include perchlorate located in unused military munitions that were stored on or after January 1, 2004 in Health and Safety Code section 25249.1.

AB 1354 (Baca, 2005) would require the Department of Health Services to establish the maximum contaminant level for perchlorate at 6 parts per billion, phased in over a period of 2 years commencing January 1, 2006. This bill would require persons or entities found responsible for perchlorate contamination of drinking water to pay the costs of removing that contamination.

Drinking Water Standards

Public Health Goals

In accordance with Health and Safety Code Section 116293 (SB1822, Sher, Statutes of 2002), the Office of Environmental Health Hazard Assessment (OEHHA) published the final Public Health Goal (PHG) for perchlorate in drinking water. The PHG is 6 ppb and there are no existing state or federal drinking water regulatory standards. The current detection level for perchlorate in drinking water

is 4 ppb. The notification level was set at 4 ppb in January 2002 and was later raised to 6 ppb in March 2004.

OEHHA completed a technical support document that provides the scientific basis for the PHG. This support document estimates the level of the chemical in drinking water that would pose no significant health risk to individuals, including sensitive populations, consuming the water on a daily basis over a lifetime. PHGs represent health-protective goals based solely on public health considerations and are developed based on the best available data in the scientific literature.

The National Academy of Sciences (NAS) finished conducting its evaluation of U.S. EPA's 2002 Draft Toxicological and Risk Characterization for Perchlorate in January. OEHHA carefully reviewed the NAS conclusions and determined that it was not necessary to revise the PHG (Health and Safety Code Section 116365(e)(1)).

Maximum Contaminant Level (MCL)

The Department of Health Services (DHS) will establish a primary drinking water standard (state maximum contaminant level, or MCL). By law, DHS was required to issue the MCL no later than January 1, 2004 and was to consider economic factors and technical feasibility in setting the MCL. However, the deadline was held up by a court-ordered peer review and a delay in the University of California's appointment of a peer review committee. The UC peer review began October 20, 2003, and was released by OEHHA on January 14, 2004. DHS anticipates proposing an MCL for perchlorate later in 2005. Until the MCL is in place, DHS will continue to use 6 ppb as a notification level to advise water systems and others.

III. OTHER STATES

No state maximum contaminant levels or other final standards exist for perchlorate. Only a few states, have adopted "action levels" or other advisory type levels as summarized in the following table.

While state advisory levels generally range from 1 to 6 ppb, some disagreement on perchlorate standards continues to exist. Arguing for more stringent standards, the Environmental Working Group cites evidence concerning sensitive populations and the detection of perchlorate in irrigated crops to support a 0.1 ppb drinking water standard. Arguing for a more lenient standard, the Department of Defense and some risk assessment practitioners argue for a 200 ppb drinking water standard. In 2002, the Oregon Health & Science University also recommended a drinking water equivalent of approximately 200 ppb as protective.

References

¹ Library of Congress website. 2005. <http://www.loc.gov>.

² National Research Council of the National Academies. 2005. *Health Implications of Perchlorate Ingestion* (Prepublication Copy). Available for online reading at: <http://books.nap.edu/catalog/11202.html>

³ U.S. Environmental Protection Agency website. 2005. *Unregulated Contaminant Monitoring Rule (UCMR) 1999*. <http://www.epa.gov/safewater/ucmr.html>

⁴ U.S. Environmental Protection Agency website. 2005. *Perchlorate Links* http://www.epa.gov/fedfac/documents/perchlorate_links.htm#epa_resources

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