



- **Board of Directors**
Legislation Committee

3/8/2011 Board Meeting

8-5

Subject

Express support, if amended, for S. 79 (Boxer, D-CA) - Protecting Pregnant Women and Children from Hexavalent Chromium Act of 2011

Description

Legislation has been introduced at the federal level to compel drinking water regulators to set a drinking water standard for hexavalent chromium, also known as chromium 6, within specified time frames. United States Senator Boxer (D-California) introduced S. 79, the "Protecting Pregnant Women and Children from Hexavalent Chromium Act of 2011" ([Attachment 1](#)) that would direct the United States Environmental Protection Agency (USEPA) to publish a Health Advisory no later than 90 days after enactment and finalize a national drinking water standard for chromium 6 within one year.

Background

Chromium, an inorganic chemical, is a naturally occurring element but is also used in manufacturing (e.g., electroplating and wood treatment) and cooling tower treatment for corrosion control. Chromium ("total chromium") can occur in various forms – the two most common as trivalent chromium or chromium 3, an essential dietary nutrient, and hexavalent chromium or chromium 6. Chromium 3 is the most common form of the two; however, the relative ratio between them can vary significantly. Chromium 6 is a known human carcinogen when inhaled; however, there has been considerable controversy concerning the adverse human health effects of chromium 6 when ingested.

The USEPA established a federal drinking water standard (maximum contaminant level or MCL) for total chromium at 50 parts per billion (ppb) in 1977 but in 1991 raised the standard to 100 ppb citing lack of evidence for human health concern for ingested chromium. There is currently no state or federal drinking water standard for chromium 6 other than the regulations which limit total chromium. California currently has in place USEPA's initial standard of 50 ppb as an MCL for total chromium in drinking water.

The USEPA follows an established process to set drinking water standards. This process is defined under the Safe Drinking Water Act (SDWA) and its 1996 Amendments. One of the first federal steps in standard setting is to establish a Health Advisory level which is an estimate of an acceptable amount in drinking water based on health effects information. The USEPA then uses the Health Advisory level, along with monitoring data, treatment capability and a cost-benefit analysis to set the enforceable MCL. The federal Health Advisory level is based solely on theoretical risk calculations and does not consider analytical capability, available treatment technologies or cost-benefit information. As such, drinking water MCLs may ultimately be set several orders of magnitude higher than these advisory levels.

Legislative Analysis

On February 2, 2011, USEPA Administrator Lisa Jackson testified before the US Senate Committee on the Environment and Public Works ("Oversight Hearing on Public Health and Drinking Water Issues") and indicated that her agency will likely regulate chromium 6 in drinking water but only after completing a health assessment study. Administrator Jackson also indicated that USEPA's decision would be based on the results of a human

health study, which is under peer review, and other studies that have demonstrated the carcinogenicity of chromium 6 in drinking water. In light of Administrator Jackson's testimony, it is unclear if S. 79 is still necessary or if the author would still pursue the legislation.

Impacts to Metropolitan

A groundwater plume containing high concentrations of chromium 6 is located near a Pacific Gas and Electric (PG&E) gas compressor station near Needles, California, approximately 500 yards from the Colorado River. Chromium 6 levels in Colorado River water supplies are typically non-detect (i.e., less than 0.03 ppb) with some values at 0.03 to 0.04 ppb. There has been no evidence, however, that the plume has led to increased levels of chromium 6 in Colorado River water. Additionally, PG&E is taking responsibility to clean up the plume. Monitoring conducted in 2010 indicated that chromium 6 in State Water Project supplies has ranged from non-detect to 0.44 ppb and that chromium 6 levels in Metropolitan's treated water ranged from non-detect to 0.45 ppb.

Staff Recommendations

Metropolitan staff recommends a support if amended position on S. 79 (Boxer). S. 79 should be amended to exclude any reference to a specific date for establishing a national drinking water regulation for chromium 6. Metropolitan staff opposes legislating numeric standards or date-specific regulations because both of these alternatives contradict the existing regulatory framework of the SDWA. This well-established framework requires evaluating health risk using peer-reviewed science, monitoring source water supplies to estimate exposure, establishing analytical methods, defining best-available treatment technologies, and—most importantly—performing an economic analysis to determine whether the benefits of a new standard justify the costs. When numeric standards or regulatory timelines are prescribed in additional legislation, the SDWA framework may be circumvented.

Drinking water trade associations, such as the American Water Works Association (AWWA), the Association of California Water Agencies (ACWA), and the Association of Metropolitan Water Agencies, have historically opposed efforts to legislate arbitrary deadlines for setting drinking water standards. AWWA has expressed opposition to S. 79, while ACWA has expressed opposition unless amended.

Policy

Source Water Protection, M.I. 39929 - November 10, 1992; Added to by M.I. 40878 - June 14, 1994; Added to by M.I. 41222 - January 10, 1995, Added to by M.I. 42820 - February 10, 1998

Drinking Water Quality, M.I. 46191 - April 12, 2005

California Environmental Quality Act (CEQA)

CEQA determination for Options #1 and #2:

The proposed action is not defined as a project under CEQA because it involves continuing administrative activities, such as general policy and procedure making (Section 15378(b)(2) of the State CEQA Guidelines). In addition, where it can be seen with certainty that there is no possibility that the proposed action in question may have a significant effect on the environment, the proposed action is not subject to CEQA (Section 15061(b)(3) of the State CEQA Guidelines).

The CEQA determination is: Determine that the proposed action is not subject to CEQA pursuant to Sections 15378(b)(2) and 15061(b)(3) of the State CEQA Guidelines.

CEQA determination for Option #3:

None required

Board Options

Option #1

Adopt the CEQA determination and authorize the General Manager to express Metropolitan’s support for S. 79, if amended.

Fiscal Impact: None

Business Analysis: Protects Metropolitan from costs associated with an unwarranted standard setting process

Option #2

Adopt the CEQA determination and authorize the General Manager to express Metropolitan’s support for S. 79.

Fiscal Impact: None

Business Analysis: Protects Metropolitan from costs associated with an unwarranted standard setting process

Option #3



Take no position on S. 79 at this time.

Fiscal Impact: None

Business Analysis: Potential for costs due to regulating constituents without thorough scientific review

Staff Recommendation

Option #1

 Linda Waade Deputy General Manager, External Affairs	3/1/2011 Date
 Jeffrey Kightlinger General Manager	3/2/2011 Date

Attachment 1 – S. 79 (Boxer, D-CA)

II

112TH CONGRESS
1ST SESSION

S. 79

To amend the Safe Drinking Water Act to protect the health of vulnerable individuals, including pregnant women, infants, and children, by requiring a health advisory and drinking water standard for hexavalent chromium.

IN THE SENATE OF THE UNITED STATES

JANUARY 25 (legislative day, JANUARY 5), 2011

Mrs. BOXER (for herself and Mrs. FEINSTEIN) introduced the following bill; which was read twice and referred to the Committee on Environment and Public Works

A BILL

To amend the Safe Drinking Water Act to protect the health of vulnerable individuals, including pregnant women, infants, and children, by requiring a health advisory and drinking water standard for hexavalent chromium.

1 SECTION 1. SHORT TITLE.

2 This Act may be cited as the “Protecting Pregnant
3 Women and Children From Hexavalent Chromium Act of
4 2011”.

5 SEC. 2. FINDINGS AND PURPOSE.

6 (a) FINDINGS.—Congress finds that—

2

1 (1) according to the National Toxicology Pro-
2 gram of the Department of Health and Human
3 Services—

4 (A) chromium is a metal that can take var-
5 ious forms, including “hexavalent chromium”,
6 which is created when the metal is heated;

7 (B) hexavalent chromium, also called
8 “Chrome 6”, is widely used in metal fabrica-
9 tion, chrome finishing and plating, stainless-
10 steel production, leather tanning, and wood pre-
11 servatives to reduce corrosion and for other
12 purposes; and

13 (C) determining the full extent of human
14 exposures to Chrome 6 can be difficult to quan-
15 tify because exposure studies do not normally
16 identify the specific form of chromium, but peo-
17 ple can come into contact with Chrome 6
18 through breathing in air, drinking water, or
19 touching products that contain the metal;

20 (2) according to the Environmental Protection
21 Agency—

22 (A) in 2009, facilities in the United States
23 released almost 8,000,000 pounds of chromium
24 into the air, water, and land; and

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1 (B) in 2010, chromium was a primary con-
2 taminant in more than 500 of the most heavily
3 contaminated sites on the National Priorities
4 List developed by the President in accordance
5 with section 105(a)(8)(B) of the Comprehensive
6 Environmental Response, Compensation, and
7 Liability Act of 1980 (42 U.S.C.
8 9605(a)(8)(B)), which means that more than
9 40 percent of those most heavily contaminated
10 sites in the United States are contaminated
11 with chromium;

12 (3) in 1990, the International Agency for the
13 Research on Cancer declared that Chrome 6 was
14 known to cause cancer in people when inhaled;

15 (4) as early as 1998, the Environmental Protec-
16 tion Agency also concluded that Chrome 6 could
17 cause cancer when inhaled;

18 (5) in 2008, the National Toxicology Program
19 of the Department of Health and Human Services
20 concluded that Chrome 6 in drinking water shows
21 “clear evidence” of cancer-causing activity in labora-
22 tory animals;

23 (6) a 2010 draft toxicological review of Chrome
24 6 by the Environmental Protection Agency found
25 that the contaminant in tap water is “likely to be

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1 carcinogenic to humans” and cited significant cancer
2 concerns and other health effects from animal stud-
3 ies, including anemia and damage to the gastro-
4 intestinal tract, lymph nodes, and liver;

5 (7) nearly 2 decades before the date of enact-
6 ment of this Act, in 1991, the Environmental Pro-
7 tection Agency established a tap water standard for
8 total chromium at 100 parts per billion;

9 (8) in 2009, the State of California proposed a
10 public health goal of 0.06 parts per billion for
11 Chrome 6 in drinking water, which is almost 1,700
12 times lower than the standard for total chromium
13 established by the Environmental Protection Agency;

14 (9) in 2010, the State of California proposed a
15 public health goal of 0.02 parts per billion for
16 Chrome 6 in drinking water and stated that “new
17 research has documented that young children and
18 other sensitive populations are more susceptible than
19 the general population to health risks from exposure
20 to carcinogens”;

21 (10) a December 2010 report from a nonprofit
22 organization, which represents a snap-shot in time
23 for water quality, tested tap water in 35 cities across
24 the United States for chromium and Chrome 6 and
25 found that—

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1 (A) the majority of chromium in drinking
2 water was Chrome 6; and

3 (B) tap water in 31 cities across the coun-
4 try contained Chrome 6, of which the 10 cities
5 with the highest levels were—

6 (i) Norman, Oklahoma;

7 (ii) Honolulu, Hawaii;

8 (iii) Riverside, California;

9 (iv) Madison, Wisconsin;

10 (v) San Jose, California;

11 (vi) Tallahassee, Florida;

12 (vii) Omaha, Nebraska;

13 (viii) Albuquerque, New Mexico;

14 (ix) Pittsburgh, Pennsylvania; and

15 (x) Bend, Oregon; and

16 (11) tap water from 25 cities had levels of
17 Chrome 6 above the 2009 proposed public health
18 goal of the State of California.

19 (b) PURPOSE.—The purpose of this Act is to require
20 the Administrator of the Environmental Protection Agen-
21 cy to establish—

22 (1) by not later than 90 days after the date of
23 enactment of this Act, a health advisory for
24 hexavalent chromium in drinking water that—

6

1 (A) is fully protective of, and considers,
2 the body weight and exposure patterns of preg-
3 nant women, infants, and children;

4 (B) provides an adequate margin of safety;
5 and

6 (C) takes into account all routes of expo-
7 sure to hexavalent chromium; and

8 (2) by not later than 1 year after the date of
9 enactment of this Act, a national primary drinking
10 water regulation for hexavalent chromium that fully
11 protects pregnant women, infants, and children, tak-
12 ing into consideration body weight, exposure pat-
13 terns, and all routes of exposure to hexavalent chro-
14 mium.

15 **SEC. 3. HEALTH ADVISORY AND NATIONAL PRIMARY**
16 **DRINKING WATER REGULATION FOR**
17 **HEXAVALENT CHROMIUM.**

18 Section 1412(b)(12) of the Safe Drinking Water Act
19 (42 U.S.C. 300g-1(b)(12)) is amended by adding at the
20 end the following:

21 “(C) HEXAVALENT CHROMIUM.—

22 “(i) HEALTH ADVISORY.—Notwith-
23 standing any other provision of this sec-
24 tion, not later than 90 days after the date
25 of enactment of this subparagraph, the Ad-

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1 administrator shall publish a health advisory
2 for hexavalent chromium that is fully pro-
3 tective, with an adequate margin of safety,
4 of the health of vulnerable individuals (in-
5 cluding pregnant women, infants, and chil-
6 dren), taking into consideration body
7 weight, exposure patterns, and all routes of
8 exposure.

9 “(ii) PROPOSED REGULATIONS.—Not-
10 withstanding any other provision of this
11 section, the Administrator shall propose
12 (not later than 180 days after the date of
13 enactment of this subparagraph) and shall
14 finalize (not later than 1 year after the
15 date of enactment of this subparagraph) a
16 national primary drinking water regulation
17 for hexavalent chromium—

18 “(I) that based on the factors in
19 clause (i) and other relevant data, is
20 protective, with an adequate margin
21 of safety, of vulnerable individuals (in-
22 cluding pregnant women, infants, and
23 children); and

24 “(II) the maximum contaminant
25 level of which is as close to the max-

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1 imum contaminant level goal for
2 hexavalent chromium, and as protec-
3 tive of vulnerable individuals, as is
4 feasible.”.

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