110TH CONGRESS
1ST SESSION

S. 843

To provide for the establishment of a national mercury monitoring program.

IN THE SENATE OF THE UNITED STATES

MARCH 12, 2007

Ms. COLLINS (for herself, Mr. LIEBERMAN, and Mrs. CLINTON) 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 provide for the establishment of a national mercury monitoring program.

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

SECTION 1. SHORT TITLE.

This Act may be cited as the ''Comprehensive National Mercury Monitoring Act''.

SEC. 2. FINDINGS.

Congress finds that—

(1) mercury is a potent neurotoxin of significant ecological and public health concern;

(2) exposure to mercury occurs largely by consumption of contaminated fish, and children and women of childbearing age who consume large quantities of fish are at high risk of suffering adverse effects;

(3) it is estimated that more than 630,000 children born each year in the United States are exposed to elevated methyl mercury in the womb and are at risk of impaired neurological development;

(4) 8 percent of women in the United States of childbearing age have blood mercury levels in excess of values determined to be safe by the Environmental Protection Agency;

(5) as of 2004, fish consumption advisories due to mercury contamination have been issued for 44 States, including 21 statewide advisories for freshwater and 12 statewide advisories for coastal water;

(6) those advisories represent more than 52,000 square kilometers of lakes and 1,230,000 kilometers of rivers;

(7) fish and shellfish are an important source of dietary protein, and a healthy fishing resource is important to the economy of the United States;

(8) the extent of fish consumption advisories underscores the extensive human and ecological health risk posed by mercury pollution;

(9) the interaction of mercury with the environment and bioaccumulation in biota are not fully understood;

(10) computer models and other assessment tools predict varying effectiveness in reducing mercury concentrations in fish, and no broad-scale data sets exist to test model predictions;

(11) in September 2003, the Society of Environmental Toxicology and Chemistry convened a workshop of 32 mercury scientists to develop a system to measure and document changes resulting from reductions in mercury emissions in the United States;

(12) on January 1, 2005, an article entitled ''Monitoring the Response to Changing Mercury Deposition''—

(A) was published in the periodical Environmental Science and Technology; and

(B) proposed a ''holistic, multimedia, long-term mercury monitoring program'';

(13) many regulations limiting mercury emissions have taken effect or will soon be promulgated,

but scientists are not adequately measuring the environmental benefits of reduced mercury emissions;

(14) on May 18, 2005, the Administrator of the Environmental Protection Agency, using results generated by a computer model that were not peer reviewed or verified by actual measurements, finalized the Clean Air Mercury Rule (70 Fed. Reg. 28606 (May 18, 2005));

(15) as governments advance proposals for the regulation of mercury and mercury emissions, the governments should document whether regulations already or soon to be in effect achieve the desired results;

(16) on May 15, 2006, the Office of Inspector General of the Environmental Protection Agency issued a report entitled, ''Monitoring Needed to Assess Impact of EPA's Clean Air Mercury Rule (CAMR) on Potential Hotspots'', and numbered 2006–P–0025, that states, in part—

(A) ''Without field data from an improved monitoring network, EPA's ability to advance mercury science will be limited and 'utility-attributable' hotspots that pose health risks may occur and go undetected''; and

(B) ''We recommend that EPA develop and implement a mercury monitoring plan to (1) assess the impact of CAMR, if adopted, on mercury deposition and fish tissue; and (2) evaluate and refine mercury estimation tools and models'';

(17) on January 9, 2007, numerous individuals published a paper in the journal entitled ''BioScience'' that identified the location of biological mercury hotspots in the northeastern region of the United States and the southeastern region of Canada, including—

(A) David Evers and Wing Goodale of the BioDiversity Research Institute in Gorham, Maine;

(B) Charles Driscoll of Syracuse University;

(C) Kathleen Fallon Lambert of the Hubbard Brook Research Foundation in Hanover, New Hampshire;

(D) Neil Kamman of the Vermont Department of Environmental Conservation; and

(E) other concerned individuals;

(18) on January 9, 2007, Charles Driscoll and other concerned individuals published a paper in the

journal entitled ''BioScience'' that established a link between—

(A) mercury contamination in forest and freshwater ecosystems located in the northeastern region of the United States; and

(B) mercury emissions generated by electric utilities, incinerators, and industrial processes; and

(19) those papers published in the journal entitled ''BioScience''—

(A) demonstrated the importance of the use of mercury measurements in addition to modeling results; and

(B) indicated the need for a comprehensive nationwide mercury monitoring program.

SEC. 3. DEFINITIONS.

In this Act:

(1) ADMINISTRATOR.—The term ''Administrator'' means the Administrator of the Environmental Protection Agency.

(2) ADVISORY COMMITTEE.—The term ''Advisory Committee'' means the Mercury Monitoring Advisory Committee established by section 5(a).

(3) ECOREGION.—The term ''ecoregion'' means a large area of land and water that contains a geo-

graphically distinct assemblage of natural communities, including similar land forms, climate, ecological processes, and vegetation.

(4) MERCURY EXPORT.—The term ''mercury export'' means mercury flux from a watershed to the corresponding water body, or from 1 water body to another (e.g. a lake to a river), generally expressed as mass per unit time.

(5) MERCURY FLUX.—The term ''mercury flux'' means the rate of transfer of mercury between ecosystem components (e.g. between water and air), or between portions of ecosystem components, expressed in terms of mass per unit time or mass per unit area per time.

(6) SURFACE SEDIMENT.—The term ''surface sediment'' means sediment in the uppermost 2 centimeters of a lakebed or riverbed.

SEC. 4. MONITORING PROGRAM.

(a) ESTABLISHMENT.—

(1) IN GENERAL.—The Administrator, in consultation with the United States Fish and Wildlife Service, the United States Geological Survey, the Forest Service, the National Park Service, and the National Oceanic and Atmospheric Administration,

shall establish a national-scale mercury monitoring program.

(2) MONITORING SITES.—In carrying out paragraph (1), not later than 1 year after the date of enactment of this Act, the Administrator shall select multiple monitoring sites in ecoregions of the United States.

(b) AIR AND WATERSHEDS.—The program under this section shall monitor long-term changes in mercury levels in the air and watersheds, including—

(1) at such locations or portions of locations selected under subsection (a)(2) as the Administrator determines to be appropriate, the measurement and recording of—

(A) wet mercury deposition;

(B) dry deposition of mercury; and

(C) mercury flux and mercury export; and

(2) at all locations selected under subsection (a)(2), the measurement and recording of the level of mercury reemitted from aquatic and terrestrial environments into the atmosphere.

(c) WATER AND SOIL CHEMISTRY.—The program under this section shall monitor mercury levels in water and soil chemistry, including—

(1) at such locations or portions of locations selected under subsection (a)(2) as the Administrator determines to be appropriate—

(A) extraction and analysis of sediment cores; and

(B) measurement and recording of total mercury concentrations and methyl mercury concentrations throughout the water column; and

(2) at all locations selected under subsection (a)(2)—

(A) measurement and recording of total mercury concentration, methyl mercury concentration, and percent methyl mercury in surface sediments; and

(B) measurement and recording of total mercury concentration and methyl mercury concentration in surface water.

(d) AQUATIC PLANTS AND ANIMALS.—The program under this section shall monitor mercury levels in plants and animals, including—

(1) at all locations selected under subsection (a)(2), measurement and recording of—

(A) methyl mercury levels in yearling fish;

(B) mercury levels, and other scientific data relevant to assessment of the health of the fish population, in commercially or recreationally important fish; and

(C) mercury levels in the appropriate tissue in reptiles, amphibians, birds, and mammals; and

(2) at such locations or portions of locations selected under subsection (a)(2) as the Administrator determines to be appropriate, measurement and recording of mercury levels in phytoplankton, algae, zooplankton, and benthic invertebrates.

SEC. 5. ADVISORY COMMITTEE.

(a) ESTABLISHMENT.—There is established a scientific advisory committee, to be known as the ''Mercury Monitoring Advisory Committee'', to advise the Administrator with respect to the establishment and operation (including the location of sampling sites) of the national mercury monitoring program under this Act.

(b) MEMBERSHIP.—The Advisory Committee shall consist of at least 13 scientists who are not employees of the Federal Government, including—

(1) 3 scientists appointed by the Administrator;

(2) 2 scientists appointed by the Director of the United States Fish and Wildlife Service;

(3) 2 scientists appointed by the Director of the National Park Service;

(4) 2 scientists appointed by the Director of the Forest Service;

(5) 2 scientists appointed by the Director of the United States Geological Survey; and

(6) 2 scientists appointed by the Administrator of the National Oceanic and Atmospheric Administration.

SEC. 6. REPORTS AND PUBLIC DISCLOSURE.

(a) REPORTS.—

(1) BIENNIAL REPORT.—Not later than 2 years after the date of enactment of this Act, and every 2 years thereafter, the Administrator shall submit to Congress a report on the program under this Act.

(2) QUADRENNIAL ASSESSMENT.—In the second biennial report submitted under paragraph (1), and in the biennial report submitted every 4 years thereafter, the Administrator shall include an assessment of the reduction in mercury deposition rates that would be required to be achieved in order to prevent adverse ecological effects.

(b) AVAILABILITY OF DATA.—The Administrator shall make all data obtained pursuant to this Act available to the public.

SEC. 7. AUTHORIZATION OF APPROPRIATIONS.

There are authorized to be appropriated to carry out this Act—

(1) for fiscal year 2008—

(A) to the Environmental Protection Agency $9,000,000;

(B) to the United States Geological Survey $4,500,000;

(C) to the United States Fish and Wildlife Service $4,500,000; and

(D) to the National Oceanic and Atmospheric Administration $1,000,000;

(2) for fiscal year 2009—

(A) to the Environmental Protection Agency $6,000,000;

(B) to the United States Geological Survey $3,000,000;

(C) to the United States Fish and Wildlife Service $3,000,000; and

(D) to the National Oceanic and Atmospheric Administration $1,000,000;

(3) for fiscal year 2010—

(A) to the Environmental Protection Agency $6,500,000;

(B) to the United States Geological Survey $3,250,000;

(C) to the United States Fish and Wildlife Service $3,250,000; and

(D) to the National Oceanic and Atmospheric Administration $1,000,000; and

(4) such sums as are necessary for each of fiscal years 2011 through 2013 to—

(A) the Environmental Protection Agency;

(B) the United States Geological Survey;

(C) the United States Fish and Wildlife Service; and

(D) the National Oceanic and Atmospheric Administration.

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