106TH CONGRESS 1ST SESSION

# S. 673

To amend the Clean Air Act to establish requirements concerning the operation of fossil fuel-fired electric utility steam generating units, commercial and industrial boiler units, solid waste incineration units, medical waste incinerators, hazardous waste combustors, chlor-alkali plants, and Portland cement plants to reduce emissions of mercury to the environment, and for other purposes.

### IN THE SENATE OF THE UNITED STATES

March 19, 1999

Mr. Leahy (for himself and Ms. Snowe) introduced the following bill; which was read twice and referred to the Committee on Environment and Public Works

## A BILL

To amend the Clean Air Act to establish requirements concerning the operation of fossil fuel-fired electric utility steam generating units, commercial and industrial boiler units, solid waste incineration units, medical waste incinerators, hazardous waste combustors, chlor-alkali plants, and Portland cement plants to reduce emissions of mercury to the environment, and for other purposes.

- 1 Be it enacted by the Senate and House of Representa-
- 2 tives of the United States of America in Congress assembled,

#### 1 SECTION 1. SHORT TITLE; TABLE OF CONTENTS.

- 2 (a) SHORT TITLE.—This Act may be cited as the
- 3 "Omnibus Mercury Emissions Reduction Act of 1999".
- 4 (b) Table of Contents of
- 5 this Act is as follows:
  - Sec. 1. Short title; table of contents.
  - Sec. 2. Findings and purposes.
  - Sec. 3. Mercury emission standards for fossil fuel-fired electric utility steam generating units.
  - Sec. 4. Mercury emission standards for coal- and oil-fired commercial and industrial boiler units.
  - Sec. 5. Reduction of mercury emissions from solid waste incineration units.
  - Sec. 6. Mercury emission standards for chlor-alkali plants.
  - Sec. 7. Mercury emission standards for Portland cement plants.
  - Sec. 8. Report on implementation of mercury emission standards for medical waste incinerators.
  - Sec. 9. Report on implementation of mercury emission standards for hazardous waste combustors.
  - Sec. 10. Report on use of mercury and mercury compounds by Department of Defense.
  - Sec. 11. International activities.
  - Sec. 12. Mercury research.

#### 6 SEC. 2. FINDINGS AND PURPOSES.

- 7 (a) FINDINGS.—Congress finds that—
- 8 (1) on the basis of available scientific and med-
- 9 ical evidence, exposure to mercury and mercury com-
- pounds (collectively referred to in this Act as "mer-
- cury') is of concern to human health and the envi-
- 12 ronment;
- 13 (2) pregnant women and their fetuses, women
- of childbearing age, children, and individuals who
- subsist primarily on fish, are most at risk for mer-
- 16 cury-related health impacts such as neurotoxicity;

1	(3) although exposure to mercury occurs most
2	frequently through consumption of mercury-contami-
3	nated fish, such exposure can also occur through—
4	(A) ingestion of drinking water, and food
5	sources other than fish, that are contaminated
6	with methyl mercury;
7	(B) dermal uptake through soil and water;
8	and
9	(C) inhalation of contaminated air;
10	(4) on the basis of the report entitled "Mercury
11	Study Report to Congress" and submitted by the
12	Environmental Protection Agency under section
13	112(n)(1)(B) of the Clean Air Act (42 U.S.C.
14	7412(n)(1)(B)), the major sources of mercury emis-
15	sions in the United States are, in descending order
16	of volume of emissions—
17	(A) fossil fuel-fired electric utility steam
18	generating units;
19	(B) solid waste incineration units;
20	(C) coal- and oil-fired commercial and in-
21	dustrial boiler units;
22	(D) medical waste incinerators;
23	(E) hazardous waste combustors;
24	(F) chlor-alkali plants; and
25	(G) Portland cement plants;

1	(5)(A) the Environmental Protection Agency re-
2	port described in paragraph (4), in conjunction with
3	available scientific knowledge, supports a plausible
4	link between mercury emissions from anthropogenic
5	combustion and industrial sources and mercury con-
6	centrations in air, soil, water, and sediments;
7	(B) the Environmental Protection Agency has
8	concluded that the geographical areas that have the
9	highest annual rate of deposition of mercury in all
10	forms are—
11	(i) the southern Great Lakes and Ohio
12	River Valley;
13	(ii) the Northeast and southern New Eng-
14	land; and
15	(iii) scattered areas in the South, with the
16	most elevated deposition occurring in the Miami
17	and Tampa areas and 2 areas in northeast
18	Texas; and
19	(C) analysis conducted before the date of the
20	Environmental Protection Agency report dem-
21	onstrates that mercury is being deposited into the
22	waters of Canada;
23	(6)(A) the Environmental Protection Agency re-
24	port described in paragraph (4) supports a plausible
25	link between mercury emissions from anthropogenic

- 1 combustion and industrial sources and concentra-2 tions of methyl mercury in freshwater fish;
  - (B) in 1997, 39 States issued health advisories that warned the public about consuming mercury-tainted fish, as compared to 27 States that issued such advisories in 1993;
    - (C) the total number of mercury advisories increased from 899 in 1993 to 1,675 in 1996, an increase of 86 percent; and
    - (D) the United States and Canada have agreed on a goal of virtual elimination of mercury from the transboundary waters of the 2 countries;
    - (7) the presence of mercury in consumer products is of concern in light of the health consequences associated with exposure to mercury;
    - (8) the presence of mercury in certain batteries and fluorescent light bulbs is of special concern, particularly in light of the substantial quantities of used batteries and fluorescent light bulbs that are discarded annually in the solid waste stream and the potential for environmental and health consequences associated with land disposal, composting, or incineration of the batteries and light bulbs; and
    - (9) a comprehensive study of the use of mercury by the Department of Defense would signifi-

cantly further the goal of reducing mercury pollution.

#### (b) Purposes.—The purposes of this Act are—

- (1) to greatly reduce the quantity of mercury entering the environment by controlling air emissions of mercury from fossil fuel-fired electric utility steam generating units, coal- and oil-fired commercial and industrial boiler units, solid waste incineration units, medical waste incinerators, hazardous waste combustors, chlor-alkali plants, and Portland cement plants;
- (2) to reduce the quantity of mercury entering solid waste landfills, incinerators, and composting facilities by promoting recycling or proper disposal of used batteries, fluorescent light bulbs, and other products containing mercury;
- (3) to increase the understanding of the volume and sources of mercury emissions throughout North America;
- (4) to promote efficient and cost-effective methods of controlling mercury emissions;
- (5) to promote permanent, safe, and stable disposal of mercury recovered through coal cleaning, flue gas control systems, and other methods of mercury pollution control;

1	(6) to reduce the use of mercury in cases in
2	which technologically and economically feasible alter-
3	natives are available;
4	(7) to educate the public concerning the collec-
5	tion, recycling, and proper disposal of mercury-con-
6	taining products;
7	(8) to increase public knowledge of the sources
8	of mercury exposure and the threat to public health,
9	particularly the threat to the health of pregnant
10	women and their fetuses, women of childbearing age,
11	children, and individuals who subsist primarily on
12	fish;
13	(9) to significantly decrease the threat to
14	human health and the environment posed by mer-
15	cury; and
16	(10) to ensure that the health of sensitive popu-
17	lations, whether in the United States, Canada, or
18	Mexico, is protected, with an adequate margin of
19	safety, against adverse health effects caused by mer-
20	cury.
21	SEC. 3. MERCURY EMISSION STANDARDS FOR FOSSIL
22	FUEL-FIRED ELECTRIC UTILITY STEAM GEN-
23	ERATING UNITS.
24	Section 112 of the Clean Air Act (42 U.S.C. 7412)
25	is amended—

1	(1) by redesignating subsection (s) as sub-
2	section (x); and
3	(2) by inserting after subsection (r) the fol-
4	lowing:
5	"(s) MERCURY EMISSION STANDARDS FOR ELECTRIC
6	UTILITY STEAM GENERATING UNITS.—
7	"(1) In general.—
8	"(A) Regulations.—Not later than 180
9	days after the date of enactment of this sub-
10	paragraph, the Administrator shall promulgate
11	regulations to establish standards for the emis-
12	sion of mercury and mercury compounds (col-
13	lectively referred to in this subsection as 'mer-
14	cury') applicable to existing and new electric
15	utility steam generating units.
16	"(B) Permit requirement.—Not later
17	than 2 years after the date of enactment of this
18	subparagraph, each electric utility steam gener-
19	ating unit shall have an enforceable permit
20	issued under title V that complies with this sub-
21	section.
22	"(C) Procedures and schedules for
23	COMPLIANCE WITH STANDARDS.—Each electric
24	utility steam generating unit shall achieve com-
25	pliance with the mercury emission standards es-

1 tablished under subparagraph (A) in accordance 2 with the procedures and schedules established 3 under subsection (i). "(2) Standards and methods.— 4 "(A) MINIMUM REQUIRED EMISSION RE-5 6 DUCTION.—Subject to subparagraph (C), the 7 emission standards established under paragraph 8 (1)(A) shall require that each electric utility 9 steam generating unit reduce its annual pound-10 age of mercury emitted, as calculated under 11 subparagraph (B), below its mercury emission 12 baseline, as calculated under paragraph (3)(D), 13 by not less than 95 percent. 14 "(B) CALCULATION OF ANNUAL POUND-15 AGE OF MERCURY EMITTED.— "(i) In general.—For each electric 16 17 utility steam generating unit (referred to 18 in this subparagraph as a 'unit') and each 19 calendar year, the Administrator shall cal-20 culate the poundage of mercury emitted 21 per unit for the calendar year, which shall

be equal to the product obtained by

multiplying—

22

1	"(I) the fuel consumption deter-
2	mined under clause (ii) for the unit
3	for the calendar year; by
4	"(II) the average mercury con-
5	tent determined under clause (iii) for
6	the unit for the calendar year.
7	"(ii) Fuel consumption.—The fuel
8	consumption for a unit shall be equal to
9	the annual average quantity of millions of
10	British thermal units (referred to in this
11	subparagraph as 'mmBtu's') consumed by
12	the unit during the calendar year, as sub-
13	mitted to the Secretary of Energy on De-
14	partment of Energy Form 767.
15	"(iii) Average mercury con-
16	TENT.—
17	"(I) Specific data.—The aver-
18	age mercury content per mmBtu of
19	fuel consumed by a unit shall be de-
20	termined using the best available data
21	from the Department of the Interior
22	and the Department of Energy that
23	characterize the average mercury con-
24	tent of the fuel consumed by the unit
25	during the calendar year.

1	"(II) ESTIMATED DATA.—If spe-
2	cific mercury content data from the
3	Department of the Interior and the
4	Department of Energy are not avail-
5	able, the average mercury content
6	shall be estimated using the average
7	mercury content of fossil fuel from
8	mines or wells in the geographic re-
9	gion of each mine or well that supplies
10	the unit.
11	"(C) Emission trading within a gener-
12	ATING STATION.—
13	"(i) In general.—For the purpose
14	of this subsection, taking into consider-
15	ation the cost of achieving the emission re-
16	duction, the Administrator may allow emis-
17	sion trading among the electric utility
18	steam generating units contained in a
19	power generating station at a single site if
20	the aggregate annual reduction from all
21	such units at the power generating station
22	is not less than 95 percent.
23	"(ii) Underlying data.—In car-
24	rying out clause (i), the Administrator

1	shall use mercury emission data calculated
2	under paragraph (3)(D).
3	"(D) Control methods.—For the pur-
4	pose of achieving compliance with the emission
5	standards established under paragraph (1)(A),
6	the Administrator shall authorize methods of
7	control of mercury emissions, including meas-
8	ures that—
9	"(i) reduce the volume of, or eliminate
10	emissions of, mercury through a process
11	change, substitution of material or fuel, or
12	other method;
13	"(ii) enclose systems or processes to
14	eliminate mercury emissions;
15	"(iii) collect, capture, or treat mer-
16	cury emissions when released from a proc-
17	ess, stack, storage, or fugitive emission
18	point;
19	"(iv) consist of design, equipment,
20	work practice, or operational standards
21	(including requirements for operator train-
22	ing or certification) in accordance with
23	subsection (h); or

1	"(v) consist of a combination of the
2	measures described in clauses (i) through
3	(iv).
4	"(3) Permit requirements and condi-
5	TIONS.—
6	"(A) IN GENERAL.—Each permit issued in
7	accordance with paragraph (1)(B) shall
8	include—
9	"(i) enforceable mercury emission
10	standards;
11	"(ii) a schedule of compliance;
12	"(iii) a requirement that the permittee
13	submit to the permitting authority, not less
14	often than every 90 days, the results of
15	any required monitoring; and
16	"(iv) such other conditions as the Ad-
17	ministrator determines are necessary to en-
18	sure compliance with this subsection and
19	each applicable implementation plan under
20	section 110.
21	"(B) Monitoring and analysis.—
22	"(i) Procedures and methods.—
23	The regulations promulgated by the Ad-
24	ministrator under paragraph (1)(A) shall
25	prescribe procedures and methods for—

1	"(I) monitoring and analysis for
2	mercury; and
3	$(\Pi)$ determining compliance
4	with this subsection.
5	"(ii) Information.—Application of
6	the procedures and methods shall result in
7	reliable and timely information for deter-
8	mining compliance.
9	"(iii) Other requirements.—
10	"(I) IN GENERAL.—The require-
11	ments for monitoring and analysis
12	under this subparagraph shall
13	include—
14	"(aa) such requirements
15	that result in a representative de-
16	termination of mercury in ash
17	and sludge; and
18	"(bb) such combination of
19	requirements for continuous or
20	other reliable and representative
21	emission monitoring methods
22	that results in a representative
23	determination of mercury in fuel
24	as received by each electric utility
25	steam generating unit;

1	as are requisite to provide accurate
2	and reliable data for determining
3	baseline and controlled emissions of
4	mercury from each electric utility
5	steam generating unit.
6	"(II) MINIMUM REQUIREMENT.—
7	If, under subclause (I)(bb), the Ad-
8	ministrator does not require an elec-
9	tric utility steam generating unit to
10	use direct emission monitoring meth-
11	ods, the requirements under subclause
12	(I)(bb) shall, at a minimum, result in
13	representative determinations of mer-
14	cury in fuel as received by the electric
15	utility steam generating unit at such
16	frequencies as are sufficient to deter-
17	mine whether compliance with this
18	subsection is continuous.
19	"(iv) Effect on other law.—
20	Nothing in this subsection affects any con-
21	tinuous emission monitoring requirement
22	of title IV or any other provision of this
23	Act.
24	"(C) Inspection, entry, monitoring,
25	CERTIFICATION, AND REPORTING.—

1	"(i) In General.—Each permit
2	issued in accordance with paragraph
3	(1)(B) shall specify inspection, entry, mon-
4	itoring, compliance certification, and re-
5	porting requirements to ensure compliance
6	with the permit terms and conditions.
7	"(ii) Conformity with other reg-
8	ULATIONS.—The monitoring and reporting
9	requirements shall conform to each appli-
10	cable regulation under subparagraph (B).
11	"(iii) Signature.—Each report re-
12	quired under clause (i) and subparagraph
13	(B)(iii) shall be signed by a responsible of-
14	ficial of the electric utility steam gener-
15	ating unit, who shall certify the accuracy
16	of the report.
17	"(D) MERCURY EMISSION BASELINE.—
18	"(i) In general.—For each electric
19	utility steam generating unit (referred to
20	in this subparagraph as a 'unit'), the Ad-
21	ministrator shall calculate the baseline an-
22	nual average poundage of mercury emitted
23	per unit, which shall be equal to the prod-
24	uct obtained by multiplying—

1	"(I) the baseline fuel consump-
2	tion determined under clause (ii) for
3	the unit; by
4	"(II) the baseline average mer-
5	cury content determined under clause
6	(iii) for the unit.
7	"(ii) Baseline fuel consump-
8	TION.—
9	"(I) Units in commercial op-
10	ERATION BEFORE JANUARY 1, 1996.—
11	For each unit that began commercial
12	operation before January 1, 1996, the
13	baseline fuel consumption shall be
14	equal to the annual average quantity
15	of millions of British thermal units
16	(referred to in this subparagraph as
17	'mmBtu's') consumed by the unit dur-
18	ing the period of calendar years 1996,
19	1997, and 1998, as submitted annu-
20	ally to the Secretary of Energy on De-
21	partment of Energy Form 767 (re-
22	ferred to in this clause as 'Form
23	767').
24	"(II) Units beginning com-
25	MERCIAL OPERATION BETWEEN JANU-

1	ARY 1, 1996, AND 180 DAYS AFTER EN-
2	ACTMENT.—Subject to subclause
3	(III), for each unit that begins com-
4	mercial operation between January 1,
5	1996, and the date that is 180 days
6	after the date of enactment of this
7	subparagraph, the baseline fuel con-
8	sumption shall be based on the annual
9	average of the fuel use data submitted
10	on Form 767 for each full year of
11	commercial operation that begins on
12	or after January 1, 1996.
13	"(III) Units in commercial
14	OPERATION LESS THAN 1 YEAR AS OF
15	180 DAYS AFTER ENACTMENT.—For
16	each unit that has not been in com-
17	mercial operation for at least 1 year
18	as of the date that is 180 days after
19	the date of enactment of this subpara-
20	graph, the Administrator may deter-
21	mine an interim baseline fuel con-
22	sumption by—
23	"(aa) extrapolating from
24	monthly fuel use data available
25	for the unit; or

1	"(bb) assigning a baseline
2	fuel consumption based on the
3	annual average of the fuel use
4	data submitted on Form 767 for
5	other units that are of similar de-
6	sign and capacity.
7	"(IV) Units beginning com-
8	MERCIAL OPERATION MORE THAN 180
9	DAYS AFTER ENACTMENT.—For each
10	unit that begins commercial operation
11	more than 180 days after the date of
12	enactment of this subparagraph, the
13	application for a permit issued in ac-
14	cordance with paragraph (1)(B) for
15	the unit shall include an initial base-
16	line fuel consumption that is based on
17	the maximum design capacity for the
18	unit.
19	"(V) RECALCULATION AFTER EX-
20	TENDED PERIOD OF COMMERCIAL OP-
21	ERATION.—At such time as a unit de-
22	scribed in any of subclauses (II)
23	through (IV) has submitted fuel use
24	data for 3 consecutive years of com-
25	mercial operation on Form 767, the

1	Administrator shall recalculate the
2	baseline fuel consumption and make
3	modifications, as necessary, to the
4	mercury emission limitations con-
5	tained in the permit for the unit
6	issued in accordance with paragraph
7	(1)(B).
8	"(iii) Baseline average mercury
9	CONTENT.—
10	"(I) Units in commercial op-
11	ERATION BEFORE JANUARY 1, 1996.—
12	In the case of a unit described in
13	clause (ii)(I), the baseline average
14	mercury content per mmBtu of fuel
15	consumed by a unit shall be deter-
16	mined using the best available data
17	from the Department of the Interior
18	and the Department of Energy that
19	characterize the average mercury con-
20	tent of the fuel consumed by the unit
21	during the 3-year period described in
22	clause (ii)(I).
23	"(II) Units beginning com-
24	MERCIAL OPERATION BETWEEN JANU-
25	ARY 1, 1996, AND 180 DAYS AFTER EN-

1 ACTMENT.—In the case of a unit de-2 scribed in clause (ii)(II), the baseline 3 average mercury content per mmBtu of fuel consumed by a unit shall be determined using the best available 6 data from the Department of the In-7 terior and the Department of Energy 8 that characterize the average mercury 9 content of the fuel consumed by the 10 unit during each full year of commer-11 cial operation that begins on or after 12 January 1, 1996. 13 "(III) Units in commercial 14 OPERATION LESS THAN 1 YEAR AS OF 15 180 DAYS AFTER ENACTMENT.—In the 16 case of a unit described in clause 17 (ii)(III), the baseline average mercury

content per mmBtu of fuel consumed
by a unit shall be determined using
the best available data from the Department of the Interior and the Department of Energy that characterize
the average mercury content of the
fuel consumed by the unit—

1	"(aa) during the months
2	used for the extrapolation under
3	clause (ii)(III); or
4	"(bb) based on the average
5	mercury content of fuel con-
6	sumed by other units that are of
7	similar design and capacity.
8	"(IV) Units beginning com-
9	MERCIAL OPERATION MORE THAN 180
10	DAYS AFTER ENACTMENT.—In the
11	case of a unit described in clause
12	(ii)(IV), the baseline average mercury
13	content per mmBtu of fuel consumed
14	by a unit shall be determined using
15	the best available data from the De-
16	partment of the Interior and the De-
17	partment of Energy, or data sub-
18	mitted by the unit under subpara-
19	graph (B)(iii), that characterize the
20	average mercury content of the fuel
21	consumed by the unit based on the
22	maximum design capacity for the
23	unit.
24	"(V) ESTIMATED DATA.—If mer-
25	cury content data described in clauses

1	(I) through (IV) are not available, the
2	baseline average mercury content shall
3	be estimated using the average mer-
4	cury content of fossil fuel from mines
5	or wells in the geographic region of
6	each mine or well that supplies the
7	unit.
8	"(4) Disposal of Mercury Captured
9	THROUGH EMISSION CONTROLS.—
10	"(A) In General.—
11	"(i) Captured or recovered mer-
12	CURY.—The regulations promulgated by
13	the Administrator under paragraph (1)(A)
14	shall ensure that mercury that is captured
15	or recovered through the use of an emis-
16	sion control, coal cleaning, or another
17	method is disposed of in a manner that en-
18	sures that—
19	"(I) the hazards from mercury
20	are not transferred from 1 environ-
21	mental medium to another; and
22	"(II) there is no release of mer-
23	cury into the environment (as the
24	terms 'release' and 'environment' are
25	defined in section 101 of the Com-

1	prehensive Environmental Response,
2	Compensation, and Liability Act of
3	1980 (42 U.S.C. 9601)).
4	"(ii) Mercury-containing sludges
5	AND WASTES.—The regulations promul-
6	gated by the Administrator under para-
7	graph (1)(A) shall ensure that mercury-
8	containing sludges and wastes are handled
9	and disposed of in accordance with all ap-
10	plicable Federal and State laws (including
11	regulations).
12	"(B) Research Program.—To promote
13	permanent and cost-effective disposal of mer-
14	cury from electric utility steam generating
15	units, the Administrator shall establish a pro-
16	gram of long-term research to develop and dis-
17	seminate information on methods and tech-
18	niques such as separating, solidifying, recycling,
19	and encapsulating mercury-containing waste so
20	that mercury does not volatilize, migrate to
21	ground water or surface water, or contaminate
22	the soil.
23	"(5) Other requirements.—An emission
24	standard or other requirement promulgated under

this subsection does not diminish or replace any re-

1	quirement of a more stringent emission limitation or
2	other applicable requirement established under this
3	Act or a standard issued under State law.
4	"(6) Public reporting of data pertaining
5	TO EMISSIONS OF MERCURY.—
6	"(A) In General.—The Administrator
7	shall annually make available to the public,
8	through 1 or more published reports and 1 or
9	more forms of electronic media, facility-specific
10	mercury emission data for each electric utility
11	steam generating unit.
12	"(B) Source of data.—The emission
13	data shall be taken from the monitoring and
14	analysis reports submitted under paragraph
15	(3)(C).".
16	SEC. 4. MERCURY EMISSION STANDARDS FOR COAL- AND
17	OIL-FIRED COMMERCIAL AND INDUSTRIAL
18	BOILER UNITS.
19	Section 112 of the Clean Air Act (as amended by sec-
20	tion 3) is amended by inserting after subsection (s) the
21	following:
22	"(t) Mercury Emission Standards for Coal-
23	AND OIL-FIRED COMMERCIAL AND INDUSTRIAL BOILER
24	Units.—
25	"(1) In general.—

- "(A) REGULATIONS.—Not later than 180 days after the date of enactment of this sub-paragraph, the Administrator shall promulgate regulations to establish standards for the emission of mercury and mercury compounds (collectively referred to in this subsection as 'mercury') applicable to existing and new coal- and oil-fired commercial and industrial boiler units that have a maximum design heat input capacity of 10 mmBtu per hour or greater.
  - "(B) PERMIT REQUIREMENT.—Not later than 2 years after the date of enactment of this subparagraph, each coal- or oil-fired commercial or industrial boiler unit shall have an enforceable permit issued under title V that complies with this subsection.
  - "(C) PROCEDURES AND SCHEDULES FOR COMPLIANCE WITH STANDARDS.—Each coal- or oil-fired commercial or industrial boiler unit shall achieve compliance with the mercury emission standards established under subparagraph (A) in accordance with the procedures and schedules established under subsection (i).
- 24 "(2) STANDARDS AND METHODS.—

1	"(A) MINIMUM REQUIRED EMISSION RE-
2	DUCTION.—Subject to subparagraph (C), the
3	emission standards established under paragraph
4	(1)(A) shall require that each coal- or oil-fired
5	commercial or industrial boiler unit reduce its
6	annual poundage of mercury emitted, as cal-
7	culated under subparagraph (B), below its mer-
8	cury emission baseline, as calculated under
9	paragraph (3)(D), by not less than 95 percent.
10	"(B) CALCULATION OF ANNUAL POUND-
11	AGE OF MERCURY EMITTED.—
12	"(i) In general.—For each coal- or
13	oil-fired commercial or industrial boiler
14	unit (referred to in this subparagraph as a
15	'unit') and each calendar year, the Admin-
16	istrator shall calculate the poundage of
17	mercury emitted per unit for the calendar
18	year, which shall be equal to the product
19	obtained by multiplying—
20	"(I) the fuel consumption deter-
21	mined under clause (ii) for the unit
22	for the calendar year; by
23	$``(\Pi)$ the average mercury con-
24	tent determined under clause (iii) for
25	the unit for the calendar year.

1	"(ii) Fuel consumption.—The fuel
2	consumption for a unit shall be equal to
3	the annual average quantity of millions of
4	British thermal units (referred to in this
5	subparagraph as 'mmBtu's') consumed by
6	the unit during the calendar year, as sub-
7	mitted to the Secretary of Energy on De-
8	partment of Energy Forms EIA-3 and
9	EIA-846 (A,B,C).
10	"(iii) Average mercury con-
11	TENT.—
12	"(I) Specific data.—The aver-
13	age mercury content per mmBtu of
14	fuel consumed by a unit shall be de-
15	termined using the best available data
16	from the Department of the Interior
17	and the Department of Energy (as
18	submitted to the Secretary of Energy
19	on Department of Energy Form EIA-
20	3A) that characterize the average
21	mercury content of the fuel consumed
22	by the unit during the calendar year.
23	"(II) ESTIMATED DATA.—If spe-
24	cific mercury content data from the
25	Department of the Interior and the

1	Department of Energy are not avail-
2	able, the average mercury content
3	shall be estimated using the average
4	mercury content of coal mined or oil
5	produced in the geographic region of
6	each mine or well that supplies the
7	unit.
8	"(C) Emission trading within a facil-
9	ITY.—
10	"(i) In general.—For the purpose
11	of this subsection, taking into consider-
12	ation the cost of achieving the emission re-
13	duction, the Administrator may allow emis-
14	sion trading among the coal- and oil-fired
15	commercial and industrial boiler units con-
16	tained in a facility at a single site if the
17	aggregate annual reduction from all such
18	units at the facility is not less than 95 per-
19	cent.
20	"(ii) Underlying data.—In
21	carrying out clause (i), the Administrator
22	shall use mercury emission data calculated
23	under paragraph (3)(D).
24	"(D) Control methods.—For the pur-
25	pose of achieving compliance with the emission

1	standards established under paragraph $(1)(A)$ ,
2	the Administrator shall authorize methods of
3	control of mercury emissions, including meas-
4	ures that—
5	"(i) reduce the volume of, or eliminate
6	emissions of, mercury through a process
7	change, substitution of material or fuel, or
8	other method;
9	"(ii) enclose systems or processes to
10	eliminate mercury emissions;
11	"(iii) collect, capture, or treat mer-
12	cury emissions when released from a proc-
13	ess, stack, storage, or fugitive emission
14	point;
15	"(iv) consist of design, equipment,
16	work practice, or operational standards
17	(including requirements for operator train-
18	ing or certification) in accordance with
19	subsection (h); or
20	"(v) consist of a combination of the
21	measures described in clauses (i) through
22	(iv).
23	"(3) Permit requirements and condi-
24	TIONS.—

1	"(A) IN GENERAL.—Each permit issued in
2	accordance with paragraph (1)(B) shall
3	include—
4	"(i) enforceable mercury emission
5	standards;
6	"(ii) a schedule of compliance;
7	"(iii) a requirement that the permittee
8	submit to the permitting authority, not less
9	often than every 90 days, the results of
10	any required monitoring; and
11	"(iv) such other conditions as the Ad-
12	ministrator determines are necessary to en-
13	sure compliance with this subsection and
14	each applicable implementation plan under
15	section 110.
16	"(B) Monitoring and analysis.—
17	"(i) Procedures and methods.—
18	The regulations promulgated by the Ad-
19	ministrator under paragraph (1)(A) shall
20	prescribe procedures and methods for—
21	"(I) monitoring and analysis for
22	mercury; and
23	$(\Pi)$ determining compliance
24	with this subsection.

1	"(ii) Information.—Application of
2	the procedures and methods shall result in
3	reliable and timely information for deter-
4	mining compliance.
5	"(iii) Other requirements.—
6	"(I) In general.—The require-
7	ments for monitoring and analysis
8	under this subparagraph shall
9	include—
10	"(aa) such requirements
11	that result in a representative de-
12	termination of mercury in ash
13	and sludge; and
14	"(bb) such combination of
15	requirements for continuous or
16	other reliable and representative
17	emission monitoring methods
18	that results in a representative
19	determination of mercury in fuel
20	as received by each coal- or oil-
21	fired commercial or industrial
22	boiler unit;
23	as are requisite to provide accurate
24	and reliable data for determining
25	haseline and controlled emissions of

1	mercury from each coal- or oil-fired
2	commercial or industrial boiler unit.
3	"(II) MINIMUM REQUIREMENT.—
4	If, under subclause (I)(bb), the Ad-
5	ministrator does not require a coal- or
6	oil-fired commercial or industrial boil-
7	er unit to use direct emission moni-
8	toring methods, the requirements
9	under subclause (I)(bb) shall, at a
10	minimum, result in representative de-
11	terminations of mercury in fuel as re-
12	ceived by the boiler unit at such fre-
13	quencies as are sufficient to determine
14	whether compliance with this sub-
15	section is continuous.
16	"(iv) Effect on other law.—
17	Nothing in this subsection affects any con-
18	tinuous emission monitoring requirement
19	of title IV or any other provision of this
20	Act.
21	"(C) Inspection, entry, monitoring,
22	CERTIFICATION, AND REPORTING.—
23	"(i) In General.—Each permit
24	issued in accordance with paragraph
25	(1)(B) shall specify inspection, entry, mon-

1	itoring, compliance certification, and re-
2	porting requirements to ensure compliance
3	with the permit terms and conditions.
4	"(ii) Conformity with other reg-
5	ULATIONS.—The monitoring and reporting
6	requirements shall conform to each appli-
7	cable regulation under subparagraph (B).
8	"(iii) SIGNATURE.—Each report re-
9	quired under clause (i) and subparagraph
10	(B)(iii) shall be signed by a responsible of-
11	ficial of the coal- or oil-fired commercial or
12	industrial boiler unit, who shall certify the
13	accuracy of the report.
14	"(D) Mercury emission baseline.—
15	"(i) In general.—For each coal- or
16	oil-fired commercial or industrial boiler
17	unit (referred to in this subparagraph as a
18	'unit'), the Administrator shall calculate
19	the baseline annual average poundage of
20	mercury emitted per unit, which shall be
21	equal to the product obtained by
22	multiplying—
23	"(I) the baseline fuel consump-
24	tion determined under clause (ii) for
25	the unit; by

1	"(II) the baseline average mer-
2	cury content determined under clause
3	(iii) for the unit.
4	"(ii) Baseline fuel consump-
5	TION.—
6	"(I) Units in commercial op-
7	ERATION BEFORE JANUARY 1, 1996.—
8	For each unit that began commercial
9	operation before January 1, 1996, the
10	baseline fuel consumption shall be
11	equal to the annual average quantity
12	of millions of British thermal units
13	(referred to in this subparagraph as
14	'mmBtu's') consumed by the unit dur-
15	ing the period of calendar years 1996,
16	1997, and 1998, as submitted annu-
17	ally to the Secretary of Energy on De-
18	partment of Energy Forms EIA-3
19	and EIA $-846$ (A, B, C) (referred to
20	in this clause as the 'Forms').
21	"(II) Units beginning com-
22	MERCIAL OPERATION BETWEEN JANU-
23	ARY 1, 1996, AND 180 DAYS AFTER EN-
24	ACTMENT.—Subject to subclause
25	(III), for each unit that begins com-

1	mercial operation between January 1,
2	1996, and the date that is 180 days
3	after the date of enactment of this
4	subparagraph, the baseline fuel con-
5	sumption shall be based on the annual
6	average of the fuel use data submitted
7	on the Forms for each full year of
8	commercial operation that begins on
9	or after January 1, 1996.
10	"(III) Units in commercial
11	OPERATION LESS THAN 1 YEAR AS OF
12	180 DAYS AFTER ENACTMENT.—For
13	each unit that has not been in com-
14	mercial operation for at least 1 year
15	as of the date that is 180 days after
16	the date of enactment of this subpara-
17	graph, the Administrator may deter-
18	mine an interim baseline fuel con-
19	sumption by—
20	"(aa) extrapolating from
21	monthly fuel use data available
22	for the unit; or
23	"(bb) assigning a baseline
24	fuel consumption based on the
25	annual average of the fuel use

1	data submitted on the Forms for
2	other units that are of similar de-
3	sign and capacity.
4	"(IV) Units beginning com-
5	MERCIAL OPERATION MORE THAN 180
6	DAYS AFTER ENACTMENT.—For each
7	unit that begins commercial operation
8	more than 180 days after the date of
9	enactment of this subparagraph, the
10	application for a permit issued in ac-
11	cordance with paragraph (1)(B) for
12	the unit shall include an initial base-
13	line fuel consumption that is based on
14	the maximum design capacity for the
15	unit.
16	"(V) RECALCULATION AFTER EX-
17	TENDED PERIOD OF COMMERCIAL OP-
18	ERATION.—At such time as a unit de-
19	scribed in any of subclauses (II)
20	through (IV) has submitted fuel use
21	data for 3 consecutive years of com-
22	mercial operation on the Forms, the
23	Administrator shall recalculate the
24	baseline fuel consumption and make
25	modifications, as necessary, to the

modifications, as necessary, to the

1	mercury emission limitations con-
2	tained in the permit for the unit
3	issued in accordance with paragraph
4	(1)(B).
5	"(iii) Baseline average mercury
6	CONTENT.—
7	"(I) Units in commercial op-
8	ERATION BEFORE JANUARY 1, 1996.—
9	In the case of a unit described in
10	clause (ii)(I), the baseline average
11	mercury content per mmBtu of fuel
12	consumed by a unit shall be deter-
13	mined using the best available data
14	from the Department of the Interior
15	and the Department of Energy (as
16	submitted to the Secretary of Energy
17	on Department of Energy Form EIA-
18	3A) that characterize the average
19	mercury content of the fuel consumed
20	by the unit during the 3-year period
21	described in clause (ii)(I).
22	"(II) Units beginning com-
23	MERCIAL OPERATION BETWEEN JANU-
24	ARY 1, 1996, AND 180 DAYS AFTER EN-
25	ACTMENT.—In the case of a unit de-

scribed in clause (ii)(II), the baseline average mercury content per mmBtu of fuel consumed by a unit shall be determined using the best available data from the Department of the Interior and the Department of Energy (as submitted to the Secretary of Energy on Department of Energy Form EIA–3A) that characterize the average mercury content of the fuel consumed by the unit during each full year of commercial operation that begins on or after January 1, 1996.

"(III) Units in commercial operation less than 1 year as of 180 days after enactment.—In the case of a unit described in clause (ii)(III), the baseline average mercury content per mmBtu of fuel consumed by a unit shall be determined using the best available data from the Department of the Interior and the Department of Energy (as submitted to the Secretary of Energy on Department of Energy Form EIA–3A) that

1	characterize the average mercury con-
2	tent of the fuel consumed by the
3	unit—
4	"(aa) during the months
5	used for the extrapolation under
6	clause (ii)(III); or
7	"(bb) based on the average
8	mercury content of fuel con-
9	sumed by other units that are of
10	similar design and capacity.
11	"(IV) Units beginning com-
12	MERCIAL OPERATION MORE THAN 180
13	DAYS AFTER ENACTMENT.—In the
14	case of a unit described in clause
15	(ii)(IV), the baseline average mercury
16	content per mmBtu of fuel consumed
17	by a unit shall be determined using
18	the best available data from the De-
19	partment of the Interior and the De-
20	partment of Energy (as submitted to
21	the Secretary of Energy on Depart-
22	ment of Energy Form EIA-3A), or
23	data submitted by the unit under sub-
24	paragraph (B)(iii), that characterize
25	the average mercury content of the

1	fuel consumed by the unit based on
2	the maximum design capacity for the
3	unit.
4	"(V) ESTIMATED DATA.—If mer-
5	cury content data described in clauses
6	(I) through (IV) are not available, the
7	baseline average mercury content shall
8	be estimated using the average mer-
9	cury content of coal mined or oil pro-
10	duced in the geographic region of each
11	mine or well that supplies the unit.
12	"(4) DISPOSAL OF MERCURY CAPTURED
13	THROUGH EMISSION CONTROLS.—
14	"(A) In general.—
15	"(i) Captured or recovered mer-
16	CURY.—The regulations promulgated by
17	the Administrator under paragraph (1)(A)
18	shall ensure that mercury that is captured
19	or recovered through the use of an emis-
20	sion control, coal cleaning, or another
21	method is disposed of in a manner that en-
22	sures that—
23	"(I) the hazards from mercury
24	are not transferred from 1 environ-
25	mental medium to another; and

1	"(II) there is no release of mer-
2	cury into the environment (as the
3	terms 'release' and 'environment' are
4	defined in section 101 of the Com-
5	prehensive Environmental Response,
6	Compensation, and Liability Act of
7	1980 (42 U.S.C. 9601)).
8	"(ii) Mercury-containing sludges
9	AND WASTES.—The regulations promul-
10	gated by the Administrator under para-
11	graph (1)(A) shall ensure that mercury-
12	containing sludges and wastes are handled
13	and disposed of in accordance with all ap-
14	plicable Federal and State laws (including
15	regulations).
16	"(B) Research Program.—To promote
17	permanent and cost-effective disposal of mer-
18	cury from coal- and oil-fired commercial and in-
19	dustrial boiler units, the Administrator shall es-

cury from coal- and oil-fired commercial and industrial boiler units, the Administrator shall establish a program of long-term research to develop and disseminate information on methods and techniques such as separating, solidifying, recycling, and encapsulating mercury-containing waste so that mercury does not volatilize, mi-

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1	grate to ground water or surface water, or con-
2	taminate the soil.
3	"(5) Other requirements.—An emission
4	standard or other requirement promulgated under
5	this subsection does not diminish or replace any re-
6	quirement of a more stringent emission limitation or
7	other applicable requirement established under this
8	Act or a standard issued under State law.
9	"(6) Public reporting of data pertaining
10	TO EMISSIONS OF MERCURY.—
11	"(A) In General.—The Administrator
12	shall annually make available to the public,
13	through 1 or more published reports and 1 or
14	more forms of electronic media, facility-specific
15	mercury emission data for each coal- or oil-fired
16	commercial or industrial boiler unit.
17	"(B) Source of data.—The emission
18	data shall be taken from the monitoring and
19	analysis reports submitted under paragraph
20	(3)(C).".
21	SEC. 5. REDUCTION OF MERCURY EMISSIONS FROM SOLID
22	WASTE INCINERATION UNITS.
23	(a) Separation of Mercury-Containing
24	ITEMS.—Section 3002 of the Solid Waste Disposal Act

1	(42 U.S.C. 6922) is amended by adding at the end the
2	following:
3	"(c) Separation of Mercury-Containing
4	ITEMS.—
5	"(1) Publication of List.—
6	"(A) In General.—Not later than 180
7	days after the date of enactment of this sub-
8	section, the Administrator shall publish a list of
9	mercury-containing items that shall be required
10	to be separated and removed from the waste
11	streams that feed solid waste management fa-
12	cilities.
13	"(B) Required items.—The list shall in-
14	clude mercury-containing items such as fluores-
15	cent light bulbs, batteries, pharmaceuticals, lab-
16	oratory chemicals and reagents, electrical de-
17	vices such as thermostats, relays, and switches,
18	and medical and scientific instruments.
19	"(C) Labeling requirement.—
20	"(i) In general.—Except as pro-
21	vided in clause (ii), to facilitate the process
22	of separating and removing items listed
23	under subparagraph (A), each manufac-
24	turer of a listed item shall ensure that

each item is clearly labeled to indicate that
the product contains mercury.

"(ii) Button cell batteries.—In the case of button cell batteries for which, due to size constraints, labeling described in clause (i) is not practicable, the packaging shall indicate that the product contains mercury.

## "(2) Plan.—

"(A) REQUIREMENT.—Not later than 1 year after the date of enactment of this subsection, each person that transfers, directly or through a contractor, solid waste that may contain a mercury-containing item listed under paragraph (1) to a solid waste management facility shall submit for review and approval by the Administrator (or, in the case of a solid waste management facility located in a State that has a State hazardous waste program authorized under section 3006, the State) a plan for—

"(i) separating and removing mercury-containing items listed by the Administrator under paragraph (1) from the

1	waste streams that feed any solid waste
2	management facility;
3	"(ii) subject to the other requirements
4	of this subtitle, transferring the separated
5	waste to a recycling facility or a treatment,
6	storage, or disposal facility that holds a
7	permit under this subtitle;
8	"(iii) monitoring and reporting on
9	compliance with the plan; and
10	"(iv) achieving full compliance with
11	the plan not later than 18 months after
12	the date of approval of the plan in accord-
13	ance with subparagraph (B).
14	"(B) Plan approval.—
15	"(i) DEADLINE.—The Administrator
16	(or the State) shall determine whether to
17	approve or disapprove a plan submitted
18	under subparagraph (A) not later than 180
19	days after the date of receipt of the plan.
20	"(ii) Preference.—In determining
21	whether to approve a plan, the Adminis-
22	trator (or the State) shall give preference
23	to recycling or stabilization of mercury-
24	containing items over disposal of the items.
25	"(C) Amended plan.—

1	"(i) Submission.—If the Adminis-
2	trator (or the State) disapproves a plan,
3	the person may submit an amended plan
4	not later than 90 days after the date of
5	disapproval.
6	"(ii) Approval.—The Administrator
7	(or the State) shall approve or disapprove
8	the amended plan not later than 30 days
9	after the date of receipt of the plan.
10	"(D) Plan by administrator (or
11	STATE).—
12	"(i) IN GENERAL.—If an amended
13	plan is not submitted to the Administrator
14	(or the State) within 90 days after the
15	date of disapproval, or if an amended plan
16	has been submitted and subsequently dis-
17	approved, the Administrator (or the State)
18	shall issue a determination that it is nec-
19	essary for the Administrator (or the State)
20	to promulgate a plan for the person.
21	"(ii) Plan.—Not later than 180 days
22	after issuing the determination, the Ad-
23	ministrator (or the State) shall develop,
24	publish in the Federal Register (or submit
25	to the Administrator for publication in the

1	Federal Register), implement, and enforce
2	a plan that meets the criteria specified in
3	subparagraph (A) and ensures that full
4	compliance with the plan will be achieved
5	not later than 18 months after the date of
6	publication of the plan.
7	"(E) Enforceability.—Upon approval
8	by the Administrator (or the State) of a plan
9	submitted under subparagraph (A), or upon
10	publication of a plan developed by the Adminis-
11	trator (or the State) under subparagraph (D),
12	the plan shall be enforceable under this Act.".
13	(b) Solid Waste Incineration Unit Mercury
14	Emission Monitoring and Analysis.—Section 129(e)
15	of the Clean Air Act (42 U.S.C. 7429(e)) is amended—
16	(1) by striking "Beginning (1) 36" and insert-
17	ing the following:
18	"(1) In general.—Beginning (A) 36";
19	(2) in the first sentence, by redesignating para-
20	graph (2) as subparagraph (B); and
21	(3) by adding at the end the following:
22	"(2) Solid waste incineration unit mer-
23	CURY EMISSION MONITORING AND ANALYSIS.—
24	"(A) Procedures and methods.—

1	"(i) In general.—Not later than
2	180 days after the date of enactment of
3	this subparagraph, the Administrator shall
4	promulgate regulations prescribing proce-
5	dures and methods for—
6	"(I) monitoring and analysis for
7	mercury emissions from solid waste
8	combustion flue gases; and
9	"(II) determining compliance
10	with this paragraph.
11	"(ii) Information.—Application of
12	the procedures and methods shall result in
13	reliable and timely information for deter-
14	mining compliance.
15	"(B) Permit requirements.—
16	"(i) In general.—Each permit de-
17	scribed in paragraph (1) shall specify in-
18	spection, entry, monitoring, compliance
19	certification, and reporting requirements
20	with respect to mercury to ensure compli-
21	ance with the permit terms and conditions,
22	including a requirement that the permittee
23	submit to the permitting authority, not less
24	often than every 90 days, the results of
25	any required monitoring.

1	"(ii) Signature.—Each report re-
2	quired under clause (i) shall be signed by
3	a responsible official of the solid waste in-
4	cineration unit or by a municipal official,
5	who shall certify the accuracy of the re-
6	port.
7	"(C) ESTABLISHMENT OF MAXIMUM MER-
8	CURY EMISSION RATE.—
9	"(i) Determination by the admin-
10	ISTRATOR.—Based on the reports required
11	to be submitted under subparagraph (B)(i)
12	36 months, 39 months, and 42 months
13	after the date of enactment of this sub-
14	paragraph, the Administrator (or the
15	State) shall make a determination as to
16	whether the solid waste incinerator unit
17	has achieved and is continuously maintain-
18	ing a mercury emission rate of not more
19	than 0.080 milligrams per dry standard
20	cubic meter.
21	"(ii) Requirement of Installa-
22	TION OF CONTROLS.—If the mercury emis-
23	sion rate specified in clause (i) is not
24	achieved and maintained over the period
25	covered by the reports referred to in clause

1	(i), or over any 2 out of 3 reporting peri-
2	ods thereafter, the Administrator shall re-
3	quire that the solid waste incineration unit
4	install control equipment and techniques
5	that will, within 3 years, result in a mer-
6	cury emission rate by the unit of not more
7	than 0.060 milligrams per dry standard
8	cubic meter.
9	"(iii) Enforceability.—The re-
10	quirements of this subparagraph shall be
11	an enforceable modification to any existing
12	or new permit described in paragraph (1)
13	for the solid waste incineration unit.
14	"(D) Other requirements.—An emis-
15	sion standard or other requirement promulgated
16	under this subsection does not diminish or re-
17	place any requirement of a more stringent emis-
18	sion limitation or other applicable requirement
19	established under this Act or a standard issued
20	under State law.
21	"(E) Public reporting of data per-
22	TAINING TO EMISSIONS OF MERCURY.—
23	"(i) In General.—The Administrator
24	shall annually make available to the public
25	through 1 or more published reports and 1

1	or more forms of electronic media, facility-
2	specific mercury emission data for each
3	solid waste incineration unit.
4	"(ii) Source of data.—The emis-
5	sion data shall be taken from the moni-
6	toring and analysis reports submitted
7	under subparagraph (B).".
8	(c) Phaseout of Mercury in Products.—Section
9	112 of the Clean Air Act (as amended by section 4) is
10	amended by inserting after subsection (t) the following:
11	"(u) Phaseout of Mercury in Products.—
12	"(1) Definition of Manufacturer.—In this
13	subsection, the term 'manufacturer' includes an im-
14	porter for resale.
15	"(2) Prohibition on Sale.—Beginning 3
16	years after the date of enactment of this paragraph,
17	a manufacturer shall not sell any mercury-con-
18	taining product, whether manufactured domestically,
19	imported, or manufactured for export, unless the
20	manufacturer has applied for and has been granted
21	by the Administrator an exemption from the prohibi-
22	tion on sale specified in this paragraph.
23	"(3) Procedures for making exemption
24	APPLICATION DETERMINATIONS.—Before making a

1	determination on an application, the Administrator
2	shall—
3	"(A) publish notice of the application in
4	the Federal Register;
5	"(B) provide a public comment period of
6	60 days; and
7	"(C) conduct a hearing on the record.
8	"(4) Criteria for exemption.—In making a
9	determination on an application, the Administrator
10	may grant an exemption from the prohibition on sale
11	only if—
12	"(A) the Administrator determines that
13	the mercury-containing product is a product the
14	use of which is essential;
15	"(B) the Administrator determines that
16	there is no comparable product that does not
17	contain mercury and that is available in the
18	marketplace at a reasonable cost; and
19	"(C) through documentation submitted by
20	the manufacturer, the Administrator determines
21	that the manufacturer has established a pro-
22	gram to take back, after use by the consumer,
23	all mercury-containing products subject to the
24	exemption that are manufactured after the date
25	of approval of the application.

1	"(5) Term of exemption.—
2	"(A) IN GENERAL.—An exemption may be
3	granted for a period of not more than 3 years.
4	"(B) Renewals.—Renewal of an exemp-
5	tion shall be carried out in accordance with
6	paragraphs (3) and (4).
7	"(6) Publications in the federal reg-
8	ISTER.—The Administrator shall publish in the Fed-
9	eral Register—
10	"(A) a description of each exemption appli-
11	cation approval or denial; and
12	"(B) on an annual basis, a list of products
13	for which exemptions have been granted under
14	this subsection.".
15	SEC. 6. MERCURY EMISSION STANDARDS FOR CHLOR-AL-
16	KALI PLANTS.
17	Section 112 of the Clean Air Act (as amended by sec-
18	tion 5(c)) is amended by inserting after subsection (u) the
19	following:
20	"(v) Mercury Emission Standards for Chlor-
21	ALKALI PLANTS.—
22	"(1) In General.—
23	"(A) REGULATIONS.—Not later than 180
24	days after the date of enactment of this sub-
25	paragraph, the Administrator shall promulgate

regulations to establish standards for the direct and fugitive emission of mercury and mercury compounds (collectively referred to in this subsection as 'mercury') applicable to existing and new chlor-alkali plants that use the mercury cell production process (referred to in this subsection as 'mercury cell chlor-alkali plants').

- "(B) Permit requirement.—Not later than 2 years after the date of enactment of this subparagraph, each mercury cell chlor-alkali plant shall have an enforceable permit issued under title V that complies with this subsection.
- "(C) PROCEDURES AND SCHEDULES FOR COMPLIANCE WITH STANDARDS.—Each mercury cell chlor-alkali plant shall achieve compliance with the mercury emission standards established under subparagraph (A) in accordance with the procedures and schedules established under subsection (i).

## "(2) STANDARDS AND METHODS.—

"(A) MINIMUM REQUIRED EMISSION REDUCTION.—The emission standards established under paragraph (1)(A) shall require that each mercury cell chlor-alkali plant reduce its annual poundage of direct and fugitive mercury emit-

1	ted below its mercury emission baseline, as de-
2	termined by the Administrator, by not less than
3	95 percent.
4	"(B) Control methods.—For the pur-
5	pose of achieving compliance with the emission
6	standards established under paragraph (1)(A),
7	the Administrator shall authorize methods of
8	control of mercury emissions, including meas-
9	ures that—
10	"(i) reduce the volume of, or eliminate
11	emissions of, mercury through a process
12	change, substitution of material, or other
13	method;
14	"(ii) enclose systems or processes to
15	eliminate mercury emissions;
16	"(iii) collect, capture, or treat mer-
17	cury emissions when released from a proc-
18	ess, stack, storage, or fugitive emission
19	point, or through evaporation of a spill;
20	"(iv) consist of design, equipment,
21	manufacturing process, work practice, or
22	operational standards (including require-
23	ments for operator training or certification
24	or spill prevention) in accordance with sub-
25	section (h); or

1	"(v) consist of a combination of the
2	measures described in clauses (i) through
3	(iv).
4	"(3) Permit requirements and condi-
5	TIONS.—
6	"(A) IN GENERAL.—Each permit issued in
7	accordance with paragraph (1)(B) shall
8	include—
9	"(i) enforceable mercury emission
10	standards;
11	"(ii) a schedule of compliance;
12	"(iii) a requirement that the permittee
13	submit to the permitting authority, not less
14	often than every 90 days, the results of
15	any required monitoring; and
16	"(iv) such other conditions as the Ad-
17	ministrator determines are necessary to en-
18	sure compliance with this subsection and
19	each applicable implementation plan under
20	section 110.
21	"(B) Monitoring and analysis.—
22	"(i) Procedures and methods.—
23	The regulations promulgated by the Ad-
24	ministrator under paragraph (1)(A) shall
25	prescribe procedures and methods for—

1	"(I) monitoring and analysis for
2	mercury; and
3	$"(\Pi)$ determining compliance
4	with this subsection.
5	"(ii) Information.—Application of
6	the procedures and methods shall result in
7	reliable and timely information for deter-
8	mining compliance.
9	"(iii) Effect on other law.—
10	Nothing in this subsection affects any con-
11	tinuous emission monitoring requirement
12	of title IV or any other provision of this
13	Act.
14	"(C) Inspection, entry, monitoring,
15	CERTIFICATION, AND REPORTING.—
16	"(i) In GENERAL.—Each permit
17	issued in accordance with paragraph
18	(1)(B) shall specify inspection, entry, mon-
19	itoring, compliance certification, and re-
20	porting requirements to ensure compliance
21	with the permit terms and conditions.
22	"(ii) Conformity with other reg-
23	ULATIONS.—The monitoring and reporting
24	requirements shall conform to each appli-
25	cable regulation under subparagraph (B).

1	"(iii) Signature.—Each report re-
2	quired under clause (i) shall be signed by
3	a responsible official of the mercury cell
4	chlor-alkali plant, who shall certify the ac-
5	curacy of the report.
6	"(4) DISPOSAL OF MERCURY CAPTURED
7	THROUGH EMISSION CONTROLS.—
8	"(A) In general.—
9	"(i) Captured or recovered mer-
10	CURY.—The regulations promulgated by
11	the Administrator under paragraph (1)(A)
12	shall ensure that mercury that is captured
13	or recovered through the use of an emis-
14	sion control or another method is disposed
15	of in a manner that ensures that—
16	"(I) the hazards from mercury
17	are not transferred from 1 environ-
18	mental medium to another; and
19	"(II) there is no release of mer-
20	cury into the environment (as the
21	terms 'release' and 'environment' are
22	defined in section 101 of the Com-
23	prehensive Environmental Response,
24	Compensation, and Liability Act of
25	1980 (42 U.S.C. 9601)).

1	"(ii) Mercury-containing
2	WASTES.—The regulations promulgated by
3	the Administrator under paragraph (1)(A)
4	shall ensure that mercury-containing
5	wastes are handled and disposed of in ac-
6	cordance with all applicable Federal and
7	State laws (including regulations).
8	"(B) Research Program.—To promote
9	permanent and cost-effective disposal of mer-
10	cury from mercury cell chlor-alkali plants, the
11	Administrator shall establish a program of long-
12	term research to develop and disseminate infor-
13	mation on methods and techniques such as sep-
14	arating, solidifying, recycling, and encapsulating
15	mercury-containing waste so that mercury does
16	not volatilize, migrate to ground water or sur-
17	face water, or contaminate the soil.
18	"(5) OTHER REQUIREMENTS.—An emission
19	standard or other requirement promulgated under
20	this subsection does not diminish or replace any re-
21	quirement of a more stringent emission limitation or
22	other applicable requirement established under this
23	Act or a standard issued under State law.
24	"(6) Public reporting of data pertaining

TO EMISSIONS OF MERCURY.—

1	"(A) In General.—The Administrator
2	shall annually make available to the public,
3	through 1 or more published reports and 1 or
4	more forms of electronic media, facility-specific
5	mercury emission data for each mercury cell
6	chlor-alkali plant.
7	"(B) Source of data.—The emission
8	data shall be taken from the monitoring and
9	analysis reports submitted under paragraph
10	(3)(C).".
11	SEC. 7. MERCURY EMISSION STANDARDS FOR PORTLAND
12	CEMENT PLANTS.
13	Section 112 of the Clean Air Act (as amended by sec-
14	tion 6) is amended by inserting after subsection (v) the
15	following:
16	"(w) Mercury Emission Standards for Port-
17	LAND CEMENT PLANTS.—
18	"(1) In general.—
19	"(A) Regulations.—Not later than 180
20	days after the date of enactment of this sub-
21	paragraph, the Administrator shall promulgate
22	regulations—
23	"(i) to establish standards for the
24	control of direct dust emission of mercury
25	and mercury compounds (collectively re-

1 ferred to in this subsection as 'mercury') 2 from crushers, mills, dryers, kilns (excluding emission from such burning of haz-3 ardous waste-containing fuel in a cement kiln as is regulated under section 3004(q) 6 of the Solid Waste Disposal Act (42) 7 U.S.C. 6924(q)), and clinker coolers at ex-8 isting and new Portland cement plants; 9 and "(ii) to establish standards for the 10 11 control of fugitive dust emission of mer-12 cury from storage, transport, charging, 13 and discharging operations at existing and 14 new Portland cement plants. 15 "(B) PERMIT REQUIREMENT.—Not later 16 than 2 years after the date of enactment of this 17 18

subparagraph, each Portland cement plant shall have an enforceable permit issued under title V that complies with this subsection.

"(C) Procedures and schedules for COMPLIANCE WITH STANDARDS.—Each Portland cement plant shall achieve compliance with the mercury emission standards established under subparagraph (A) in accordance with the

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1	procedures and schedules established under
2	subsection (i).
3	"(2) Standards and methods.—
4	"(A) MINIMUM REQUIRED EMISSION RE-
5	DUCTION.—The emission standards established
6	under paragraph (1)(A) shall require that each
7	Portland cement plant reduce its annual pound-
8	age of direct and fugitive mercury emitted
9	below its mercury emission baseline, as deter-
10	mined by the Administrator, by not less than
11	95 percent.
12	"(B) Control methods.—For the pur-
13	pose of achieving compliance with the emission
14	standards established under paragraph (1)(A),
15	the Administrator shall authorize methods of
16	control of mercury emissions, including meas-
17	ures that—
18	"(i) reduce the volume of, or eliminate
19	emissions of, mercury through a process
20	change, substitution of material, or other
21	method;
22	"(ii) enclose systems, processes, or
23	storage to eliminate mercury emissions;
24	"(iii) collect, capture, or treat mer-
25	cury emissions when released from a proc-

1	ess, stack, storage, or fugitive emission
2	point;
3	"(iv) consist of design, equipment,
4	manufacturing process, work practice, or
5	operational standards (including require-
6	ments for operator training or certifi-
7	cation) in accordance with subsection (h);
8	or
9	"(v) consist of a combination of the
10	measures described in clauses (i) through
11	(iv).
12	"(3) Permit requirements and condi-
13	TIONS.—
14	"(A) IN GENERAL.—Each permit issued in
15	accordance with paragraph (1)(B) shall
16	include—
17	"(i) enforceable mercury emission
18	standards;
19	"(ii) a schedule of compliance;
20	"(iii) a requirement that the permittee
21	submit to the permitting authority, not less
22	often than every 90 days, the results of
23	any required monitoring; and
24	"(iv) such other conditions as the Ad-
25	ministrator determines are necessary to en-

1	sure compliance with this subsection and
2	each applicable implementation plan under
3	section 110.
4	"(B) Monitoring and analysis.—
5	"(i) Procedures and methods.—
6	The regulations promulgated by the Ad-
7	ministrator under paragraph (1)(A) shall
8	prescribe procedures and methods for—
9	"(I) monitoring and analysis for
10	mercury; and
11	$``(\Pi)$ determining compliance
12	with this subsection.
13	"(ii) Information.—Application of
14	the procedures and methods shall result in
15	reliable and timely information for deter-
16	mining compliance.
17	"(iii) Effect on other law.—
18	Nothing in this subsection affects any con-
19	tinuous emission monitoring requirement
20	of title IV or any other provision of this
21	Act.
22	"(C) Inspection, entry, monitoring,
23	CERTIFICATION, AND REPORTING.—
24	"(i) In GENERAL.—Each permit
25	issued in accordance with paragraph

1	(1)(B) shall specify inspection, entry, mon-
2	itoring, compliance certification, and re-
3	porting requirements to ensure compliance
4	with the permit terms and conditions.
5	"(ii) Conformity with other reg-
6	ULATIONS.—The monitoring and reporting
7	requirements shall conform to each appli-
8	cable regulation under subparagraph (B).
9	"(iii) Signature.—Each report re-
10	quired under clause (i) shall be signed by
11	a responsible official of the Portland ce-
12	ment plant, who shall certify the accuracy
13	of the report.
14	"(4) Disposal of Mercury Captured
15	THROUGH EMISSION CONTROLS.—
16	"(A) In general.—
17	"(i) Captured or recovered mer-
18	CURY.—The regulations promulgated by
19	the Administrator under paragraph (1)(A)
20	shall ensure that mercury that is captured
21	or recovered through the use of an emis-
22	sion control or another method is disposed
23	of in a manner that ensures that—

1	"(I) the hazards from mercury
2	are not transferred from 1 environ-
3	mental medium to another; and
4	"(II) there is no release of mer-
5	cury into the environment (as the
6	terms 'release' and 'environment' are
7	defined in section 101 of the Com-
8	prehensive Environmental Response,
9	Compensation, and Liability Act of
10	1980 (42 U.S.C. 9601)).
11	"(ii) Mercury-containing
12	WASTES.—The regulations promulgated by
13	the Administrator under paragraph (1)(A)
14	shall ensure that mercury-containing
15	wastes are handled and disposed of in ac-
16	cordance with all applicable Federal and
17	State laws (including regulations).
18	"(B) RESEARCH PROGRAM.—To promote
19	permanent and cost-effective disposal of mer-
20	cury from Portland cement plants, the Adminis-
21	trator shall establish a program of long-term re-
22	search to develop and disseminate information
23	on methods and techniques such as separating,
24	solidifying, recycling, and encapsulating mer-
25	cury-containing waste so that mercury does not

1	volatilize, migrate to ground water or surface
2	water, or contaminate the soil.
3	"(5) Other requirements.—An emission
4	standard or other requirement promulgated under
5	this subsection does not diminish or replace any re-
6	quirement of a more stringent emission limitation or
7	other applicable requirement established under this
8	Act or a standard issued under State law.
9	"(6) Public reporting of data pertaining
10	TO EMISSIONS OF MERCURY.—
11	"(A) In General.—The Administrator
12	shall annually make available to the public
13	through 1 or more published reports and 1 or
14	more forms of electronic media, facility-specific
15	mercury emission data for each Portland ce-
16	ment plant.
17	"(B) Source of data.—The emission
18	data shall be taken from the monitoring and
19	analysis reports submitted under paragraph
20	(3)(C).".
21	SEC. 8. REPORT ON IMPLEMENTATION OF MERCURY EMIS
22	SION STANDARDS FOR MEDICAL WASTE IN
23	CINERATORS.
24	(a) In General.—Not later than December 31
25	2000, the Administrator of the Environmental Protection

- 1 Agency shall submit to Congress a report on the extent
- 2 to which the annual poundage of mercury and mercury
- 3 compounds emitted by each medical waste incinerator in
- 4 the United States has been reduced below the baseline for
- 5 the medical waste incinerator determined under subsection
- 6 (b).

## 7 (b) Baseline.—

- 8 (1) Use of actual data.—As a baseline for
- 9 measuring emission reductions, the report shall use
- the mercury and mercury compound emission data
- that were submitted or developed during the process
- of permitting of the medical waste incinerator under
- 13 the Clean Air Act (42 U.S.C. 7401 et seq.).
- 14 (2) LACK OF ACTUAL DATA.—If the data de-
- scribed in paragraph (1) are not available, the Ad-
- 16 ministrator shall develop an estimate of baseline
- mercury emissions based on other sources of data
- and the best professional judgment of the Adminis-
- 19 trator.
- 20 SEC. 9. REPORT ON IMPLEMENTATION OF MERCURY EMIS-
- 21 SION STANDARDS FOR HAZARDOUS WASTE
- 22 COMBUSTORS.
- 23 (a) IN GENERAL.—Not later than December 31,
- 24 2000, the Administrator of the Environmental Protection
- 25 Agency shall submit to Congress a report on the extent

- 1 to which the annual poundage of mercury and mercury
- 2 compounds emitted by each hazardous waste combustor
- 3 in the United States has been reduced below the baseline
- 4 for the hazardous waste combustor determined under sub-
- 5 section (b).
- 6 (b) Baseline.—
- 7 (1) Use of actual data.—As a baseline for
- 8 measuring emission reductions, the report shall use
- 9 the mercury and mercury compound emission data
- that were submitted or developed during the process
- of permitting of the hazardous waste combustor
- under the Clean Air Act (42 U.S.C. 7401 et seq.).
- 13 (2) Lack of actual data—If the data de-
- scribed in paragraph (1) are not available, the Ad-
- ministrator shall develop an estimate of baseline
- mercury emissions based on other sources of data
- and the best professional judgment of the Adminis-
- trator.
- 19 SEC. 10. REPORT ON USE OF MERCURY AND MERCURY
- 20 COMPOUNDS BY DEPARTMENT OF DEFENSE.
- 21 (a) IN GENERAL.—Not later than December 31,
- 22 2000, the Secretary of Defense shall submit to Congress
- 23 a report on the use of mercury and mercury compounds
- 24 by the Department of Defense.

1	(b) Contents.—In the report, the Secretary of De-
2	fense shall describe—
3	(1) measures that the Department of Defense is
4	carrying out to reduce the use and emissions of mer-
5	cury and mercury compounds by the Department;
6	and
7	(2) measures that the Department of Defense is
8	carrying out to stabilize or recycle discarded mer-
9	cury or discarded mercury-containing products.
10	SEC. 11. INTERNATIONAL ACTIVITIES.
11	(a) STUDY AND REPORT.—Not later than December
12	31, 2000, the Administrator of the Environmental Protec-
13	tion Agency, in cooperation with appropriate representa-
14	tives of Canada and Mexico, shall study and submit to
15	Congress a report on the sources and extent of mercury
16	emissions in North America.
17	(b) Review.—Before submitting the report to Con-
18	gress, the Administrator shall submit the report for—
19	(1) internal and external scientific peer review;
20	and
21	(2) review by the Science Advisory Board estab-
22	lished by section 8 of the Environmental Research,
23	Development, and Demonstration Authorization Act
24	of 1978 (42 U.S.C. 4365).

1	(c) Required Elements.—The report shall
2	include—
3	(1) a characterization and identification of the
4	sources of emissions of mercury in North America;
5	(2) a description of the patterns and pathways
6	taken by mercury pollution through the atmosphere
7	and surface water; and
8	(3) recommendations for pollution control meas-
9	ures, options, and strategies that, if implemented in-
10	dividually or jointly by the United States, Canada,
11	and Mexico, will eliminate or greatly reduce
12	transboundary atmospheric and surface water mer-
13	cury pollution in North America.
14	SEC. 12. MERCURY RESEARCH.
15	Section 103 of the Clean Air Act (42 U.S.C. 7403)
16	is amended by adding at the end the following:
17	"(l) Mercury Research.—
18	"(1) Establishment of programs.—The Ad-
19	ministrator shall establish—
20	"(A) a program to characterize and quan-
21	tify the potential mercury-related health effects
22	on high-risk populations (such as pregnant
23	women and their fetuses, women of childbearing
24	age, children, and individuals who subsist pri-
25	marily on fish); and

1	"(B) a mercury public awareness and pre-
2	vention program targeted at populations most
3	at risk from exposure to mercury.
4	"(2) Study of implementation of meas-
5	URES TO CONTROL MERCURY EMISSIONS.—
6	"(A) Establishment of advisory com-
7	MITTEE.—Not later than 3 years after the date
8	of enactment of this subsection, the Secretary
9	of Health and Human Services and the Admin-
10	istrator shall establish an advisory committee to
11	evaluate and prepare a report on the progress
12	made by the Federal Government, State and
13	local governments, industry, and other regu-
14	lated entities to implement and comply with the
15	mercury-related amendments to the Clean Air
16	Act (42 U.S.C. 7401 et seq.) made by the Om-
17	nibus Mercury Emissions Reduction Act of
18	1999.
19	"(B) Membership.—
20	"(i) In general.—The advisory com-
21	mittee shall consist of at least 15 mem-
22	bers, of whom at least 1 member shall rep-
23	resent each of the following:
24	"(I) The Department of Health
25	and Human Services.

1	"(II) The Agency for Toxic Sub-
2	stances and Disease Registry.
3	"(III) The Food and Drug Ad-
4	ministration.
5	"(IV) The Environmental Protec-
6	tion Agency.
7	"(V) The National Academy of
8	Sciences.
9	"(VI) Native American popu-
10	lations.
11	"(VII) State and local govern-
12	ments.
13	"(VIII) Industry.
14	"(IX) Environmental organiza-
15	tions.
16	"(X) Public health organizations.
17	"(ii) Appointment.—The Secretary
18	of Health and Human Services and the
19	Administrator shall each appoint not fewer
20	than 7 members of the advisory committee.
21	"(C) Duties.—The advisory committee
22	shall—
23	"(i) evaluate the adequacy and com-
24	pleteness of data collected and dissemi-
25	nated by the Environmental Protection

1	Agency and each State that reports on and
2	measures mercury contamination in the en-
3	vironment;
4	"(ii) make recommendations to the
5	Secretary of Health and Human Services
6	and the Administrator concerning—
7	"(I) changes necessary to im-
8	prove the quality and ensure consist-
9	ency from State to State of Federal
10	and State data collection, reporting,
11	and characterization of baseline envi-
12	ronmental conditions; and
13	"(II) methods for improving pub-
14	lic education, particularly among high-
15	risk populations (such as pregnant
16	women and their fetuses, women of
17	childbearing age, children, and indi-
18	viduals who subsist primarily on fish),
19	concerning the pathways and effects
20	of mercury contamination and con-
21	sumption; and
22	"(iii) not later than 4 years after the
23	date of enactment of this subsection, com-
24	pile and make available to the public,
25	through 1 or more published reports and 1

1	or more forms of electronic media, the
2	findings, recommendations, and supporting
3	data, including State-specific data, of the
4	advisory committee under this subpara-
5	graph.
6	"(D) Compensation.—
7	"(i) IN GENERAL.—A member of the
8	advisory committee shall receive no com-
9	pensation by reason of the service of the
10	member on the advisory committee.
11	"(ii) Travel expenses.—A member
12	of the advisory committee shall be allowed
13	travel expenses, including per diem in lieu
14	of subsistence, at rates authorized for em-
15	ployees of agencies under subchapter I of
16	chapter 57 of title 5, United States Code,
17	while away from the home or regular place
18	of business of the member in the perform-
19	ance of services for the advisory com-
20	mittee.
21	"(E) Duration of Advisory Com-
22	MITTEE.—The advisory committee—
23	"(i) shall terminate not earlier than
24	the date on which the Secretary of Health
25	and Human Services and the Adminis-

1	trator determine that the findings, rec-
2	ommendations, and supporting data pre-
3	pared by the advisory committee have been
4	made available to the public; and
5	"(ii) may, at the discretion of the Sec-
6	retary of Health and Human Services and
7	the Administrator, continue in existence
8	after that date to further carry out the du-
9	ties described in subparagraph (C).
10	"(F) Applicability of federal advi-
11	SORY COMMITTEE ACT.—The Federal Advisory
12	Committee Act (5 U.S.C. App.) shall not apply
13	to the advisory committee established under
14	this paragraph.
15	"(G) Funding.—The Secretary of Health
16	and Human Services and the Administrator
17	shall each provide 50 percent of the funding
18	necessary to carry out this paragraph.
19	"(3) Report on mercury sedimentation
20	TRENDS.—Not later than 1 year after the date of
21	enactment of this subsection, the Administrator shall
22	submit to Congress a report that characterizes mer-
23	cury and mercury-compound sedimentation trends in
24	Lake Champlain, Chesapeake Bay, the Great Lakes,

the finger lakes region of upstate New York, Tampa

1	Bay, and other water bodies of concern (as deter-
2	mined by the Administrator).
3	"(4) Evaluation of fish consumption
4	ADVISORIES.—
5	"(A) In General.—The Administrator
6	shall evaluate the adequacy, consistency, com-
7	pleteness, and public dissemination of—
8	"(i) data collected by the Environ-
9	mental Protection Agency and each State
10	concerning mercury contamination of fish;
11	and
12	"(ii) advisories to warn the public
13	about the consumption of mercury-con-
14	taminated fish (referred to in this para-
15	graph as 'fish consumption advisories').
16	"(B) Improvement of quality and
17	CONSISTENCY.—In conjunction with each State
18	or unilaterally, the Administrator shall imple-
19	ment any changes necessary to improve the
20	quality and ensure consistency from State to
21	State of Federal and State data collection, re-
22	porting, characterization of mercury contamina-
23	tion, and thresholds concerning mercury con-
24	tamination in fish above which fish consump-
25	tion advisories will be issued

1	"(C) Reporting.—Not later than 2 years
2	after the date of enactment of this subsection
3	and every 2 years thereafter, the Administrator
4	shall prepare and make available to the public,
5	through 1 or more published reports and 1 or
6	more forms of electronic media, information
7	providing detail by State, watershed, water
8	body, and river reach of mercury levels in fish
9	and any fish consumption advisories that have
10	been issued during the preceding 2-year period.

"(D) EFFECT ON STATE AUTHORITY.—
Nothing in this paragraph affects any authority
of a State to advise residents of the mercury
content of commercially sold foods and other
products.".

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