110TH CONGRESS
1ST SESSION

S. 1911

To amend the Safe Drinking Water Act to protect the health of susceptible populations, including pregnant women, infants, and children, by requiring a health advisory, drinking water standard, and reference concentration for trichloroethylene vapor intrusion, and for other purposes.

IN THE SENATE OF THE UNITED STATES

AUGUST 1, 2007

Mrs. CLINTON (for herself, Mrs. DOLE, Mrs. BOXER, Mr. LAUTENBERG, and Mr. KERRY) introduced the following bill; which was read twice and referred to the Committee on Environment and Public Works

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A BILL

To amend the Safe Drinking Water Act to protect the health of susceptible populations, including pregnant women, infants, and children, by requiring a health advisory, drinking water standard, and reference concentration for trichloroethylene vapor intrusion, and for other purposes.

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled,

SECTION 1. SHORT TITLE; TABLE OF CONTENTS.

(a) SHORT TITLE.—This Act may be cited as the ''Toxic Chemical Exposure Reduction Act of 2007'' or the ''TCE Reduction Act of 2007''.

(b) TABLE OF CONTENTS.—The table of contents of this Act is as follows:

SEC. 2. FINDINGS AND PURPOSE.

(a) FINDINGS.—Congress finds that—

(1) trichloroethylene is a metal degreaser and an ingredient in adhesives and paint removers;

(2)(A) waste from the use and improper disposal of chemicals containing trichloroethylene is widespread in soil and water;

(B) more than 1,000 waste sites in the United States are contaminated with trichloroethylene;

(C) it is well documented that individuals in many communities are exposed to trichloroethylene and experience associated health risks;

(D) certain human subpopulations might be at increased risk to trichloroethylene exposure because of age, genetic polymorphisms, or preexisting diseases; and

(E) in utero exposure to trichloroethylene has been associated with birth defects and childhood diseases, including cancer;

(3) according to the report of the National Academy of Sciences entitled ''Assessing the Human Health Risks of Trichloroethylene: Key Scientific Issues''—

(A) acute exposures to trichloroethylene occurring as a result of occupational industrial accidents are associated with nerve damage and residual neurological deficits, including memory loss;

(B) high-concentration exposure to air contaminated with trichloroethylene—

(i) causes nervous system damage;

(ii) has been associated with generalized skin eruptions and other more severe skin and mucus membrane conditions, such as Stevens-Johnson syndrome; and

(iii) can cause liver dysfunction, leading to jaundice, hepatomegaly, and hepatic encephalopathy;

(C) trichloroethylene in drinking water can alter the therapeutic action of medications, including anticoagulants and barbiturates;

(D) evidence regarding carcinogenic risk and other health hazards from exposure to trichloroethylene has strengthened since 2001, and there is strong evidence that exposure to trichloroethylene in a dose-dependent manner is associated in humans with increased rates of—

(i) kidney cancer; and

(ii) leukemia;

(E) exposure to mixtures of volatile organic compound contaminants in groundwater, in combination with trichloroethylene, can accelerate tumor growth in humans; and

(F) evidence from animal-related and epidemiological studies suggests that several reproductive and developmental toxicity end-points may be associated with trichloroethylene exposure, including—

(i) infertility in males and females;

(ii) impaired intrauterine growth and development; and

(iii) cardiac teratogenesis;

(4) the report referred to in paragraph (3) recommended the use of currently available data to finalize a risk assessment to ensure that risk management decisions can be made expeditiously;

(5)(A) exposures to volatile organic compound vapors from migration to indoor air have become a concern at sites throughout the United States, including many Superfund sites under the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (42 U.S.C. 9601 et seq.);

(B) potential routes of exposure to trichloroethylene exist with respect to susceptible populations, even at sites at which no current drinking water pathways of exposure are known to exist; and

(C) in September 2002, the Office of Solid Waste and Emergency Response of the Environmental Protection Agency released an external review draft entitled ''Evaluating the Vapor Intrusion to Indoor Air Pathway from Groundwater and Soils'' that focuses specifically on those exposures;

(6)(A) in 2006, the United States Geological Survey published a report entitled ''Volatile Organic Compounds in the Nation's Ground Water and Drinking-Water Supply Wells'';

(B) as of the date of enactment of this Act, the long-term investigation by the national water-quality assessment program of the United States Geological Survey provides the most comprehensive national analysis of the occurrence of volatile organic com-

pounds in ground water, based on results of sampling between 1985 and 2002; and

(C) among the major findings developed under the program described in subparagraph (B) are—

(i) that volatile organic compounds were detected in most aquifers throughout the United States and were not limited to few specific aquifers or regions;

(ii) the most frequently detected volatile organic compounds are chloroform, the solvents perchloroethylene and trichloroethylene, and the gasoline oxygenate methyl tertiary butyl ether;

(iii) 5 of the 29 regulated volatile organic compounds had 1 or more concentrations greater than applicable maximum contaminant levels that generally occurred in highly populated areas of the United States, including 1,1-DCE, methylene chloride, perchloroethylene, trichloroethylene, and vinyl chloride;

(iv) the solvents perchloroethylene and trichloroethylene comprised approximately ¾ of the concentrations of potential concern;

(v) trichloroethylene was detected at levels ranging from 0.002 to over 110 micrograms per liter; and

(vi) as of the date of enactment of this Act, the maximum contaminant level for trichloroethylene is 5 micrograms per liter; and

(7) the document of the Environmental Protection Agency entitled ''Draft Trichloroethylene Health Risk Assessment: Synthesis and Characterization'' and dated 2001—

(A) stated that the Agency for Toxic Substances and Disease Registry—

(i) reports that trichloroethylene is the most frequently reported organic contaminant in groundwater; and

(ii) has estimated that between 9 and 34 percent of drinking water supply sources have some trichloroethylene contamination; and

(B) recommended extrapolation to lower doses for oral exposure of trichloroethylene in drinking water, resulting in a maximum contaminant level of 1 microgram per liter.

(b) PURPOSE.—The purpose of this Act is to require the Administrator of the Environmental Protection Agency—

(1) to establish, by not later than 180 days after the date of enactment of this Act—

(A) a health advisory for trichloroethylene in drinking water that fully protects susceptible populations (including pregnant women, infants, and children), taking into consideration body weight, exposure patterns, and all routes of exposure to trichloroethylene; and

(B) an integrated risk information system reference concentration of trichloroethylene that is protective of the susceptible populations identified in subparagraph (A) from vapor intrusion, taking into consideration the factors described in that subparagraph; and

(2) to promptly establish a national primary drinking water regulation for trichloroethylene that fully protects susceptible populations (including pregnant women, infants, and children), taking into consideration body weight, exposure patterns, and all routes of exposure to trichloroethylene.

TITLE I—HEALTH ADVISORY AND NATIONAL PRIMARY DRINKING WATER REGULATION FOR TRICHLOROETHYLENE

SEC. 101. HEALTH ADVISORY AND NATIONAL PRIMARY DRINKING WATER REGULATION FOR TRICHLOROETHYLENE.

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

''(C) TRICHLOROETHYLENE.—

''(i) HEALTH ADVISORY.—Notwithstanding any other provision of this section, not later than 180 days after the date of enactment of this subparagraph, the Administrator shall publish a health advisory for trichloroethylene that fully protects, with an adequate margin of safety, the health of susceptible populations (including pregnant women, infants, and children), taking into consideration body weight, exposure patterns, and all routes of exposure.

''(ii) NATIONAL PRIMARY DRINKING WATER REGULATION.—

"(I) PROPOSED REGULATION.—Notwithstanding any other provision of this section, not later than 1 year after the date of enactment of this subparagraph, the Administrator shall propose a national primary drinking water regulation for trichloroethylene—

"(aa) that is protective of susceptible populations (including pregnant women, infants, and children); and

"(bb) the maximum contaminant level of which is as close to the maximum contaminant level goal for trichloroethylene, and as protective of those susceptible populations, as is feasible.

"(II) FINAL REGULATION.—Notwithstanding any other provision of this section, not later than 18 months after the date of enactment of this subparagraph, after providing notice and an opportunity for public com-

ment, the Administrator shall promulgate a final national primary drinking water regulation (including a provision for monitoring under subclause (III)) for trichloroethylene that is consistent with subclause (I).

"(III) MONITORING REQUIREMENTS.—

"(aa) DEFINITION OF QUALIFYING SYSTEM.—In this subclause, the term 'qualifying system' means a public water system that has been granted a monitoring waiver under section 141.24 of volume 40, Code of Federal Regulations (or successor regulations).

"(bb) REQUIREMENTS.—The regulation under subclause (II) shall include a provision relating to monitoring that requires—

"(AA) that the Administrator shall revise monitoring requirements for all

systems to ensure detection of potential trichloroethylene contamination and full compliance with the revised national primary drinking water regulation;

''(BB) for each qualifying system located in the vicinity of a subsurface migration of a known volatile organic compound contamination site, that the State with primary enforcement responsibility shall review and submit the waiver of the qualifying system for review by the Administrator; and

''(CC) each qualifying system potentially located in the path of subsurface migration of a known volatile organic compound be subject to minimum regular monitoring for trichloroethylene, as the Administrator and

primary State officials determine to be appropriate.

"(iii) CONSUMER CONFIDENCE REPORTS.—

"(I) IN GENERAL.—Subject to subclause (II), simultaneously with the promulgation of the final regulation under clause (ii)(II), each consumer confidence report issued under section 1414(c)(4) shall disclose the presence of any trichloroethylene in drinking water, and the potential health risks to susceptible populations (including pregnant women, infants, and children) from exposure to trichloroethylene in drinking water, consistent with regulations promulgated by the Administrator.

"(II) EXCEPTION.—Notwithstanding subclause (I), trichloroethylene shall not be considered to be 1 of the 3 regulated contaminants described in the matter following clause (vi) of section 1414(c)(4)(B).".

TITLE II—REDUCING DANGEROUS VAPOR INTRUSION FROM CONTAMINATED GROUNDWATER AND SOILS

SEC. 201. HEALTH ADVISORY AND REFERENCE CONCENTRATION FOR TRICHLOROETHYLENE.

(a) HEALTH ADVISORY.—Not later than 1 year after the date of enactment of this Act, the Administrator of the Environmental Protection Agency (referred to in this section as the ''Administrator'') shall publish a health advisory for trichloroethylene that fully protects from vapor intrusion, with an adequate margin of safety, the health of susceptible populations (including pregnant women, infants, and children), taking into consideration body weight, exposure patterns, and all routes of exposure.

(b) ESTABLISHMENT AND APPLICATION OF REFERENCE CONCENTRATION.—

(1) ESTABLISHMENT OF REFERENCE CONCENTRATION.—Not later than 18 months after the date of enactment of this Act, the Administrator shall establish an integrated risk information system reference concentration of trichloroethylene vapor that is protective of susceptible populations (including pregnant women, infants, and children), con-

sistent with the health advisory described in subsection (a).

(2) REMEDIAL ACTION.—Not later than 2 years after the date of enactment of this Act, the Administrator shall apply the reference concentration established under paragraph (1) with respect to any potential vapor intrusion-related investigations or actions to protect public health with respect to trichloroethylene exposure carried out pursuant to the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (42 U.S.C. 9601 et seq.), the Safe Drinking Water Act (42 U.S.C. 300f et seq.), or the Solid Waste Disposal Act (42 U.S.C. 6901 et seq.).

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