

(a) DEFINITIONS For purposes of this section, except subsection (r)—

(1) MAJOR SOURCE

The term "[major source](#)" means any [stationary source](#) or group of [stationary sources](#) located within a contiguous area and under common control that emits or has the potential to emit considering controls, in the aggregate, 10 tons per [year](#) or more of any [hazardous air pollutant](#) or 25 tons per [year](#) or more of any combination of [hazardous air pollutants](#). The [Administrator](#) may establish a lesser quantity, or in the case of radionuclides different criteria, for a [major source](#) than that specified in the previous sentence, on the basis of the potency of the [air pollutant](#), persistence, potential for bioaccumulation, other characteristics of the [air pollutant](#), or other relevant factors.

(2) AREA SOURCE

The term "[area source](#)" means any [stationary source](#) of [hazardous air pollutants](#) that is not a [major source](#). For purposes of this section, the term "[area source](#)" shall not include motor vehicles or nonroad vehicles subject to regulation under subchapter II.

(3) STATIONARY SOURCE

The term "[stationary source](#)" shall have the same meaning as such term has under [section 7411\(a\) of this title](#).

(4) NEW SOURCE

The term "[new source](#)" means a [stationary source](#) the [construction](#) or reconstruction of which is [commenced](#) after the [Administrator](#) first proposes regulations under this section establishing an [emission standard](#) applicable to such source.

(5) MODIFICATION

The term "[modification](#)" means any physical change in, or change in the method of [operation](#) of, a [major source](#) which increases the actual emissions of any [hazardous air pollutant](#) emitted by such source by more than a de minimis amount or which results in the emission of any [hazardous air pollutant](#) not previously emitted by more than a de minimis amount.

(6) HAZARDOUS AIR POLLUTANT

The term "[hazardous air pollutant](#)" means any [air pollutant](#) listed pursuant to subsection (b).

(7) ADVERSE ENVIRONMENTAL EFFECT

The term "[adverse environmental effect](#)" means any significant and widespread adverse effect, which may reasonably be anticipated, to wildlife, aquatic life, or other natural [resources](#), including adverse [impacts](#) on populations of endangered or threatened species or significant degradation of environmental quality over broad areas.

(8) ELECTRIC UTILITY STEAM GENERATING UNIT

The term "[electric utility steam generating unit](#)" means any fossil fuel fired combustion [unit](#) of more than 25 megawatts that serves a [generator](#) that produces electricity for sale. A [unit](#) that cogenerates steam and electricity and supplies more than one-third of its potential electric output capacity and more than 25 megawatts electrical output to any utility power

distribution system for sale shall be considered an [electric utility steam generating unit](#).

(9) OWNER OR OPERATOR

The term "[owner or operator](#)" means any [person](#) who owns, leases, [operates](#), controls, or supervises a [stationary source](#).

(10) EXISTING SOURCE

The term "[existing source](#)" means any [stationary source](#) other than a [new source](#).

(11) CARCINOGENIC EFFECT

Unless revised, the term "[carcinogenic effect](#)" shall have the meaning provided by the [Administrator](#) under Guidelines for Carcinogenic Risk Assessment as of the date of enactment.^[1] Any revisions in the existing Guidelines shall be subject to notice and opportunity for comment.

(b) LIST OF POLLUTANTS

(1) INITIAL LIST

The Congress establishes for purposes of this section a list of [hazardous air pollutants](#) as follows:

CAS number	Chemical name
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NOTE: For all listings above which contain the word "compounds" and for glycol ethers, the following applies: Unless otherwise specified, these listings are defined as including any unique chemical substance that contains the named chemical (i.e., antimony, arsenic, etc.) as part of that chemical's infrastructure.

¹ X'CN where X = H' or any other group where a formal dissociation may occur. For example KCN or Ca(CN)₂.

² Includes mono- and di- ethers of ethylene glycol, diethylene glycol, and triethylene glycol R-(OCH₂CH₂)_n-OR' where

n = 1, 2, or 3

R = alkyl or aryl groups

R' = R, H, or groups which, when removed, yield glycol ethers with the structure: R-(OCH₂CH)_n-OH. Polymers are excluded from the glycol category.

³ Includes mineral fiber emissions from facilities manufacturing or processing glass, rock, or slag fibers (or other mineral derived fibers) of average diameter 1 micrometer or less.

⁴ Includes organic compounds with more than one benzene ring, and which have a boiling point greater than or equal to 100 °C.

⁵ A type of atom which spontaneously undergoes radioactive decay.

75070

Acetaldehyde

60355

Acetamide

CAS number	Chemical name
75058	Acetonitrile
98862	Acetophenone
53963	2-Acetylaminofluorene
107028	Acrolein
79061	Acrylamide
79107	Acrylic acid
107131	Acrylonitrile
107051	Allyl chloride
92671	4-Aminobiphenyl
62533	Aniline
90040	o-Anisidine
1332214	Asbestos
71432	Benzene (including benzene from gasoline)
92875	Benzidine
98077	Benzotrichloride
100447	Benzyl chloride
92524	Biphenyl
117817	Bis(2-ethylhexyl)phthalate (DEHP)
542881	Bis(chloromethyl)ether
75252	Bromoform
106990	1,3-Butadiene
156627	Calcium cyanamide
105602	Caprolactam
133062	Captan
63252	Carbaryl
75150	Carbon disulfide
56235	Carbon tetrachloride
463581	Carbonyl sulfide
120809	Catechol
133904	Chloramben

CAS number	Chemical name
57749	Chlordane
7782505	Chlorine
79118	Chloroacetic acid
532274	2-Chloroacetophenone
108907	Chlorobenzene
510156	Chlorobenzilate
67663	Chloroform
107302	Chloromethyl methyl ether
126998	Chloroprene
1319773	Cresols/Cresylic acid (isomers and mixture)
95487	o-Cresol
108394	m-Cresol
106445	p-Cresol
98828	Cumene
94757	2,4-D, salts and esters
3547044	DDE
334883	Diazomethane
132649	Dibenzofurans
96128	1,2-Dibromo-3-chloropropane
84742	Dibutylphthalate
106467	1,4-Dichlorobenzene(p)
91941	3,3-Dichlorobenzidene
111444	Dichloroethyl ether (Bis(2-chloroethyl)ether)
542756	1,3-Dichloropropene
62737	Dichlorvos
111422	Diethanolamine
121697	N,N-Diethyl aniline (N,N-Dimethylaniline)
64675	Diethyl sulfate
119904	3,3-Dimethoxybenzidine
60117	Dimethyl aminoazobenzene

CAS number	Chemical name
119937	3,3'-Dimethyl benzidine
79447	Dimethyl carbamoyl chloride
68122	Dimethyl formamide
57147	1,1-Dimethyl hydrazine
131113	Dimethyl phthalate
77781	Dimethyl sulfate
534521	4,6-Dinitro-o-cresol, and salts
51285	2,4-Dinitrophenol
121142	2,4-Dinitrotoluene
123911	1,4-Dioxane (1,4-Diethyleneoxide)
122667	1,2-Diphenylhydrazine
106898	Epichlorohydrin (1-Chloro-2,3-epoxypropane)
106887	1,2-Epoxybutane
140885	Ethyl acrylate
100414	Ethyl benzene
51796	Ethyl carbamate (Urethane)
75003	Ethyl chloride (Chloroethane)
106934	Ethylene dibromide (Dibromoethane)
107062	Ethylene dichloride (1,2-Dichloroethane)
107211	Ethylene glycol
151564	Ethylene imine (Aziridine)
75218	Ethylene oxide
96457	Ethylene thiourea
75343	Ethylidene dichloride (1,1-Dichloroethane)
50000	Formaldehyde
76448	Heptachlor
118741	Hexachlorobenzene
87683	Hexachlorobutadiene
77474	Hexachlorocyclopentadiene
67721	Hexachloroethane

CAS number	Chemical name
822060	Hexamethylene-1,6-diisocyanate
680319	Hexamethylphosphoramide
110543	Hexane
302012	Hydrazine
7647010	Hydrochloric acid
7664393	Hydrogen fluoride (Hydrofluoric acid)
123319	Hydroquinone
78591	Isophorone
58899	Lindane (all isomers)
108316	Maleic anhydride
67561	Methanol
72435	Methoxychlor
74839	Methyl bromide (Bromomethane)
74873	Methyl chloride (Chloromethane)
71556	Methyl chloroform (1,1,1-Trichloroethane)
78933	Methyl ethyl ketone (2-Butanone)
60344	Methyl hydrazine
74884	Methyl iodide (Iodomethane)
108101	Methyl isobutyl ketone (Hexone)
624839	Methyl isocyanate
80626	Methyl methacrylate
1634044	Methyl tert butyl ether
101144	4,4-Methylene bis(2-chloroaniline)
75092	Methylene chloride (Dichloromethane)
101688	Methylene diphenyl diisocyanate (MDI)
101779	4,4'-Methylenedianiline
91203	Naphthalene
98953	Nitrobenzene
92933	4-Nitrobiphenyl
100027	4-Nitrophenol

CAS number	Chemical name
79469	2-Nitropropane
684935	N-Nitroso-N-methylurea
62759	N-Nitrosodimethylamine
59892	N-Nitrosomorpholine
56382	Parathion
82688	Pentachloronitrobenzene (Quintobenzene)
87865	Pentachlorophenol
108952	Phenol
106503	p-Phenylenediamine
75445	Phosgene
7803512	Phosphine
7723140	Phosphorus
85449	Phthalic anhydride
1336363	Polychlorinated biphenyls (Aroclors)
1120714	1,3-Propane sultone
57578	beta-Propiolactone
123386	Propionaldehyde
114261	Propoxur (Baygon)
78875	Propylene dichloride (1,2-Dichloropropane)
75569	Propylene oxide
75558	1,2-Propylenimine (2-Methyl aziridine)
91225	Quinoline
106514	Quinone
100425	Styrene
96093	Styrene oxide
1746016	2,3,7,8-Tetrachlorodibenzo-p-dioxin
79345	1,1,2,2-Tetrachloroethane
127184	Tetrachloroethylene (Perchloroethylene)
7550450	Titanium tetrachloride
108883	Toluene

CAS number	Chemical name
95807	2,4-Toluene diamine
584849	2,4-Toluene diisocyanate
95534	o-Toluidine
8001352	Toxaphene (chlorinated camphene)
120821	1,2,4-Trichlorobenzene
79005	1,1,2-Trichloroethane
79016	Trichloroethylene
95954	2,4,5-Trichlorophenol
88062	2,4,6-Trichlorophenol
121448	Triethylamine
1582098	Trifluralin
540841	2,2,4-Trimethylpentane
108054	Vinyl acetate
593602	Vinyl bromide
75014	Vinyl chloride
75354	Vinylidene chloride (1,1-Dichloroethylene)
1330207	Xylenes (isomers and mixture)
95476	o-Xylenes
108383	m-Xylenes
106423	p-Xylenes
0	Antimony Compounds
0	Arsenic Compounds (inorganic including arsine)
0	Beryllium Compounds
0	Cadmium Compounds
0	Chromium Compounds
0	Cobalt Compounds
0	Coke Oven Emissions
0	Cyanide Compounds ¹
0	Glycol ethers ²
0	Lead Compounds

CAS number	Chemical name
0	Manganese Compounds
0	Mercury Compounds
0	Fine mineral fibers ³
0	Nickel Compounds
0	Polycyclic Organic Matter ⁴
0	Radionuclides (including radon) ⁵
0	Selenium Compounds

(2) REVISION OF THE LIST

The [Administrator](#) shall periodically review the list established by this subsection and publish the results thereof and, where appropriate, revise such list by rule, adding pollutants which present, or may present, through inhalation or other routes of exposure, a threat of adverse human health effects (including, but not limited to, substances which are known to be, or may reasonably be anticipated to be, carcinogenic, mutagenic, teratogenic, neurotoxic, which [cause](#) reproductive dysfunction, or which are acutely or chronically toxic) or [adverse environmental effects](#) whether through ambient concentrations, bioaccumulation, deposition, or otherwise, but not including releases subject to regulation under subsection (r) as a result of emissions to the air. No [air pollutant](#) which is listed under [section 7408\(a\) of this title](#) may be added to the list under this section, except that the prohibition of this sentence shall not apply to any pollutant which independently meets the listing criteria of [this paragraph](#) and is a precursor to a pollutant which is listed under [section 7408\(a\) of this title](#) or to any pollutant which is in a class of pollutants listed under such section. No substance, practice, process or activity regulated under subchapter VI of this chapter shall be subject to regulation under this section solely due to its adverse effects on the environment.

(3) PETITIONS TO MODIFY THE LIST

(A)

Beginning at any time after 6 months after November 15, 1990, any [person](#) may petition the [Administrator](#) to modify the list of [hazardous air pollutants](#) under this subsection by adding or deleting a substance or, in case of listed pollutants without CAS numbers (other than coke oven emissions, mineral fibers, or polycyclic organic matter) removing certain unique substances. Within 18 months after receipt of a petition, the [Administrator](#) shall either [grant](#) or deny the petition by publishing a written explanation of the reasons for the [Administrator's](#) decision. Any such petition shall include a showing by the petitioner that there is adequate data on the health or environmental defects [\[2\]](#) of the pollutant or other evidence adequate to support the petition. The [Administrator](#) may not deny a petition solely on the basis of inadequate [resources](#) or time for review.

(B)

22 March 2019

The [Administrator](#) shall add a substance to the list upon a showing by the petitioner or on the [Administrator's](#) own determination that the substance is an [air pollutant](#) and that emissions, ambient concentrations, bioaccumulation or deposition of the substance are known to [cause](#) or may reasonably be anticipated to [cause](#) adverse effects to human health or [adverse environmental effects](#).

(C)

The [Administrator](#) shall delete a substance from the list upon a showing by the petitioner or on the [Administrator's](#) own determination that there is adequate data on the health and environmental effects of the substance to determine that emissions, ambient concentrations, bioaccumulation or deposition of the substance may not reasonably be anticipated to [cause](#) any adverse effects to the human health or [adverse environmental effects](#).

(D)

The [Administrator](#) shall delete one or more unique chemical substances that contain a listed [hazardous air pollutant](#) not having a CAS number (other than coke oven emissions, mineral fibers, or polycyclic organic matter) upon a showing by the petitioner or on the [Administrator's](#) own determination that such unique chemical substances that contain the named chemical of such listed [hazardous air pollutant](#) meet the deletion requirements of subparagraph (C). The [Administrator](#) must [grant](#) or deny a deletion petition prior to promulgating any [emission standards](#) pursuant to subsection (d) applicable to any source category or subcategory of a listed [hazardous air pollutant](#) without a CAS number listed under subsection (b) for which a deletion petition has been filed within 12 months of November 15, 1990.

(4) FURTHER INFORMATION

If the [Administrator](#) determines that information on the health or environmental effects of a substance is not sufficient to make a determination required by this subsection, the [Administrator](#) may use any authority available to the [Administrator](#) to acquire such information.

(5) TEST METHODS

The [Administrator](#) may establish, by rule, test measures and other analytic procedures for monitoring and measuring emissions, ambient concentrations, deposition, and bioaccumulation of [hazardous air pollutants](#).

(6) PREVENTION OF SIGNIFICANT DETERIORATION

The provisions of part C (prevention of significant deterioration) shall not apply to pollutants listed under this section.

(7) LEAD

The [Administrator](#) may not list elemental lead as a [hazardous air pollutant](#) under this subsection.

(c) LIST OF SOURCE CATEGORIES

(1) IN GENERAL

Not later than 12 months after November 15, 1990, the [Administrator](#) shall publish, and shall from time to time, but no less often than every 8 [years](#), revise, if appropriate, in response to public comment or new information, a list of all categories and subcategories

22 March 2019

of [major sources](#) and [area sources](#) (listed under paragraph (3)) of the [air pollutants](#) listed pursuant to subsection (b). To the extent practicable, the categories and subcategories listed under this subsection shall be consistent with the list of source categories established pursuant to [section 7411 of this title](#) and part C. Nothing in the preceding sentence limits the [Administrator's](#) authority to establish subcategories under this section, as appropriate.

(2) REQUIREMENT FOR EMISSIONS STANDARDS

For the categories and subcategories the [Administrator](#) lists, the [Administrator](#) shall establish emissions standards under subsection (d), according to the schedule in this subsection and subsection (e).

(3) AREA SOURCES

The [Administrator](#) shall list under this subsection each category or subcategory of [area sources](#) which the [Administrator](#) finds presents a threat of adverse effects to human health or the environment (by such sources individually or in the aggregate) warranting regulation under this section. The [Administrator](#) shall, not later than [5 years](#) after November 15, 1990, and pursuant to subsection (k)(3)(B), list, based on actual or estimated aggregate emissions of a listed pollutant or pollutants, sufficient categories or subcategories of [area sources](#) to ensure that [area sources](#) representing 90 percent of the [area source](#) emissions of the [30 hazardous air pollutants](#) that present the greatest threat to public health in the largest number of urban areas are subject to regulation under this section. Such regulations shall be promulgated not later than [10 years](#) after November 15, 1990.

(4) PREVIOUSLY REGULATED CATEGORIES

The [Administrator](#) may, in the [Administrator's](#) discretion, list any category or subcategory of sources previously regulated under this section as in effect before November 15, 1990.

(5) ADDITIONAL CATEGORIES

In addition to those categories and subcategories of sources listed for regulation pursuant to paragraphs (1) and (3), the [Administrator](#) may at any time list additional categories and subcategories of sources of [hazardous air pollutants](#) according to the same criteria for listing applicable under such paragraphs. In the case of source categories and subcategories listed after publication of the initial list required under paragraph (1) or (3), [emission standards](#) under subsection (d) for the category or subcategory shall be promulgated within [10 years](#) after November 15, 1990, or within [2 years](#) after the date on which such category or subcategory is listed, whichever is later.

(6) SPECIFIC POLLUTANTS

With respect to alkylated lead compounds, polycyclic organic matter, hexachlorobenzene, mercury, polychlorinated biphenyls, 2,3,7,8-tetrachlorodibenzofurans and 2,3,7,8-tetrachlorodibenzo-p-dioxin, the [Administrator](#) shall, not later than [5 years](#) after November 15, 1990, list categories and subcategories of sources assuring that sources accounting for not less than 90 per centum of the aggregate emissions of each such pollutant are subject to standards under subsection (d)(2) or (d)(4). Such standards shall be promulgated not later than

10 years after November 15, 1990. This paragraph shall not be construed to require the Administrator to promulgate standards for such pollutants emitted by electric utility steam generating units.

(7) RESEARCH FACILITIES

The Administrator shall establish a separate category covering research or laboratory facilities, as necessary to assure the equitable treatment of such facilities. For purposes of this section, "research or laboratory facility" means any stationary source whose primary purpose is to conduct research and development into new processes and products, where such source is operated under the close supervision of technically trained personnel and is not engaged in the manufacture of products for commercial sale in commerce, except in a de minimis manner.

(8) BOAT MANUFACTURING

When establishing emissions standards for styrene, the Administrator shall list boat manufacturing as a separate subcategory unless the Administrator finds that such listing would be inconsistent with the goals and requirements of this chapter.

(9) DELETIONS FROM THE LIST

(A)

Where the sole reason for the inclusion of a source category on the list required under this subsection is the emission of a unique chemical substance, the Administrator shall delete the source category from the list if it is appropriate because of action taken under either subparagraphs (C) or (D) of subsection (b)(3).

(B) The Administrator may delete any source category from the list under this subsection, on petition of any person or on the Administrator's own motion, whenever the Administrator makes the following determination or determinations, as applicable:

(i)

In the case of hazardous air pollutants emitted by sources in the category that may result in cancer in humans, a determination that no source in the category (or group of sources in the case of area sources) emits such hazardous air pollutants in quantities which may cause a lifetime risk of cancer greater than one in one million to the individual in the population who is most exposed to emissions of such pollutants from the source (or group of sources in the case of area sources).

(ii)

In the case of hazardous air pollutants that may result in adverse health effects in humans other than cancer or adverse environmental effects, a determination that emissions from no source in the category or subcategory concerned (or group of sources in the case of area sources) exceed a level which is adequate to protect public health with an ample margin of safety and no adverse environmental effect will result from emissions from any source (or from a group of sources in the case of area sources).

The Administrator shall grant or deny a petition under this paragraph within 1 year after the petition is filed.

(d) EMISSION STANDARDS

(1) IN GENERAL

The [Administrator](#) shall promulgate regulations establishing [emission standards](#) for each category or subcategory of [major sources](#) and [area sources of hazardous air pollutants](#) listed for regulation pursuant to subsection (c) in accordance with the schedules provided in subsections (c) and (e). The [Administrator](#) may distinguish among classes, types, and sizes of sources within a category or subcategory in establishing such standards except that, there shall be no delay in the compliance date for any standard applicable to any source under subsection (i) as the result of the authority provided by this sentence.

(2) STANDARDS AND METHODS Emissions standards promulgated under this subsection and applicable to new or [existing sources of hazardous air pollutants](#) shall require the maximum degree of reduction in emissions of the [hazardous air pollutants](#) subject to this section (including a prohibition on such emissions, where achievable) that the [Administrator](#), taking into consideration the cost of achieving such emission reduction, and any non-air quality health and environmental [impacts](#) and energy requirements, determines is achievable for new or [existing sources](#) in the category or subcategory to which such [emission standard](#) applies, through application of measures, processes, methods, systems or techniques including, but not limited to, measures which—

(A)

reduce the volume of, or eliminate emissions of, such pollutants through process changes, substitution of [materials](#) or other [modifications](#),

(B)

enclose systems or processes to eliminate emissions,

(C)

collect, capture or treat such pollutants when released from a process, stack, storage or fugitive emissions point,

(D)

are design, equipment, work practice, or operational standards (including requirements for operator training or certification) as provided in subsection (h), or

(E)

are a combination of the above.

None of the measures described in subparagraphs (A) through (D) shall, consistent with the provisions of [section 7414\(c\) of this title](#), in any way compromise any United [States](#) patent or United [States](#) trademark right, or any confidential [business](#) information, or any trade secret or any other intellectual property right.

(3) NEW AND EXISTING SOURCES The maximum degree of reduction in emissions that is deemed achievable for [new sources](#) in a category or subcategory shall not be less stringent than the emission control that is achieved in practice by the best controlled similar source, as determined by the [Administrator](#). [Emission standards](#) promulgated under this subsection for [existing sources](#) in a category or subcategory may be less stringent than standards for [new sources](#) in the same category or subcategory but shall not be less stringent, and may be more stringent than—

(A)

the average [emission limitation](#) achieved by the best performing 12 percent of the [existing sources](#) (for which the [Administrator](#) has emissions

22 March 2019

information), excluding those sources that have, within 18 months before the [emission standard](#) is proposed or within 30 months before such standard is promulgated, whichever is later, first achieved a level of emission rate or emission reduction which complies, or would comply if the source is not subject to such standard, with the lowest achievable emission rate (as defined by [section 7501 of this title](#)) applicable to the source category and prevailing at the time, in the category or subcategory for categories and subcategories with 30 or more sources, or

(B)

the average [emission limitation](#) achieved by the best performing 5 sources (for which the [Administrator](#) has or could reasonably obtain emissions information) in the category or subcategory for categories or subcategories with fewer than 30 sources.

(4) HEALTH THRESHOLD

With respect to pollutants for which a health threshold has been established, the [Administrator](#) may consider such threshold level, with an ample margin of safety, when establishing [emission standards](#) under this subsection.

(5) ALTERNATIVE STANDARD FOR AREA SOURCES

With respect only to categories and subcategories of [area sources](#) listed pursuant to subsection (c), the [Administrator](#) may, in lieu of the authorities provided in paragraph (2) and subsection (f), elect to promulgate standards or requirements applicable to sources in such categories or subcategories which provide for the use of generally available control technologies or management [practices](#) by such sources to reduce emissions of [hazardous air pollutants](#).

(6) REVIEW AND REVISION

The [Administrator](#) shall review, and revise as necessary (taking into account [developments](#) in [practices](#), processes, and control technologies), [emission standards](#) promulgated under this section no less often than every 8 [years](#).

(7) OTHER REQUIREMENTS PRESERVED

No [emission standard](#) or other requirement promulgated under this section shall be interpreted, construed or [applied](#) to diminish or replace the requirements of a more stringent [emission limitation](#) or other applicable requirement established pursuant to [section 7411 of this title](#), part C or D, or other authority of this chapter or a standard issued under [State](#) authority.

(8) COKE OVENS

(A) Not later than December 31, 1992, the [Administrator](#) shall promulgate regulations establishing [emission standards](#) under paragraphs (2) and (3) of this subsection for coke oven batteries. In establishing such standards, the [Administrator](#) shall evaluate—

(i)

the use of sodium silicate (or equivalent) luting compounds to prevent door leaks, and other operating [practices](#) and technologies for their effectiveness in reducing coke oven emissions, and their suitability for use on new and existing coke oven batteries, taking into account [costs](#) and reasonable commercial door warranties; and

(ii)

as a basis for [emission standards](#) under this subsection for new coke oven batteries that begin [construction](#) after the date of proposal of such standards, the Jewell design Thompson non-recovery coke oven batteries and other non-recovery coke oven technologies, and other appropriate emission control and coke production technologies, as to their effectiveness in reducing coke oven emissions and their capability for production of steel quality coke.

Such regulations shall require at a minimum that coke oven batteries will not exceed 8 per centum leaking doors, 1 per centum leaking lids, 5 per centum leaking offtakes, and 16 seconds visible emissions per charge, with no exclusion for emissions during the [period](#) after the closing of self-sealing oven doors. Notwithstanding subsection (i), the compliance date for such [emission standards](#) for existing coke oven batteries shall be December 31, 1995.

(B) The [Administrator](#) shall promulgate work practice regulations under this subsection for coke oven batteries requiring, as appropriate—

(i)

the use of sodium silicate (or equivalent) luting compounds, if the [Administrator](#) determines that use of sodium silicate is an effective [means](#) of emissions control and is achievable, taking into account [costs](#) and reasonable commercial warranties for doors and [related](#) equipment; and

(ii)

door and jam cleaning [practices](#).

Notwithstanding subsection (i), the compliance date for such work practice regulations for coke oven batteries shall be not later than the date 3 [years](#) after November 15, 1990.

(C)

For coke oven batteries electing to qualify for an extension of the compliance date for standards promulgated under subsection (f) in accordance with subsection (i)(8), the [emission standards](#) under this subsection for coke oven batteries shall require that coke oven batteries not exceed 8 per centum leaking doors, 1 per centum leaking lids, 5 per centum leaking offtakes, and 16 seconds visible emissions per charge, with no exclusion for emissions during the [period](#) after the closing of self-sealing doors. Notwithstanding subsection (i), the compliance date for such [emission standards](#) for existing coke oven batteries seeking an extension shall be not later than the date 3 [years](#) after November 15, 1990.

(9) SOURCES LICENSED BY THE NUCLEAR REGULATORY COMMISSION

No standard for radionuclide emissions from any category or subcategory of facilities licensed by the Nuclear Regulatory Commission (or an Agreement [State](#)) is required to be promulgated under this section if the [Administrator](#) determines, by rule, and after consultation with the Nuclear Regulatory Commission, that the regulatory [program](#) established by the Nuclear Regulatory Commission pursuant to the Atomic Energy Act [[42 U.S.C. 2011](#) et seq.] for such category or subcategory provides an ample margin of safety to protect the public health. Nothing in this subsection shall preclude or deny the right of any [State](#) or political subdivision thereof to adopt or enforce

any standard or limitation respecting emissions of radionuclides which is more stringent than the standard or limitation in effect under [section 7411 of this title](#) or this section.

(10)EFFECTIVE DATE

Emission standards or other regulations promulgated under this subsection shall be effective upon promulgation.

(e)SCHEDULE FOR STANDARDS AND REVIEW

(1)IN GENERALThe [Administrator](#) shall promulgate regulations establishing [emission standards](#) for categories and subcategories of sources initially listed for regulation pursuant to subsection (c)(1) as expeditiously as practicable, assuring that—

(A)

[emission standards](#) for not less than 40 categories and subcategories (not counting coke oven batteries) shall be promulgated not later than 2 years after November 15, 1990;

(B)

[emission standards](#) for coke oven batteries shall be promulgated not later than December 31, 1992;

(C)

[emission standards](#) for 25 per centum of the listed categories and subcategories shall be promulgated not later than 4 years after November 15, 1990;

(D)

[emission standards](#) for an additional 25 per centum of the listed categories and subcategories shall be promulgated not later than 7 years after November 15, 1990; and

(E)

[emission standards](#) for all categories and subcategories shall be promulgated not later than 10 years after November 15, 1990.

(2)PRIORITIESIn determining priorities for promulgating standards under subsection (d), the [Administrator](#) shall consider—

(A)

the known or anticipated adverse effects of such pollutants on public health and the environment;

(B)

the quantity and location of emissions or reasonably anticipated emissions of [hazardous air pollutants](#) that each category or subcategory will emit; and

(C)

the efficiency of grouping categories or subcategories according to the pollutants emitted, or the processes or technologies used.

(3)PUBLISHED SCHEDULE

Not later than 24 months after November 15, 1990, and after opportunity for comment, the [Administrator](#) shall publish a schedule establishing a date for the promulgation of [emission standards](#) for each category and subcategory of sources listed pursuant to subsection (c)(1) and (3) which shall be consistent with the requirements of paragraphs (1) and (2). The determination of priorities for the promulgation of standards pursuant to [this paragraph](#) is not a rulemaking and shall not be subject to judicial review, except that, failure to promulgate any standard pursuant to the

schedule established by [this paragraph](#) shall be subject to review under [section 7604 of this title](#).

(4) JUDICIAL REVIEW

Notwithstanding [section 7607 of this title](#), no action of the [Administrator](#) adding a pollutant to the list under subsection (b) or listing a source category or subcategory under subsection (c) shall be a final [agency action](#) subject to judicial review, except that any such action may be reviewed under such [section 7607 of this title](#) when the [Administrator](#) issues [emission standards](#) for such pollutant or category.

(5) PUBLICLY OWNED TREATMENT WORKS

The [Administrator](#) shall promulgate standards pursuant to subsection (d) applicable to publicly owned [treatment](#) works (as defined in title II of the [Federal Water Pollution Control Act](#) [[33 U.S.C. 1281](#) et seq.]) not later than [5 years](#) after November 15, 1990.

(f) STANDARD TO PROTECT HEALTH AND ENVIRONMENT

(1) REPORT Not later than [6 years](#) after November 15, 1990, the [Administrator](#) shall investigate and [report](#), after consultation with the Surgeon General and after opportunity for public comment, to Congress on—

(A)

methods of calculating the risk to public health remaining, or likely to remain, from sources subject to regulation under this section after the application of standards under subsection (d);

(B)

the public health significance of such estimated remaining risk and the technologically and commercially available methods and [costs](#) of reducing such risks;

(C)

the actual health effects with respect to [persons](#) living in the vicinity of sources, any available epidemiological or other health studies, risks presented by background concentrations of [hazardous air pollutants](#), any uncertainties in risk assessment methodology or other health assessment technique, and any negative health or environmental consequences to the community of efforts to reduce such risks; and

(D)

recommendations as to legislation regarding such remaining risk.

(2) EMISSION STANDARDS

(A)

If Congress does not act on any recommendation submitted under paragraph (1), the [Administrator](#) shall, within [8 years](#) after promulgation of standards for each category or subcategory of sources pursuant to subsection (d), promulgate standards for such category or subcategory if promulgation of such standards is required in order to provide an ample margin of safety to protect public health in accordance with this section (as in effect before November 15, 1990) or to prevent, taking into consideration [costs](#), energy, safety, and other relevant factors, an [adverse environmental effect](#). [Emission standards](#) promulgated under this subsection shall provide an ample margin of safety to protect public health in accordance with this section (as in effect before November 15, 1990), unless the [Administrator](#) determines that a more stringent standard is

22 March 2019

necessary to prevent, taking into consideration [costs](#), energy, safety, and other relevant factors, an [adverse environmental effect](#). If standards promulgated pursuant to subsection (d) and applicable to a category or subcategory of sources emitting a pollutant (or pollutants) classified as a known, probable or possible human carcinogen do not reduce lifetime excess cancer risks to the individual most exposed to emissions from a source in the category or subcategory to less than one in one million, the [Administrator](#) shall promulgate standards under this subsection for such source category.

(B)

Nothing in subparagraph (A) or in any other provision of this section shall be construed as affecting, or applying to the [Administrator](#)'s interpretation of this section, as in effect before November 15, 1990, and set forth in the Federal Register of September 14, 1989 (54 Federal Register 38044).

(C)

The [Administrator](#) shall determine whether or not to promulgate such standards and, if the [Administrator](#) decides to promulgate such standards, shall promulgate the standards [8 years](#) after promulgation of the standards under subsection (d) for each source category or subcategory concerned. In the case of categories or subcategories for which standards under subsection (d) are required to be promulgated within [2 years](#) after November 15, 1990, the [Administrator](#) shall have [9 years](#) after promulgation of the standards under subsection (d) to make the determination under the preceding sentence and, if required, to promulgate the standards under [this paragraph](#).

(3) EFFECTIVE DATE

Any [emission standard](#) established pursuant to this subsection shall become effective upon promulgation.

(4) PROHIBITION No [air pollutant](#) to which a standard under this subsection applies may be emitted from any [stationary source](#) in [violation](#) of such standard, except that in the case of an [existing source](#)—

(A)

such standard shall not apply until 90 days after its effective date, and

(B)

the [Administrator](#) may [grant](#) a waiver permitting such source a [period](#) of up to [2 years](#) after the effective date of a standard to comply with the standard if the [Administrator](#) finds that such [period](#) is necessary for the installation of controls and that steps will be taken during the [period](#) of the waiver to assure that the health of [persons](#) will be protected from imminent endangerment.

(5) AREA SOURCES

The [Administrator](#) shall not be required to conduct any review under this subsection or promulgate [emission limitations](#) under this subsection for any category or subcategory of [area sources](#) that is listed pursuant to subsection (c)(3) and for which an [emission standard](#) is promulgated pursuant to subsection (d)(5).

(6) UNIQUE CHEMICAL SUBSTANCES

In establishing standards for the control of unique chemical substances of listed pollutants without CAS numbers under this subsection, the [Administrator](#) shall establish such standards with respect to the health

22 March 2019

and environmental effects of the substances actually emitted by sources and direct transformation byproducts of such emissions in the categories and subcategories.

(g) MODIFICATIONS

(1) OFFSETS

(A)

A physical change in, or change in the method of [operation](#) of, a [major source](#) which results in a greater than de minimis increase in actual emissions of a [hazardous air pollutant](#) shall not be considered a [modification](#), if such increase in the quantity of actual emissions of any [hazardous air pollutant](#) from such source will be offset by an equal or greater decrease in the quantity of emissions of another [hazardous air pollutant](#) (or pollutants) from such source which is deemed more hazardous, pursuant to guidance issued by the [Administrator](#) under subparagraph (B). The [owner or operator](#) of such source shall submit a showing to the [Administrator](#) (or the [State](#)) that such increase has been offset under the preceding sentence.

(B)

The [Administrator](#) shall, after notice and opportunity for comment and not later than 18 months after November 15, 1990, publish guidance with respect to implementation of this subsection. Such guidance shall include an identification, to the extent practicable, of the relative hazard to human health resulting from emissions to the ambient air of each of the pollutants listed under subsection (b) sufficient to facilitate the offset showing authorized by subparagraph (A). Such guidance shall not authorize offsets between pollutants where the increased pollutant (or more than one pollutant in a stream of pollutants) [causes](#) adverse effects to human health for which no safety threshold for exposure can be determined unless there are corresponding decreases in such types of pollutant(s).

(2) CONSTRUCTION, RECONSTRUCTION AND MODIFICATIONS

(A)

After the effective date of a permit [program](#) under subchapter V in any [State](#), no [person](#) may modify a [major source](#) of [hazardous air pollutants](#) in such [State](#), unless the [Administrator](#) (or the [State](#)) determines that the maximum achievable control technology [emission limitation](#) under this section for [existing sources](#) will be met. Such determination shall be made on a case-by-case basis where no applicable emissions limitations have been established by the [Administrator](#).

(B)

After the effective date of a permit [program](#) under subchapter V in any [State](#), no [person](#) may construct or reconstruct any [major source](#) of [hazardous air pollutants](#), unless the [Administrator](#) (or the [State](#)) determines that the maximum achievable control technology [emission limitation](#) under this section for [new sources](#) will be met. Such determination shall be made on a case-by-case basis where no applicable [emission limitations](#) have been established by the [Administrator](#).

(3) PROCEDURES FOR MODIFICATIONS

The [Administrator](#) (or the [State](#)) shall establish reasonable procedures for assuring that the requirements applying to [modifications](#) under this section are reflected in the permit.

(h) WORK PRACTICE STANDARDS AND OTHER REQUIREMENTS

(1) IN GENERAL

For purposes of this section, if it is not [feasible](#) in the judgment of the [Administrator](#) to prescribe or enforce an [emission standard](#) for control of a [hazardous air pollutant](#) or pollutants, the [Administrator](#) may, in lieu thereof, promulgate a design, equipment, work practice, or operational standard, or combination thereof, which in the [Administrator's](#) judgment is consistent with the provisions of subsection (d) or (f). In the event the [Administrator](#) promulgates a design or equipment standard under this subsection, the [Administrator](#) shall include as part of such standard such requirements as will assure the proper [operation](#) and maintenance of any such element of design or equipment.

(2) DEFINITION For the purpose of this subsection, the phrase "not [feasible](#) to prescribe or enforce an [emission standard](#)" [means](#) any situation in which the [Administrator](#) determines that—

(A)

a [hazardous air pollutant](#) or pollutants cannot be emitted through a conveyance designed and constructed to emit or capture such pollutant, or that any requirement for, or use of, such a conveyance would be inconsistent with any Federal, [State](#) or local law, or

(B)

the application of measurement methodology to a particular class of sources is not practicable due to technological and economic limitations.

(3) ALTERNATIVE STANDARD

If after notice and opportunity for comment, the [owner or operator](#) of any source establishes to the satisfaction of the [Administrator](#) that an alternative [means of emission limitation](#) will achieve a reduction in emissions of any [air pollutant](#) at least equivalent to the reduction in emissions of such pollutant achieved under the requirements of paragraph (1), the [Administrator](#) shall permit the use of such alternative by the source for purposes of compliance with this section with respect to such pollutant.

(4) NUMERICAL STANDARD REQUIRED

Any standard promulgated under paragraph (1) shall be promulgated in terms of an [emission standard](#) whenever it is [feasible](#) to promulgate and enforce a standard in such terms.

(i) SCHEDULE FOR COMPLIANCE

(1) PRECONSTRUCTION AND OPERATING REQUIREMENTS

After the effective date of any [emission standard](#), limitation, or regulation under subsection (d), (f) or (h), no [person](#) may construct any new [major source](#) or reconstruct any existing [major source](#) subject to such [emission standard](#), regulation or limitation unless the [Administrator](#) (or a [State](#) with a permit [program](#) approved under subchapter V) determines that such source, if properly constructed, reconstructed and operated, will comply with the standard, regulation or limitation.

(2) SPECIAL RULE Notwithstanding the requirements of paragraph (1), a [new source](#) which commences [construction](#) or reconstruction after a standard, limitation or regulation applicable to such source is proposed and before such standard, limitation or regulation is promulgated shall not be required to comply with such promulgated standard until the date [3 years](#) after the date of promulgation if—

(A)

the promulgated standard, limitation or regulation is more stringent than the standard, limitation or regulation proposed; and

(B)

the source complies with the standard, limitation, or regulation as proposed during the [3-year period](#) immediately after promulgation.

(3) COMPLIANCE SCHEDULE FOR EXISTING SOURCES

(A)

After the effective date of any emissions standard, limitation or regulation promulgated under this section and applicable to a source, no [person](#) may operate such source in [violation](#) of such standard, limitation or regulation except, in the case of an [existing source](#), the [Administrator](#) shall establish a compliance date or dates for each category or subcategory of [existing sources](#), which shall provide for compliance as expeditiously as practicable, but in no event later than [3 years](#) after the effective date of such standard, except as provided in subparagraph (B) and paragraphs (4) through (8).

(B)

The [Administrator](#) (or a [State](#) with a [program](#) approved under subchapter V) may issue a permit that [grants](#) an extension permitting an [existing source](#) up to 1 additional [year](#) to comply with standards under subsection (d) if such additional [period](#) is necessary for the installation of controls. An additional extension of up to [3 years](#) may be added for mining waste [operations](#), if the [4-year](#) compliance time is insufficient to dry and cover mining waste in order to reduce emissions of any pollutant listed under subsection (b).

(4) PRESIDENTIAL EXEMPTION

The President may exempt any [stationary source](#) from compliance with any standard or limitation under this section for a [period](#) of not more than [2 years](#) if the President determines that the technology to implement such standard is not available and that it is in the national security interests of the United [States](#) to do so. An exemption under [this paragraph](#) may be extended for 1 or more additional [periods](#), each [period](#) not to exceed [2 years](#). The President shall [report](#) to Congress with respect to each exemption (or extension thereof) made under [this paragraph](#).

(5) EARLY REDUCTION

(A)

The [Administrator](#) (or a [State](#) acting pursuant to a permit [program](#) approved under subchapter V) shall issue a permit allowing an [existing source](#), for which the [owner or operator](#) demonstrates that the source has achieved a reduction of 90 per centum or more in emissions of [hazardous air pollutants](#) (95 per centum in the case of [hazardous air pollutants](#) which are particulates) from the source, to meet an alternative [emission limitation](#) reflecting such reduction in lieu of an [emission limitation](#) promulgated under subsection (d) for a [period](#) of

22 March 2019

6 [years](#) from the compliance date for the otherwise applicable standard, provided that such reduction is achieved before the otherwise applicable standard under subsection (d) is first proposed. Nothing in [this paragraph](#) shall preclude a [State](#) from requiring reductions in excess of those specified in this subparagraph as a condition of granting the extension authorized by the previous sentence.

(B)

An [existing source](#) which achieves the reduction referred to in subparagraph (A) after the proposal of an applicable standard but before January 1, 1994, may qualify under subparagraph (A), if the source makes an enforceable commitment to achieve such reduction before the proposal of the standard. Such commitment shall be enforceable to the same extent as a regulation under this section.

(C)

The reduction shall be determined with respect to verifiable and actual emissions in a base [year](#) not earlier than calendar [year](#) 1987, provided that, there is no evidence that emissions in the base [year](#) are artificially or substantially greater than emissions in other [years](#) prior to implementation of emissions reduction measures. The [Administrator](#) may allow a source to use a [baseline year](#) of 1985 or 1986 provided that the source can demonstrate to the satisfaction of the [Administrator](#) that emissions data for the source reflects verifiable data based on information for such source, received by the [Administrator](#) prior to November 15, 1990, pursuant to an information request issued under [section 7414 of this title](#).

(D)

For each source granted an alternative [emission limitation](#) under [this paragraph](#) there shall be established by a permit issued pursuant to subchapter V an enforceable [emission limitation](#) for [hazardous air pollutants](#) reflecting the reduction which qualifies the source for an alternative [emission limitation](#) under [this paragraph](#). An alternative [emission limitation](#) under [this paragraph](#) shall not be available with respect to standards or requirements promulgated pursuant to subsection (f) and the [Administrator](#) shall, for the purpose of determining whether a standard under subsection (f) is necessary, review emissions from sources granted an alternative [emission limitation](#) under [this paragraph](#) at the same time that other sources in the category or subcategory are reviewed.

(E)

With respect to pollutants for which high risks of adverse public health effects may be associated with exposure to small quantities including, but not limited to, chlorinated dioxins and furans, the [Administrator](#) shall by regulation limit the use of offsetting reductions in emissions of other [hazardous air pollutants](#) from the source as counting toward the 90 per centum reduction in such high-risk pollutants qualifying for an alternative emissions limitation under [this paragraph](#).

(6) OTHER REDUCTIONS Notwithstanding the requirements of this section, no [existing source](#) that has installed—

(A)

best available control technology (as defined in [section 7479\(3\) of this title](#)), or

(B)

technology required to meet a lowest achievable emission rate (as defined in [section 7501 of this title](#)), prior to the promulgation of a standard under this section applicable to such source and the same pollutant (or stream of pollutants) controlled pursuant to an action described in subparagraph (A) or (B) shall be required to comply with such standard under this section until the date 5 [years](#) after the date on which such installation or reduction has been achieved, as determined by the [Administrator](#). The [Administrator](#) may issue such rules and guidance as are necessary to implement [this paragraph](#).

(7) EXTENSION FOR NEW SOURCES

A source for which [construction](#) or reconstruction is [commenced](#) after the date an [emission standard](#) applicable to such source is proposed pursuant to subsection (d) but before the date an [emission standard](#) applicable to such source is proposed pursuant to subsection (f) shall not be required to comply with the [emission standard](#) under subsection (f) until the date 10 [years](#) after the date [construction](#) or reconstruction is [commenced](#).

(8) COKE OVENS

(A)

Any coke oven battery that complies with the [emission limitations](#) established under subsection (d)(8)(C), subparagraph (B), and subparagraph (C), and complies with the provisions of subparagraph (E), shall not be required to achieve [emission limitations](#) promulgated under subsection (f) until January 1, 2020.

(B)

(i) Not later than December 31, 1992, the [Administrator](#) shall promulgate [emission limitations](#) for coke oven emissions from coke oven batteries. Notwithstanding paragraph (3) of this subsection, the compliance date for such [emission limitations](#) for existing coke oven batteries shall be January 1, 1998. Such [emission limitations](#) shall reflect the lowest achievable emission rate as defined in [section 7501 of this title](#) for a coke oven battery that is rebuilt or a replacement at a coke oven plant for an existing battery. Such [emission limitations](#) shall be no less stringent than—

(I)

3 per centum leaking doors (5 per centum leaking doors for six meter batteries);

(II)

1 per centum leaking lids;

(III)

4 per centum leaking offtakes; and

(IV)

16 seconds visible emissions per charge, with an exclusion for emissions during the [period](#) after the closing of self-sealing oven doors (or the total mass emissions equivalent). The rulemaking in which such [emission limitations](#) are promulgated shall also establish an appropriate measurement methodology for determining compliance with such [emission limitations](#), and shall establish such [emission limitations](#) in terms of an equivalent level of mass emissions reduction from a coke oven battery, unless

22 March 2019

the [Administrator](#) finds that such a mass emissions standard would not be practicable or enforceable. Such measurement methodology, to the extent it measures leaking doors, shall take into consideration [alternative test methods](#) that reflect the best technology and [practices](#) actually [applied](#) in the affected industries, and shall assure that the final test methods are consistent with the performance of such best technology and [practices](#).

(ii) If the [Administrator](#) fails to promulgate such [emission limitations](#) under this subparagraph prior to the effective date of such [emission limitations](#), the [emission limitations](#) applicable to coke oven batteries under this subparagraph shall be—

(I)

3 per centum leaking doors (5 per centum leaking doors for six meter batteries);

(II)

1 per centum leaking lids;

(III)

4 per centum leaking offtakes; and

(IV)

16 seconds visible emissions per charge, or the total mass emissions equivalent (if the total mass emissions equivalent is determined to be practicable and enforceable), with no exclusion for emissions during the [period](#) after the closing of self-sealing oven doors.

(C)

Not later than January 1, 2007, the [Administrator](#) shall review the [emission limitations](#) promulgated under subparagraph (B) and revise, as necessary, such [emission limitations](#) to reflect the lowest achievable emission rate as defined in [section 7501 of this title](#) at the time for a coke oven battery that is rebuilt or a replacement at a coke oven plant for an existing battery. Such [emission limitations](#) shall be no less stringent than the [emission limitation](#) promulgated under subparagraph (B).

Notwithstanding paragraph (2) of this subsection, the compliance date for such [emission limitations](#) for existing coke oven batteries shall be January 1, 2010.

(D)

At any time prior to January 1, 1998, the [owner or operator](#) of any coke oven battery may elect to comply with [emission limitations](#) promulgated under subsection (f) by the date such [emission limitations](#) would otherwise apply to such coke oven battery, in lieu of the [emission limitations](#) and the compliance dates provided under subparagraphs (B) and (C) of [this paragraph](#). Any such [owner or operator](#) shall be legally bound to comply with such [emission limitations](#) promulgated under subsection (f) with respect to such coke oven battery as of January 1, 2003. If no such [emission limitations](#) have been promulgated for such coke oven battery, the [Administrator](#) shall promulgate such [emission limitations](#) in accordance with subsection (f) for such coke oven battery.

(E)

Coke oven batteries qualifying for an extension under subparagraph (A) shall make available not later than January 1, 2000, to the surrounding communities the results of any risk assessment performed by

the [Administrator](#) to determine the appropriate level of any [emission standard](#) established by the [Administrator](#) pursuant to subsection (f).

(F)

Notwithstanding the provisions of this section, [reconstruction](#) of any source of coke oven emissions qualifying for an extension under [this paragraph](#) shall not subject such source to [emission limitations](#) under subsection (f) more stringent than those established under subparagraphs (B) and (C) until January 1, 2020. For the purposes of this subparagraph, the term "[reconstruction](#)" includes the replacement of existing coke oven battery capacity with new coke oven batteries of comparable or lower capacity and lower potential emissions.

(j)EQUIVALENT EMISSION LIMITATION BY PERMIT

(1)EFFECTIVE DATE

The requirements of this subsection shall apply in each [State](#) beginning on the effective date of a permit [program](#) established pursuant to subchapter V in such [State](#), but not prior to the date 42 months after November 15, 1990.

(2)FAILURE TO PROMULGATE A STANDARD

In the event that the [Administrator](#) fails to promulgate a standard for a category or subcategory of [major sources](#) by the date established pursuant to subsection (e)(1) and (3), and beginning 18 months after such date (but not prior to the effective date of a permit [program](#) under subchapter V), the [owner or operator](#) of any [major source](#) in such category or subcategory shall submit a permit application under paragraph (3) and such [owner or operator](#) shall also comply with paragraphs (5) and (6).

(3)APPLICATIONS

By the date established by paragraph (2), the [owner or operator](#) of a [major source](#) subject to this subsection shall file an application for a permit. If the [owner or operator](#) of a source has submitted a timely and complete application for a permit required by this subsection, any failure to have a permit shall not be a [violation](#) of paragraph (2), unless the delay in final action is due to the failure of the [applicant](#) to timely submit information required or requested to process the application.

The [Administrator](#) shall not later than 18 months after November 15, 1990, and after notice and opportunity for comment, establish requirements for applications under this subsection including a standard application form and criteria for determining in a timely manner the completeness of applications.

(4)REVIEW AND APPROVAL

Permit applications submitted under this subsection shall be reviewed and approved or disapproved according to the provisions of [section 7661d of this title](#). In the event that the [Administrator](#) (or the [State](#)) disapproves a permit application submitted under this subsection or determines that the application is incomplete, the [applicant](#) shall have up to 6 months to revise the application to meet the objections of the [Administrator](#) (or the [State](#)).

(5)EMISSION LIMITATION

22 March 2019

The permit shall be issued pursuant to subchapter V and shall contain [emission limitations](#) for the [hazardous air pollutants](#) subject to regulation under this section and emitted by the source that the [Administrator](#) (or the [State](#)) determines, on a case-by-case basis, to be equivalent to the limitation that would apply to such source if an [emission standard](#) had been promulgated in a timely manner under subsection (d). In the alternative, if the applicable criteria are met, the permit may contain an emissions limitation established according to the provisions of subsection (i)(5). For purposes of the preceding sentence, the reduction required by subsection (i)(5)(A) shall be achieved by the date on which the relevant standard should have been promulgated under subsection (d). No such pollutant may be emitted in amounts exceeding an [emission limitation](#) contained in a permit immediately for [new sources](#) and, as expeditiously as practicable, but not later than the date [3 years](#) after the permit is issued for [existing sources](#) or such other compliance date as would apply under subsection (i).

(6) APPLICABILITY OF SUBSEQUENT STANDARDS

If the [Administrator](#) promulgates an [emission standard](#) that is applicable to the [major source](#) prior to the date on which a permit application is approved, the [emission limitation](#) in the permit shall reflect the promulgated standard rather than the [emission limitation](#) determined pursuant to paragraph (5), provided that the source shall have the compliance [period](#) provided under subsection (i). If the [Administrator](#) promulgates a standard under subsection (d) that would be applicable to the source in lieu of the [emission limitation](#) established by permit under this subsection after the date on which the permit has been issued, the [Administrator](#) (or the [State](#)) shall revise such permit upon the next renewal to reflect the standard promulgated by the [Administrator](#) providing such source a reasonable time to comply, but no longer than [8 years](#) after such standard is promulgated or [8 years](#) after the date on which the source is first required to comply with the emissions limitation established by paragraph (5), whichever is earlier.

(k) AREA SOURCE PROGRAM

(1) FINDINGS AND PURPOSE

The Congress finds that emissions of [hazardous air pollutants](#) from [area sources](#) may individually, or in the aggregate, present significant risks to public health in urban areas. Considering the large number of [persons](#) exposed and the risks of carcinogenic and other adverse health effects from [hazardous air pollutants](#), ambient concentrations characteristic of large urban areas should be reduced to levels substantially below those currently experienced. It is the purpose of this subsection to achieve a substantial reduction in emissions of [hazardous air pollutants](#) from [area sources](#) and an equivalent reduction in the public health risks associated with such sources including a reduction of not less than 75 per centum in the incidence of cancer attributable to emissions from such sources.

(2) RESEARCH PROGRAM The [Administrator](#) shall, after consultation with [State](#) and local air pollution control officials, conduct a [program](#) of [research](#) with respect to sources of [hazardous air pollutants](#) in urban areas and shall include within such [program](#)—

(A)

ambient monitoring for a broad range of [hazardous air pollutants](#) (including, but not limited to, [volatile organic compounds](#), metals, pesticides and products of incomplete combustion) in a [representative](#) number of urban locations;

(B)

analysis to characterize the sources of such pollution with a focus on [area sources](#) and the contribution that such sources make to public health risks from [hazardous air pollutants](#); and

(C)

consideration of atmospheric transformation and other factors which can elevate public health risks from such pollutants.

Health effects considered under this [program](#) shall include, but not be limited to, carcinogenicity, mutagenicity, teratogenicity, neurotoxicity, reproductive dysfunction and other acute and chronic effects including the role of such pollutants as precursors of ozone or acid aerosol [formation](#).

The [Administrator](#) shall [report](#) the preliminary results of such [research](#) not later than 3 [years](#) after November 15, 1990.

(3) NATIONAL STRATEGY

(A)

Considering information collected pursuant to the monitoring [program](#) authorized by paragraph (2), the [Administrator](#) shall, not later than 5 [years](#) after November 15, 1990, and after notice and opportunity for public comment, prepare and transmit to the Congress a comprehensive strategy to control emissions of [hazardous air pollutants](#) from [area sources](#) in urban areas.

(B) The strategy shall—

(i)

identify not less than 30 [hazardous air pollutants](#) which, as the result of emissions from [area sources](#), present the greatest threat to public health in the largest number of urban areas and that are or will be listed pursuant to subsection (b), and

(ii)

identify the source categories or subcategories emitting such pollutants that are or will be listed pursuant to subsection (c). When identifying categories and subcategories of sources under this subparagraph, the [Administrator](#) shall assure that sources accounting for 90 per centum or more of the aggregate emissions of each of the 30 identified [hazardous air pollutants](#) are subject to standards pursuant to subsection (d).

(C)

The strategy shall include a schedule of specific actions to substantially reduce the public health risks posed by the release of [hazardous air pollutants](#) from [area sources](#) that will be implemented by the [Administrator](#) under the authority of this or other laws (including, but not limited to, the [Toxic Substances Control Act](#) [[15 U.S.C. 2601](#) et seq.], the Federal Insecticide, Fungicide and Rodenticide Act [[7 U.S.C. 136](#) et seq.] and the Resource Conservation and Recovery Act [[42 U.S.C. 6901](#) et seq.]) or by the [States](#). The strategy shall achieve a reduction in the incidence of cancer attributable to exposure to [hazardous air pollutants](#) emitted by [stationary sources](#) of not less than 75 per centum, considering control of emissions of [hazardous air pollutants](#) from

all [stationary sources](#) and resulting from measures implemented by the [Administrator](#) or by the [States](#) under this or other laws.

(D)

The strategy may also identify [research](#) needs in monitoring, analytical methodology, modeling or pollution control techniques and recommendations for changes in law that would further the goals and objectives of this subsection.

(E)

Nothing in this subsection shall be interpreted to preclude or delay implementation of actions with respect to [area sources](#) of [hazardous air pollutants](#) under consideration pursuant to this or any other law and that may be promulgated before the strategy is prepared.

(F)

The [Administrator](#) shall implement the strategy as expeditiously as practicable assuring that all sources are in compliance with all requirements not later than 9 [years](#) after November 15, 1990.

(G)

As part of such strategy the [Administrator](#) shall provide for ambient monitoring and emissions modeling in urban areas as appropriate to demonstrate that the goals and objectives of the strategy are being met.

(4) AREAWIDE ACTIVITIES

In addition to the national urban air toxics strategy authorized by paragraph (3), the [Administrator](#) shall also encourage and support areawide strategies developed by [State](#) or local air pollution control agencies that are intended to reduce risks from emissions by [area sources](#) within a particular urban area. From the [funds](#) available for [grants](#) under this section, the [Administrator](#) shall set aside not less than 10 per centum to support areawide strategies addressing [hazardous air pollutants](#) emitted by [area sources](#) and shall [award](#) such [funds](#) on a demonstration basis to those [States](#) with innovative and effective strategies. At the request of [State](#) or local air pollution control officials, the [Administrator](#) shall prepare guidelines for control technologies or management [practices](#) which may be applicable to various categories or subcategories of [area sources](#).

(5) REPORT

The [Administrator](#) shall [report](#) to the Congress at intervals not later than 8 and 12 [years](#) after November 15, 1990, on actions taken under this subsection and other parts of this chapter to reduce the risk to public health posed by the release of [hazardous air pollutants](#) from [area sources](#). The [reports](#) shall also identify specific [metropolitan areas](#) that continue to experience high risks to public health as the result of emissions from [area sources](#).

(I) STATE PROGRAMS

(1) IN GENERAL

Each [State](#) may develop and submit to the [Administrator](#) for approval a [program](#) for the implementation and enforcement (including a review of enforcement delegations previously granted) of [emission standards](#) and other requirements for [air pollutants](#) subject to this section or requirements for the prevention and mitigation of [accidental releases](#) pursuant to subsection (r). A [program](#) submitted by

22 March 2019

a [State](#) under this subsection may provide for partial or complete delegation of the [Administrator's](#) authorities and responsibilities to implement and enforce emissions standards and prevention requirements but shall not include authority to set standards less stringent than those promulgated by the [Administrator](#) under this chapter.

(2) GUIDANCE

Not later than 12 months after November 15, 1990, the [Administrator](#) shall publish guidance that would be useful to the [States](#) in developing [programs](#) for submittal under this subsection. The guidance shall also provide for the registration of all facilities producing, processing, handling or storing any substance listed pursuant to subsection (r) in amounts greater than the threshold quantity. The [Administrator](#) shall include as an element in such guidance an optional [program](#) begun in 1986 for the review of high-risk point sources of [air pollutants](#) including, but not limited to, [hazardous air pollutants](#) listed pursuant to subsection (b).

(3) TECHNICAL ASSISTANCE

The [Administrator](#) shall establish and maintain an air toxics clearinghouse and [center](#) to provide technical information and assistance to [State](#) and local agencies and, on a cost recovery basis, to others on control technology, health and ecological risk assessment, risk analysis, ambient monitoring and modeling, and emissions measurement and monitoring. The [Administrator](#) shall use the authority of [section 7403 of this title](#) to examine methods for preventing, measuring, and controlling emissions and evaluating associated health and ecological risks. Where appropriate, such activity shall be conducted with not-for-profit organizations. The [Administrator](#) may conduct [research](#) on methods for preventing, measuring and controlling emissions and evaluating associated health and environment risks. All information collected under [this paragraph](#) shall be available to the public.

(4) GRANTS

Upon application of a [State](#), the [Administrator](#) may make [grants](#), subject to such terms and conditions as the [Administrator](#) deems appropriate, to such [State](#) for the purpose of assisting the [State](#) in developing and implementing a [program](#) for submittal and approval under this subsection. [Programs](#) assisted under [this paragraph](#) may include [program](#) elements addressing [air pollutants](#) or extremely hazardous substances other than those specifically subject to this section. [Grants](#) under [this paragraph](#) may include support for high-risk point source review as provided in paragraph (2) and support for the [development](#) and implementation of areawide [area source programs](#) pursuant to subsection (k).

(5) APPROVAL OR DISAPPROVAL Not later than 180 days after receiving a [program](#) submitted by a [State](#), and after notice and opportunity for public comment, the [Administrator](#) shall either approve or disapprove such [program](#). The [Administrator](#) shall disapprove any [program](#) submitted by a [State](#), if the [Administrator](#) determines that—

(A)

22 March 2019

the authorities contained in the [program](#) are not adequate to assure compliance by all sources within the [State](#) with each applicable standard, regulation or requirement established by the [Administrator](#) under this section;

(B)

adequate authority does not exist, or adequate [resources](#) are not available, to implement the [program](#);

(C)

the schedule for implementing the [program](#) and assuring compliance by [affected sources](#) is not sufficiently expeditious; or

(D)

the [program](#) is otherwise not in compliance with the guidance issued by the [Administrator](#) under paragraph (2) or is not likely to satisfy, in whole or in part, the objectives of this chapter.

If the [Administrator](#) disapproves a [State](#) program, the [Administrator](#) shall notify the [State](#) of any revisions or [modifications](#) necessary to obtain approval. The [State](#) may revise and resubmit the proposed [program](#) for review and approval pursuant to the provisions of this subsection.

(6) WITHDRAWAL

Whenever the [Administrator](#) determines, after public hearing, that a [State](#) is not administering and enforcing a [program](#) approved pursuant to this subsection in accordance with the guidance published pursuant to paragraph (2) or the requirements of paragraph (5), the [Administrator](#) shall so notify the [State](#) and, if action which will assure prompt compliance is not taken within 90 days, the [Administrator](#) shall withdraw approval of the [program](#). The [Administrator](#) shall not withdraw approval of any [program](#) unless the [State](#) shall have been notified and the reasons for withdrawal shall have been stated in writing and made public.

(7) AUTHORITY TO ENFORCE

Nothing in this subsection shall prohibit the [Administrator](#) from enforcing any applicable [emission standard](#) or requirement under this section.

(8) LOCAL PROGRAM

The [Administrator](#) may, after notice and opportunity for public comment, approve a [program](#) developed and submitted by a local [air pollution control agency](#) (after consultation with the [State](#)) pursuant to this subsection and any such [agency](#) implementing an approved [program](#) may take any action authorized to be taken by a [State](#) under this section.

(9) PERMIT AUTHORITY

Nothing in this subsection shall affect the authorities and obligations of the [Administrator](#) or the [State](#) under subchapter V.

(m) ATMOSPHERIC DEPOSITION TO GREAT LAKES AND COASTAL WATERS

(1) DEPOSITION ASSESSMENT The [Administrator](#), in cooperation with the Under Secretary of Commerce for Oceans and Atmosphere, shall conduct a [program](#) to identify and assess the extent of atmospheric deposition of [hazardous air pollutants](#) (and in the discretion of the [Administrator](#), other [air pollutants](#)) to the Great Lakes, the Chesapeake Bay, Lake Champlain and [coastal waters](#). As part of such [program](#), the [Administrator](#) shall—

(A)

22 March 2019

monitor the Great Lakes, the Chesapeake Bay, Lake Champlain and [coastal waters](#), including monitoring of the Great Lakes through the monitoring network established pursuant to paragraph (2) of this subsection and designing and deploying an atmospheric monitoring network for [coastal waters](#) pursuant to paragraph (4);

(B)

investigate the sources and deposition rates of atmospheric deposition of [air pollutants](#) (and their atmospheric transformation precursors);

(C)

conduct [research](#) to develop and improve monitoring methods and to determine the relative contribution of atmospheric pollutants to total pollution loadings to the Great Lakes, the Chesapeake Bay, Lake Champlain, and [coastal waters](#);

(D)

evaluate any adverse effects to public health or the environment caused by such deposition (including effects resulting from indirect exposure pathways) and assess the contribution of such deposition to [violations](#) of water quality standards established pursuant to the [Federal Water Pollution Control Act](#) [[33 U.S.C. 1251](#) et seq.] and drinking water standards established pursuant to the [Safe Drinking Water Act](#) [[42 U.S.C. 300f](#) et seq.]; and

(E)

sample for such pollutants in biota, fish, and wildlife of the Great Lakes, the Chesapeake Bay, Lake Champlain and [coastal waters](#) and characterize the sources of such pollutants.

(2) GREAT LAKES MONITORING NETWORK The [Administrator](#) shall oversee, in accordance with Annex 15 of the Great Lakes Water Quality Agreement, the establishment and [operation](#) of a Great Lakes atmospheric deposition network to monitor atmospheric deposition of [hazardous air pollutants](#) (and in the [Administrator's](#) discretion, other [air pollutants](#)) to the Great Lakes.

(A)

As part of the network provided for in [this paragraph](#), and not later than December 31, 1991, the [Administrator](#) shall establish in each of the 5 Great Lakes at least 1 [facility](#) capable of monitoring the atmospheric deposition of [hazardous air pollutants](#) in both dry and wet conditions.

(B)

The [Administrator](#) shall use the data provided by the network to identify and track the movement of [hazardous air pollutants](#) through the Great Lakes, to determine the portion of water pollution loadings attributable to atmospheric deposition of such pollutants, and to support [development](#) of remedial action plans and other management plans as required by the Great Lakes Water Quality Agreement.

(C)

The [Administrator](#) shall assure that the data collected by the Great Lakes atmospheric deposition monitoring network is in a format compatible with databases sponsored by the International Joint [Commission](#), Canada, and the several [States](#) of the Great Lakes region.

(3) MONITORING FOR THE CHESAPEAKE BAY AND LAKE CHAMPLAIN

The [Administrator](#) shall establish at the Chesapeake Bay and Lake Champlain atmospheric deposition [stations](#) to monitor deposition

of [hazardous air pollutants](#) (and in the [Administrator's](#) discretion, other [air pollutants](#)) within the Chesapeake Bay and Lake Champlain watersheds. The [Administrator](#) shall determine the role of air deposition in the pollutant loadings of the Chesapeake Bay and Lake Champlain, investigate the sources of [air pollutants](#) deposited in the watersheds, evaluate the health and environmental effects of such pollutant loadings, and shall sample such pollutants in biota, fish and wildlife within the watersheds, as necessary to characterize such effects.

(4) MONITORING FOR COASTAL WATERS

The [Administrator](#) shall design and deploy atmospheric deposition monitoring networks for [coastal waters](#) and their watersheds and shall make any information collected through such networks available to the public. As part of this effort, the [Administrator](#) shall conduct [research](#) to develop and improve deposition monitoring methods, and to determine the relative contribution of atmospheric pollutants to pollutant loadings. For purposes of this subsection, "[coastal waters](#)" shall [mean](#) estuaries selected pursuant to section 320(a)(2)(A) of the [Federal Water Pollution Control Act](#) [[33 U.S.C. 1330\(a\)\(2\)\(A\)](#)] or listed pursuant to section 320(a)(2)(B) of such Act [[33 U.S.C. 1330\(a\)\(2\)\(B\)](#)] or estuarine research [reserves](#) designated pursuant to [section 1461 of title 16](#).

(5) REPORT Within 3 [years](#) of November 15, 1990, and biennially thereafter, the [Administrator](#), in cooperation with the Under Secretary of Commerce for Oceans and Atmosphere, shall submit to the Congress a [report](#) on the results of any monitoring, studies, and investigations conducted pursuant to this subsection. Such [report](#) shall include, at a minimum, an assessment of—

(A)

the contribution of atmospheric deposition to pollution loadings in the Great Lakes, the Chesapeake Bay, Lake Champlain and [coastal waters](#);

(B)

the environmental and public health effects of any pollution which is attributable to atmospheric deposition to the Great Lakes, the Chesapeake Bay, Lake Champlain and [coastal waters](#);

(C)

the source or sources of any pollution to the Great Lakes, the Chesapeake Bay, Lake Champlain and [coastal waters](#) which is attributable to atmospheric deposition;

(D)

whether pollution loadings in the Great Lakes, the Chesapeake Bay, Lake Champlain or [coastal waters cause](#) or contribute to exceedances of drinking water standards pursuant to the [Safe Drinking Water Act](#) [[42 U.S.C. 300f](#) et seq.] or water quality standards pursuant to the [Federal Water Pollution Control Act](#) [[33 U.S.C. 1251](#) et seq.] or, with respect to the Great Lakes, exceedances of the specific objectives of the Great Lakes Water Quality Agreement; and

(E)

a description of any revisions of the requirements, standards, and limitations pursuant to this chapter and other applicable Federal laws as are necessary to assure protection of human health and the environment.

(6) ADDITIONAL REGULATION

22 March 2019

As part of the [report](#) to Congress, the [Administrator](#) shall determine whether the other provisions of this section are adequate to prevent serious adverse effects to public health and serious or widespread environmental effects, including such effects resulting from indirect exposure pathways, associated with atmospheric deposition to the Great Lakes, the Chesapeake Bay, Lake Champlain and [coastal waters](#) of [hazardous air pollutants](#) (and their atmospheric transformation products). The [Administrator](#) shall take into consideration the tendency of such pollutants to bioaccumulate. Within 5 [years](#) after November 15, 1990, the [Administrator](#) shall, based on such [report](#) and determination, promulgate, in accordance with this section, such further [emission standards](#) or control measures as may be necessary and appropriate to prevent such effects, including effects due to bioaccumulation and indirect exposure pathways. Any requirements promulgated pursuant to [this paragraph](#) with respect to [coastal waters](#) shall only apply to the [coastal waters](#) of the [States](#) which are subject to [section 7627\(a\) of this title](#).

(n) OTHER PROVISIONS

(1) ELECTRIC UTILITY STEAM GENERATING UNITS

(A)

The [Administrator](#) shall perform a study of the hazards to public health reasonably anticipated to occur as a result of emissions by [electric utility steam generating units](#) of pollutants listed under subsection (b) after imposition of the requirements of this chapter.

The [Administrator](#) shall [report](#) the results of this study to the Congress within 3 [years](#) after November 15, 1990.

The [Administrator](#) shall develop and describe in the [Administrator's report](#) to Congress alternative control strategies for emissions which may warrant regulation under this section.

The [Administrator](#) shall regulate [electric utility steam generating units](#) under this section, if the [Administrator](#) finds such regulation is appropriate and necessary after considering the results of the study required by this subparagraph.

(B)

The [Administrator](#) shall conduct, and transmit to the Congress not later than 4 [years](#) after November 15, 1990, a study of mercury emissions from [electric utility steam generating units](#), municipal waste combustion [units](#), and other sources, including [area sources](#). Such study shall consider the rate and mass of such emissions, the health and environmental effects of such emissions, technologies which are available to control such emissions, and the [costs](#) of such technologies.

(C)

The National [Institute](#) of Environmental Health Sciences shall conduct, and transmit to the Congress not later than 3 [years](#) after November 15, 1990, a study to determine the threshold level of mercury exposure below which adverse human health effects are not expected to occur. Such study shall include a threshold for mercury concentrations in the tissue of fish which may be consumed (including [consumption](#) by sensitive populations) without adverse effects to public health.

(2) COKE OVEN PRODUCTION TECHNOLOGY STUDY

(A)

22 March 2019

The [Secretary](#) of the Department of Energy and the [Administrator](#) shall jointly undertake a 6-[year](#) study to assess coke oven production emission control technologies and to assist in the [development](#) and commercialization of technically practicable and economically viable control technologies which have the potential to significantly reduce emissions of [hazardous air pollutants](#) from coke oven production facilities. In identifying control technologies, the [Secretary](#) and the [Administrator](#) shall consider the range of existing coke oven [operations](#) and battery design and the availability of sources of [materials](#) for such coke ovens as [well](#) as alternatives to existing coke oven production design.

(B)

The [Secretary](#) and the [Administrator](#) are authorized to enter into agreements with [persons](#) who propose to develop, install and operate coke production emission control technologies which have the potential for significant emissions reductions of [hazardous air pollutants](#) provided that Federal [funds](#) shall not exceed 50 per centum of the cost of any project assisted pursuant to [this paragraph](#).

(C)

On completion of the study, the [Secretary](#) shall submit to Congress a [report](#) on the results of the study and shall make recommendations to the [Administrator](#) identifying practicable and economically viable control technologies for coke oven production facilities to reduce residual risks remaining after implementation of the standard under subsection (d).

(D)

There are authorized to be appropriated \$5,000,000 for each of the fiscal [years](#) 1992 through 1997 to carry out the [program](#) authorized by [this paragraph](#).

(3) PUBLICLY OWNED TREATMENT WORKS

The [Administrator](#) may conduct, in cooperation with the [owners](#) and operators of publicly owned [treatment](#) works, studies to characterize emissions of [hazardous air pollutants](#) emitted by such facilities, to identify industrial, commercial and residential [discharges](#) that contribute to such emissions and to demonstrate control measures for such emissions. When promulgating any standard under this section applicable to publicly owned [treatment](#) works, the [Administrator](#) may provide for control measures that include pretreatment of [discharges](#) causing emissions of [hazardous air pollutants](#) and process or product substitutions or limitations that may be effective in reducing such emissions.

The [Administrator](#) may prescribe uniform sampling, modeling and risk assessment methods for use in implementing this subsection.

(4) OIL AND GAS WELLS; PIPELINE FACILITIES

(A)

Notwithstanding the provisions of subsection (a), emissions from any oil or gas exploration or production [well](#) (with its associated equipment) and emissions from any [pipeline](#) compressor or pump [station](#) shall not be aggregated with emissions from other similar [units](#), whether or not such [units](#) are in a contiguous area or under common control, to determine whether such [units](#) or [stations](#) are [major sources](#), and in the case of any oil or gas exploration or production [well](#) (with its associated

equipment), such emissions shall not be aggregated for any purpose under this section.

(B)

The Administrator shall not list oil and gas production wells (with its associated equipment) as an area source category under subsection (c), except that the Administrator may establish an area source category for oil and gas production wells located in any metropolitan statistical area or consolidated metropolitan statistical area with a population in excess of 1 million, if the Administrator determines that emissions of hazardous air pollutants from such wells present more than a negligible risk of adverse effects to public health.

(5) HYDROGEN SULFIDE

The Administrator is directed to assess the hazards to public health and the environment resulting from the emission of hydrogen sulfide associated with the extraction of oil and natural gas resources. To the extent practicable, the assessment shall build upon and not duplicate work conducted for an assessment pursuant to section 8002(m) of the Solid Waste Disposal Act [42 U.S.C. 6982(m)] and shall reflect consultation with the States. The assessment shall include a review of existing State and industry control standards, techniques and enforcement.

The Administrator shall report to the Congress within 24 months after November 15, 1990, with the findings of such assessment, together with any recommendations, and shall, as appropriate, develop and implement a control strategy for emissions of hydrogen sulfide to protect human health and the environment, based on the findings of such assessment, using authorities under this chapter including sections 317411 of this title and this section.

(6) HYDROFLUORIC ACID

Not later than 2 years after November 15, 1990, the Administrator shall, for those regions of the country which do not have comprehensive health and safety regulations with respect to hydrofluoric acid, complete a study of the potential hazards of hydrofluoric acid and the uses of hydrofluoric acid in industrial and commercial applications to public health and the environment considering a range of events including worst-case accidental releases and shall make recommendations to the Congress for the reduction of such hazards, if appropriate.

(7) RCRA FACILITIES

In the case of any category or subcategory of sources the air emissions of which are regulated under subtitle C of the Solid Waste Disposal Act [42 U.S.C. 6921 et seq.], the Administrator shall take into account any regulations of such emissions which are promulgated under such subtitle and shall, to the maximum extent practicable and consistent with the provisions of this section, ensure that the requirements of such subtitle and this section are consistent.

(o) NATIONAL ACADEMY OF SCIENCES STUDY

(1) REQUEST OF THE ACADEMY Within 3 months of November 15, 1990, the Administrator shall enter into appropriate arrangements with the National Academy of Sciences to conduct a review of—

(A)

22 March 2019

risk assessment methodology used by the Environmental Protection Agency to determine the carcinogenic risk associated with exposure to [hazardous air pollutants](#) from source categories and subcategories subject to the requirements of this section; and

(B)

improvements in such methodology.

(2) ELEMENTS TO BE STUDIED In conducting such review, the National Academy of Sciences should consider, but not be limited to, the following—

(A)

the techniques used for estimating and describing the carcinogenic potency to humans of [hazardous air pollutants](#); and

(B)

the techniques used for estimating exposure to [hazardous air pollutants](#) (for hypothetical and actual maximally exposed individuals as [well](#) as other exposed individuals).

(3) OTHER HEALTH EFFECTS OF CONCERN

To the extent practicable, the Academy shall evaluate and [report](#) on the methodology for assessing the risk of adverse human health effects other than cancer for which safe thresholds of exposure may not exist, including, but not limited to, inheritable genetic mutations, birth defects, and reproductive dysfunctions.

(4) REPORT

A [report](#) on the results of such review shall be submitted to the Senate Committee on Environment and Public Works, the House Committee on Energy and Commerce, the Risk Assessment and Management [Commission](#) established by section 303 of the [Clean Air Act Amendments of 1990](#) and the [Administrator](#) not later than 30 months after November 15, 1990.

(5) ASSISTANCE

The [Administrator](#) shall assist the Academy in gathering any information the Academy deems necessary to carry out this subsection.

The [Administrator](#) may use any authority under this chapter to obtain information from any [person](#), and to require any [person](#) to conduct tests, keep and produce records, and make [reports](#) respecting [research](#) or other activities conducted by such [person](#) as necessary to carry out this subsection.

(6) AUTHORIZATION

Of the [funds](#) authorized to be appropriated to the [Administrator](#) by this chapter, such amounts as are required shall be available to carry out this subsection.

(7) GUIDELINES FOR CARCINOGENIC RISK ASSESSMENT

The [Administrator](#) shall consider, but need not adopt, the recommendations contained in the [report](#) of the National Academy of Sciences prepared pursuant to this subsection and the views of the Science Advisory [Board](#), with respect to such [report](#). Prior to the promulgation of any standard under subsection (f), and after notice and opportunity for comment, the [Administrator](#) shall publish revised Guidelines for Carcinogenic Risk Assessment or a detailed explanation of

22 March 2019

the reasons that any recommendations contained in the [report](#) of the National Academy of Sciences will not be implemented. The publication of such revised Guidelines shall be a final [Agency action](#) for purposes of [section 7607 of this title](#).

(p) MICKEY LELAND NATIONAL URBAN AIR TOXICS RESEARCH CENTER

(1) ESTABLISHMENT

The [Administrator](#) shall oversee the establishment of a National Urban Air Toxics [Research Center](#), to be located at a university, a [hospital](#), or other [facility](#) capable of undertaking and maintaining similar [research](#) capabilities in the areas of epidemiology, oncology, toxicology, pulmonary medicine, pathology, and biostatistics.

The [center](#) shall be known as the Mickey Leland National Urban Air Toxics [Research Center](#). The geographic [site](#) of the National Urban Air Toxics [Research Center](#) should be further directed to Harris County, Texas, in order to take full advantage of the [well](#) developed scientific community presence on [-site](#) at the Texas Medical [Center](#) as [well](#) as the extensive data previously compiled for the comprehensive monitoring system currently in place.

(2) BOARD OF DIRECTORS

The National Urban Air Toxics [Research Center](#) shall be governed by a [Board of Directors](#) to be comprised of 9 members, the appointment of which shall be allocated pro rata among the Speaker of the House, the Majority Leader of the Senate and the President. The members of the [Board of Directors](#) shall be selected based on their respective academic and professional backgrounds and expertise in matters [relating to](#) public health, environmental pollution and industrial hygiene. The duties of the [Board of Directors](#) shall be to determine policy and [research](#) guidelines, submit views from [center](#) sponsors and the public and issue periodic [reports](#) of [center](#) findings and activities.

(3) SCIENTIFIC ADVISORY PANEL

The [Board of Directors](#) shall be advised by a Scientific Advisory Panel, the 13 members of which shall be appointed by the [Board](#), and to include eminent members of the scientific and medical communities. The Panel membership may include scientists with relevant experience from the National [Institute](#) of Environmental Health Sciences, the [Center](#) for Disease Control, the Environmental Protection Agency, the National Cancer [Institute](#), and others, and the Panel shall conduct peer review and evaluate [research](#) results. The Panel shall assist the [Board](#) in developing the [research](#) agenda, reviewing proposals and applications, and advise on the awarding of [research](#) grants.

(4) FUNDING

The [center](#) shall be established and funded with both Federal and private source [funds](#).

(q) SAVINGS PROVISION

(1) STANDARDS PREVIOUSLY PROMULGATED

Any standard under this section in effect before the date of enactment of the [Clean Air Act Amendments of 1990](#) [November 15, 1990] shall remain in force and effect after such date unless modified as provided in this section before the date of enactment of such Amendments or under such

22 March 2019

Amendments. Except as provided in paragraph (4), any standard under this section which has been promulgated, but has not taken effect, before such date shall not be affected by such Amendments unless modified as provided in this section before such date or under such Amendments. Each such standard shall be reviewed and, if appropriate, revised, to comply with the requirements of subsection (d) within 10 years after the date of enactment of the Clean Air Act Amendments of 1990. If a timely petition for review of any such standard under section 7607 of this title is pending on such date of enactment, the standard shall be upheld if it complies with this section as in effect before that date. If any such standard is remanded to the Administrator, the Administrator may in the Administrator's discretion apply either the requirements of this section, or those of this section as in effect before the date of enactment of the Clean Air Act Amendments of 1990.

(2) SPECIAL RULE

Notwithstanding paragraph (1), no standard shall be established under this section, as amended by the Clean Air Act Amendments of 1990, for radionuclide emissions from (A) elemental phosphorous plants, (B) grate calcination elemental phosphorous plants, (C) phosphogypsum stacks, or (D) any subcategory of the foregoing. This section, as in effect prior to the date of enactment of the Clean Air Act Amendments of 1990 [November 15, 1990], shall remain in effect for radionuclide emissions from such plants and stacks.

(3) OTHER CATEGORIES

Notwithstanding paragraph (1), this section, as in effect prior to the date of enactment of the Clean Air Act Amendments of 1990 [November 15, 1990], shall remain in effect for radionuclide emissions from non-Department of Energy Federal facilities that are not licensed by the Nuclear Regulatory Commission, coal-fired utility and industrial boilers, underground uranium mines, surface uranium mines, and disposal of uranium mill tailings piles, unless the Administrator, in the Administrator's discretion, applies the requirements of this section as modified by the Clean Air Act Amendments of 1990 to such sources of radionuclides.

(4) MEDICAL FACILITIES

Notwithstanding paragraph (1), no standard promulgated under this section prior to November 15, 1990, with respect to medical research or treatment facilities shall take effect for two years following November 15, 1990, unless the Administrator makes a determination pursuant to a rulemaking under subsection (d)(9). If the Administrator determines that the regulatory program established by the Nuclear Regulatory Commission for such facilities does not provide an ample margin of safety to protect public health, the requirements of this section shall fully apply to such facilities. If the Administrator determines that such regulatory program does provide an ample margin of safety to protect the public health, the Administrator is not required to promulgate a standard under this section for such facilities, as provided in subsection (d)(9).

(r) PREVENTION OF ACCIDENTAL RELEASES

(1) PURPOSE AND GENERAL DUTY

It shall be the objective of the regulations and [programs](#) authorized under this subsection to prevent the [accidental release](#) and to minimize the consequences of any such release of any substance listed pursuant to paragraph (3) or any other extremely hazardous substance.

The [owners](#) and operators of [stationary sources](#) producing, processing, handling or storing such substances have a general duty in the same manner and to the same extent as [section 654 of title 29](#) to identify hazards which may result from such releases using appropriate hazard assessment techniques, to design and maintain a safe [facility](#) taking such steps as are necessary to prevent releases, and to minimize the consequences of [accidental releases](#) which do occur. For purposes of [this paragraph](#), the provisions of [section 7604 of this title](#) shall not be available to any [person](#) or otherwise be construed to be applicable to [this paragraph](#). Nothing in this section shall be interpreted, construed, implied or [applied](#) to create any liability or basis for suit for [compensation](#) for bodily injury or any other injury or property damages to any [person](#) which may result from [accidental releases](#) of such substances.

(2) DEFINITIONS

(A)

The term "[accidental release](#)" [means](#) an unanticipated emission of a [regulated substance](#) or other extremely hazardous substance into the ambient air from a [stationary source](#).

(B)

The term "[regulated substance](#)" [means](#) a substance listed under paragraph (3).

(C)

The term "[stationary source](#)" [means](#) any buildings, structures, equipment, installations or substance emitting stationary activities (i) which belong to the same industrial group, (ii) which are located on one or more contiguous properties, (iii) which are under the control of the same [person](#) (or [persons](#) under common control), and (iv) from which an [accidental release](#) may occur.

(D)

The term "[retail facility](#)" [means](#) a [stationary source](#) at which more than one-half of the income is obtained from direct sales to end users or at which more than one-half of the fuel sold, by volume, is sold through a cylinder [exchange](#) program.

(3) LIST OF SUBSTANCES

The [Administrator](#) shall promulgate not later than 24 months after November 15, 1990, an initial list of 100 substances which, in the case of an [accidental release](#), are known to [cause](#) or may reasonably be anticipated to [cause](#) death, injury, or serious adverse effects to human health or the environment. For purposes of promulgating such list, the [Administrator](#) shall use, but is not limited to, the list of extremely hazardous substances published under the Emergency Planning and Community Right-to-Know [\[41\]](#) Act of 1986 [[42 U.S.C. 11001](#) et seq.], with such [modifications](#) as the [Administrator](#) deems appropriate. The initial list shall include chlorine, anhydrous ammonia, methyl chloride, ethylene oxide, vinyl chloride, methyl isocyanate, hydrogen cyanide, ammonia, hydrogen sulfide, toluene diisocyanate, phosgene, bromine, anhydrous

22 March 2019

hydrogen chloride, hydrogen fluoride, anhydrous sulfur dioxide, and sulfur trioxide. The initial list shall include at least 100 substances which pose the greatest risk of causing death, injury, or serious adverse effects to human health or the environment from [accidental releases](#). Regulations establishing the list shall include an explanation of the basis for establishing the list. The list may be revised from time to time by the [Administrator](#) on the [Administrator's](#) own motion or by petition and shall be reviewed at least every 5 [years](#). No [air pollutant](#) for which a national primary ambient air quality standard has been established shall be included on any such list. No substance, practice, process, or activity regulated under subchapter VI shall be subject to regulations under this subsection. The [Administrator](#) shall establish procedures for the addition and deletion of substances from the list established under [this paragraph](#) consistent with those applicable to the list in subsection (b).

(4) FACTORS TO BE CONSIDERED In listing substances under paragraph (3), the [Administrator](#)—

(A) shall consider—

(i)

the severity of any acute adverse health effects associated with [accidental releases](#) of the substance;

(ii)

the likelihood of [accidental releases](#) of the substance; and

(iii)

the potential magnitude of human exposure to [accidental releases](#) of the substance; and

(B)

shall not list a flammable substance when used as a fuel or held for sale as a fuel at a [retail facility](#) under this subsection solely because of the explosive or flammable properties of the substance, unless a fire or explosion caused by the substance will result in acute adverse health effects from human exposure to the substance, including the unburned fuel or its combustion byproducts, other than those caused by the heat of the fire or [impact](#) of the explosion.

(5) THRESHOLD QUANTITY

At the time any substance is listed pursuant to paragraph (3), the [Administrator](#) shall establish by rule, a threshold quantity for the substance, taking into account the [toxicity](#), reactivity, volatility, dispersibility, combustibility, or flammability of the substance and the amount of the substance which, as a result of an [accidental release](#), is known to [cause](#) or may reasonably be anticipated to [cause](#) death, injury or serious adverse effects to human health for which the substance was listed. The [Administrator](#) is authorized to establish a greater threshold quantity for, or to exempt entirely, any substance that is a nutrient used in [agriculture](#) when held by a farmer.

(6) CHEMICAL SAFETY BOARD

(A)

There is hereby established an independent safety [board](#) to be known as the Chemical Safety and Hazard Investigation [Board](#).

(B)

22 March 2019

The Board shall consist of 5 members, including a Chairperson, who shall be appointed by the President, by and with the advice and consent of the Senate. Members of the Board shall be appointed on the basis of technical qualification, professional standing, and demonstrated knowledge in the fields of accident reconstruction, safety engineering, human factors, toxicology, or air pollution regulation. The terms of office of members of the Board shall be 5 years. Any member of the Board, including the Chairperson, may be removed for inefficiency, neglect of duty, or malfeasance in office. The Chairperson shall be the Chief Executive Officer of the Board and shall exercise the executive and administrative functions of the Board.

(C) The Board shall—

(i)

investigate (or cause to be investigated), determine and report to the public in writing the facts, conditions, and circumstances and the cause or probable cause of any accidental release resulting in a fatality, serious injury or substantial property damages;

(ii)

issue periodic reports to the Congress, Federal, State and local agencies, including the Environmental Protection Agency and the Occupational Safety and Health Administration, concerned with the safety of chemical production, processing, handling and storage, and other interested persons recommending measures to reduce the likelihood or the consequences of accidental releases and proposing corrective steps to make chemical production, processing, handling and storage as safe and free from risk of injury as is possible and may include in such reports proposed rules or orders which should be issued by the Administrator under the authority of this section or the Secretary of Labor under the Occupational Safety and Health Act [29 U.S.C. 651 et seq.] to prevent or minimize the consequences of any release of substances that may cause death, injury or other serious adverse effects on human health or substantial property damage as the result of an accidental release; and

(iii)

establish by regulation requirements binding on persons for reporting accidental releases into the ambient air subject to the Board's investigatory jurisdiction. Reporting releases to the National Response Center, in lieu of the Board directly, shall satisfy such regulations. The National Response Center shall promptly notify the Board of any releases which are within the Board's jurisdiction.

(D)

The Board may utilize the expertise and experience of other agencies.

(E)

The Board shall coordinate its activities with investigations and studies conducted by other agencies of the United States having a responsibility to protect public health and safety. The Board shall enter into a memorandum of understanding with the National Transportation Safety Board to assure coordination of functions and to limit duplication of activities which shall designate the National Transportation Safety Board as the lead agency for the investigation of releases which are transportation related. The Board shall not be authorized to investigate

22 March 2019

marine oil spills, which the National Transportation Safety Board is authorized to investigate. The [Board](#) shall enter into a memorandum of understanding with the Occupational Safety and Health Administration so as to limit duplication of activities. In no event shall the [Board](#) forego an investigation where an [accidental release](#) causes a fatality or serious injury among the general public, or had the potential to [cause](#) substantial property damage or a number of deaths or injuries among the general public.

(F)

The [Board](#) is authorized to conduct [research](#) and studies with respect to the potential for [accidental releases](#), whether or not an [accidental release](#) has occurred, where there is evidence which indicates the presence of a potential hazard or hazards. To the extent practicable, the [Board](#) shall conduct such studies in cooperation with other Federal agencies having emergency response authorities, [State](#) and local governmental agencies and associations and organizations from the industrial, commercial, and nonprofit sectors.

(G)

No part of the conclusions, findings, or recommendations of the [Board](#) relating to any [accidental release](#) or the investigation thereof shall be admitted as evidence or used in any action or suit for damages arising out of any matter mentioned in such [report](#).

(H)

Not later than 18 months after November 15, 1990, the [Board](#) shall publish a [report](#) accompanied by recommendations to the [Administrator](#) on the use of hazard assessments in preventing the occurrence and minimizing the consequences of [accidental releases](#) of extremely hazardous substances. The recommendations shall include a list of extremely hazardous substances which are not [regulated substances](#) (including threshold quantities for such substances) and categories of [stationary sources](#) for which hazard assessments would be an appropriate measure to aid in the prevention of [accidental releases](#) and to minimize the consequences of those releases that do occur. The recommendations shall also include a description of the information and analysis which would be appropriate to include in any hazard assessment. The [Board](#) shall also make recommendations with respect to the role of risk management plans as required by paragraph (8)(B) [\[5\]](#) in preventing [accidental releases](#). The [Board](#) may from time to time review and revise its recommendations under this subparagraph.

(I) Whenever the [Board](#) submits a recommendation with respect to [accidental releases](#) to the [Administrator](#), the [Administrator](#) shall respond to such recommendation formally and in writing not later than 180 days after receipt thereof. The response to the [Board's](#) recommendation by the [Administrator](#) shall indicate whether the [Administrator](#) will—

(i)

initiate a rulemaking or issue such orders as are necessary to implement the recommendation in full or in part, pursuant to any timetable contained in the recommendation; [\[6\]](#)

(ii)

decline to initiate a rulemaking or issue orders as recommended.

22 March 2019

Any determination by the [Administrator](#) not to implement a recommendation of the [Board](#) or to implement a recommendation only in part, including any variation from the schedule contained in the recommendation, shall be accompanied by a statement from the [Administrator](#) setting forth the reasons for such determination.

(J) The [Board](#) may make recommendations with respect to [accidental releases](#) to the [Secretary](#) of Labor. Whenever the [Board](#) submits such recommendation, the [Secretary](#) shall respond to such recommendation formally and in writing not later than 180 days after receipt thereof. The response to the [Board](#)'s recommendation by the [Administrator](#) [7] shall indicate whether the [Secretary](#) will—

(i)

initiate a rulemaking or issue such orders as are necessary to implement the recommendation in full or in part, pursuant to any timetable contained in the recommendation; ⁶

(ii)

decline to initiate a rulemaking or issue orders as recommended.

Any determination by the [Secretary](#) not to implement a recommendation or to implement a recommendation only in part, including any variation from the schedule contained in the recommendation, shall be accompanied by a statement from the [Secretary](#) setting forth the reasons for such determination.

(K)

Within 2 [years](#) after November 15, 1990, the [Board](#) shall issue a [report](#) to the [Administrator](#) of the Environmental Protection Agency and to the [Administrator](#) of the Occupational Safety and Health Administration recommending the adoption of regulations for the preparation of risk management plans and general requirements for the prevention of [accidental releases](#) of [regulated substances](#) into the ambient air (including recommendations for listing substances under paragraph (3)) and for the mitigation of the potential adverse effect on human health or the environment as a result of [accidental releases](#) which should be applicable to any [stationary source](#) handling any [regulated substance](#) in more than threshold amounts. The [Board](#) may include proposed rules or orders which should be issued by the [Administrator](#) under authority of this subsection or by the [Secretary](#) of Labor under the Occupational Safety and Health Act [[29 U.S.C. 651](#) et seq.]. Any such recommendations shall be specific and shall identify the [regulated substance](#) or class of [regulated substances](#) (or other substances) to which the recommendations apply. The [Administrator](#) shall consider such recommendations before promulgating regulations required by paragraph (7)(B).

(L) The [Board](#), or upon authority of the [Board](#), any member thereof, any administrative law judge employed by or assigned to the [Board](#), or any officer or [employee](#) duly designated by the [Board](#), may for the purpose of carrying out duties authorized by subparagraph (C)—

(i)

hold such hearings, sit and act at such times and places, administer such oaths, and require by subpoena or otherwise attendance and testimony of such witnesses and the production of evidence and may require by order that any [person](#) engaged in the production, processing, handling, or storage of extremely hazardous substances submit written [reports](#) and

responses to requests and questions within such time and in such form as the [Board](#) may require; and

(ii)

upon presenting appropriate credentials and a written notice of inspection authority, enter any property where an [accidental release](#) causing a fatality, serious injury or substantial property damage has occurred and do all things therein necessary for a proper investigation pursuant to subparagraph (C) and inspect at reasonable times records, files, papers, processes, controls, and facilities and take such samples as are relevant to such investigation.

Whenever the [Administrator](#) or the [Board](#) conducts an inspection of a [facility](#) pursuant to this subsection, [employees](#) and their [representatives](#) shall have the same rights to participate in such inspections as provided in the Occupational Safety and Health Act [[29 U.S.C. 651](#) et seq.].

(M)

In addition to that described in subparagraph (L), the [Board](#) may use any information gathering authority of the [Administrator](#) under this chapter, including the subpoena power provided in [section 7607\(a\)\(1\) of this title](#).

(N)

The [Board](#) is authorized to establish such procedural and administrative rules as are necessary to the exercise of its [functions](#) and duties. The [Board](#) is authorized without regard to [section 6101 of title 41](#) to enter into contracts, leases, cooperative agreements or other transactions as may be necessary in the conduct of the duties and [functions](#) of the [Board](#) with any other [agency](#), institution, or [person](#).

(O)

After the effective date of any reporting requirement promulgated pursuant to subparagraph (C)(iii) it shall be unlawful for any [person](#) to fail to [report](#) any release of any extremely hazardous substance as required by such subparagraph. The [Administrator](#) is authorized to enforce any regulation or requirements established by the [Board](#) pursuant to subparagraph (C)(iii) using the authorities of sections 7413 and 7414 of this title. Any request for information from the [owner or operator](#) of a [stationary source](#) made by the [Board](#) or by the [Administrator](#) under this section shall be treated, for purposes of sections 7413, 7414, 7416, 7420, 7603, 7604 and 7607 of this title and any other enforcement provisions of this chapter, as a request made by the [Administrator](#) under [section 7414 of this title](#) and may be enforced by the Chairperson of the [Board](#) or by the [Administrator](#) as provided in such section.

(P)

The [Administrator](#) shall provide to the [Board](#) such support and facilities as may be necessary for [operation](#) of the [Board](#).

(Q)

Consistent with subsection [\(G\)](#) and [section 7414\(c\) of this title](#) any records, [reports](#) or information obtained by the [Board](#) shall be available to the [Administrator](#), the [Secretary](#) of Labor, the Congress and the public, except that upon a showing satisfactory to the [Board](#) by any [person](#) that records, [reports](#), or information, or particular part thereof (other than release or emissions data) to which the [Board](#) has access, if made public, is likely to [cause](#) substantial harm to the [person's](#) competitive position,

22 March 2019

the [Board](#) shall consider such record, [report](#), or information or particular portion thereof confidential in accordance with [section 1905 of title 18](#), except that such record, [report](#), or information may be disclosed to other officers, [employees](#), and authorized [representatives](#) of the United [States](#) concerned with carrying out this chapter or when relevant under any proceeding under this chapter. This subparagraph does not constitute authority to withhold records, [reports](#), or information from the Congress.

(R)

Whenever the [Board](#) submits or transmits any budget estimate, budget request, supplemental budget request, or other budget information, legislative recommendation, prepared testimony for congressional hearings, recommendation or study to the President, the [Secretary](#) of Labor, the [Administrator](#), or the [Director](#) of the Office of Management and Budget, it shall concurrently transmit a copy thereof to the Congress. No [report](#) of the [Board](#) shall be subject to review by the [Administrator](#) or any [Federal agency](#) or to judicial review in any court. No officer or [agency](#) of the United [States](#) shall have authority to require the [Board](#) to submit its budget requests or estimates, legislative recommendations, prepared testimony, comments, recommendations or [reports](#) to any officer or [agency](#) of the United [States](#) for approval or review prior to the submission of such recommendations, testimony, comments or [reports](#) to the Congress. In the performance of their [functions](#) as established by this chapter, the members, officers and [employees](#) of the [Board](#) shall not be responsible to or subject to supervision or direction, in carrying out any duties under this subsection, of any officer or [employee](#) or agent of the Environmental Protection Agency, the Department of Labor or any other [agency](#) of the United [States](#) except that the President may remove any member, officer or [employee](#) of the [Board](#) for inefficiency, [neglect](#) of duty or malfeasance in [office](#). Nothing in this section shall affect the application of title 5 to officers or [employees](#) of the [Board](#).

(S)

The [Board](#) shall submit an annual [report](#) to the President and to the Congress which shall include, but not be limited to, information on [accidental releases](#) which have been investigated by or reported to the [Board](#) during the previous [year](#), recommendations for legislative or administrative action which the [Board](#) has made, the actions which have been taken by the [Administrator](#) or the [Secretary](#) of Labor or the heads of other agencies to implement such recommendations, an identification of priorities for study and investigation in the succeeding [year](#), progress in the [development](#) of risk-reduction technologies and the response to and implementation of significant [research](#) findings on chemical safety in the public and private sector.

(7) ACCIDENT PREVENTION

(A)

In order to prevent [accidental releases](#) of [regulated substances](#), the [Administrator](#) is authorized to promulgate release prevention, detection, and correction requirements which may include monitoring, record-keeping, reporting, training, vapor recovery, secondary containment, and other design, equipment, work practice, and operational requirements. Regulations promulgated under [this paragraph](#) may make

22 March 2019

distinctions between various types, classes, and kinds of facilities, [devices](#) and systems taking into consideration factors including, but not limited to, the size, location, process, process controls, quantity of substances handled, potency of substances, and response capabilities present at any [stationary source](#). Regulations promulgated pursuant to this subparagraph shall have an effective date, as determined by the [Administrator](#), assuring compliance as expeditiously as practicable.

(B)

(i)

Within 3 [years](#) after November 15, 1990, the [Administrator](#) shall promulgate reasonable regulations and appropriate guidance to provide, to the greatest extent practicable, for the prevention and detection of [accidental releases](#) of [regulated substances](#) and for response to such releases by the [owners](#) or operators of the sources of such releases. The [Administrator](#) shall utilize the expertise of the Secretaries of Transportation and Labor in promulgating such regulations. As appropriate, such regulations shall cover the use, [operation](#), repair, replacement, and maintenance of equipment to monitor, detect, inspect, and control such releases, including training of [persons](#) in the use and maintenance of such equipment and in the conduct of periodic inspections. The regulations shall include procedures and measures for emergency response after an [accidental release](#) of a [regulated substance](#) in order to protect human health and the environment. The regulations shall cover storage, as [well](#) as [operations](#). The regulations shall, as appropriate, recognize differences in size, [operations](#), processes, class and categories of sources and the voluntary actions of such sources to prevent such releases and respond to such releases. The regulations shall be applicable to a [stationary source](#) 3 [years](#) after the date of promulgation, or 3 [years](#) after the date on which a [regulated substance](#) present at the source in more than threshold amounts is first listed under paragraph (3), whichever is later.

(ii) The regulations under this subparagraph shall require the [owner or operator](#) of [stationary sources](#) at which a [regulated substance](#) is present in more than a threshold quantity to prepare and implement a risk management plan to detect and prevent or minimize [accidental releases](#) of such substances from the [stationary source](#), and to provide a prompt emergency response to any such releases in order to protect human health and the environment. Such plan shall provide for compliance with the requirements of this subsection and shall also include each of the following:

(I)

a hazard assessment to assess the potential effects of an [accidental release](#) of any [regulated substance](#). This assessment shall include an estimate of potential release quantities and a determination of downwind effects, including potential exposures to affected populations. Such assessment shall include a previous release history of the past 5 [years](#), including the size, concentration, and duration of releases, and shall include an evaluation of worst case [accidental releases](#);

(II)

22 March 2019

a [program](#) for preventing [accidental releases](#) of [regulated substances](#), including safety precautions and maintenance, monitoring and [employee](#) training measures to be used at the source; and

(III)

a response [program](#) providing for specific actions to be taken in response to an [accidental release](#) of a [regulated substance](#) so as to protect human health and the environment, including procedures for informing the public and local agencies responsible for responding to [accidental releases](#), emergency health care, and [employee](#) training measures.

At the time regulations are promulgated under this subparagraph, the [Administrator](#) shall promulgate guidelines to assist [stationary sources](#) in the preparation of risk management plans. The guidelines shall, to the extent practicable, include model risk management plans.

(iii)

The [owner or operator](#) of each [stationary source](#) covered by clause (ii) shall register a risk management plan prepared under this subparagraph with the [Administrator](#) before the effective date of regulations under clause (i) in such form and manner as the [Administrator](#) shall, by rule, require. Plans prepared pursuant to this subparagraph shall also be submitted to the Chemical Safety and Hazard Investigation [Board](#), to the [State](#) in which the [stationary source](#) is located, and to any local [agency](#) or entity having responsibility for planning for or responding to [accidental releases](#) which may occur at such source, and shall be available to the public under [section 7414\(c\) of this title](#). The [Administrator](#) shall establish, by rule, an auditing system to regularly review and, if necessary, require revision in risk management plans to assure that the plans comply with this subparagraph. Each such plan shall be updated periodically as required by the [Administrator](#), by rule.

(C)

Any regulations promulgated pursuant to this subsection shall to the maximum extent practicable, consistent with this subsection, be consistent with the recommendations and standards established by the American Society of Mechanical Engineers (ASME), the American National Standards [Institute](#) (ANSI) or the American Society of Testing [Materials](#) (ASTM). The [Administrator](#) shall take into consideration the concerns of [small business](#) in promulgating regulations under this subsection.

(D)

In carrying out the authority of [this paragraph](#), the [Administrator](#) shall consult with the [Secretary](#) of Labor and the [Secretary](#) of Transportation and shall coordinate any requirements under [this paragraph](#) with any requirements established for comparable purposes by the Occupational Safety and Health Administration or the Department of Transportation. Nothing in this subsection shall be interpreted, construed or [applied](#) to impose requirements affecting, or to [grant](#) the [Administrator](#), the Chemical Safety and Hazard Investigation [Board](#), or any other [agency](#) any authority to regulate (including requirements for hazard assessment), the [accidental release](#) of radionuclides arising from the [construction](#) and [operation](#) of facilities licensed by the Nuclear Regulatory Commission.

(E)

22 March 2019

After the effective date of any regulation or requirement imposed under this subsection, it shall be unlawful for any [person](#) to operate any [stationary source](#) subject to such regulation or requirement in [violation](#) of such regulation or requirement. Each regulation or requirement under this subsection shall for purposes of sections 7413, 7414, 7416, 7420, 7604, and 7607 of this title and other enforcement provisions of this chapter, be treated as a standard in effect under subsection (d).

(F)

Notwithstanding the provisions of subchapter V or this section, no [stationary source](#) shall be required to apply for, or operate pursuant to, a permit issued under such subchapter solely because such source is subject to regulations or requirements under this subsection.

(G)

In exercising any authority under this subsection, the [Administrator](#) shall not, for purposes of [section 653\(b\)\(1\) of title 29](#), be deemed to be exercising statutory authority to prescribe or enforce standards or regulations affecting occupational safety and health.

(H)Public access to off-site consequence analysis information.—

(i)Definitions.—In this subparagraph:

(I)Covered person.—The term "[covered person](#)" means—

(aa)

an officer or [employee](#) of the United [States](#);

(bb)

an officer or [employee](#) of an agent or contractor of the Federal Government;

(cc)

an officer or [employee](#) of a [State](#) or [local government](#);

(dd)

an officer or [employee](#) of an agent or contractor of a [State](#) or [local government](#);

(ee)

an individual affiliated with an entity that has been given, by a [State](#) or [local government](#), responsibility for preventing, planning for, or responding to [accidental releases](#);

(ff)

an officer or [employee](#) or an agent or contractor of an entity described in item (ee); and

(gg)

a qualified researcher under clause (vii).

(II)Official use.—

The term "[official use](#)" means an action of a Federal, [State](#), or [local government](#) agency or an entity referred to in subclause (I)(ee) intended to carry out a [function](#) relevant to preventing, planning for, or responding to [accidental releases](#).

(III)Off- consequence analysis information.—

The term "[off-site consequence analysis information](#)" means those portions of a [risk management plan](#), excluding the executive summary of the plan, consisting of an evaluation of 1 or more worst-case release scenarios or alternative release scenarios, and any electronic data base created by the [Administrator](#) from those portions.

(IV) Risk management plan.—

The term “[risk management plan](#)” means a [risk management plan](#) submitted to the [Administrator](#) by an [owner or operator](#) of a [stationary source](#) under subparagraph (B)(iii).

(ii) Regulations.—Not later than 1 [year](#) after August 5, 1999, the President shall—

(I) assess—

(aa)

the increased risk of terrorist and other criminal activity associated with the posting of off-[site](#) consequence analysis information on the Internet; and

(bb)

the incentives created by public disclosure of off-[site](#) consequence analysis information for reduction in the risk of [accidental releases](#); and

(II) based on the assessment under subclause (I), promulgate regulations governing the distribution of off-[site](#) consequence analysis information in a manner that, in the opinion of the President, minimizes the likelihood of [accidental releases](#) and the risk described in subclause (I)(aa) and the likelihood of harm to public health and welfare, and—

(aa)

allows access by any member of the public to paper copies of off-[site](#) consequence analysis information for a limited number of [stationary sources](#) located anywhere in the United [States](#), without any geographical restriction;

(bb)

allows other public access to off-[site](#) consequence analysis information as appropriate;

(cc)

allows access for official use by a covered [person](#) described in any of items (cc) through (ff) of clause (i)(I) (referred to in this subclause as a “[State](#) or local covered [person](#)”) to off-[site](#) consequence analysis information [relating to stationary sources](#) located in the [person’s State](#);

(dd)

allows a [State](#) or local covered [person](#) to provide, for official use, off-[site](#) consequence analysis information [relating to stationary sources](#) located in the [person’s State](#) to a [State](#) or local covered [person](#) in a contiguous [State](#); and

(ee)

allows a [State](#) or local covered [person](#) to obtain for official use, by request to the [Administrator](#), off-[site](#) consequence analysis information that is not available to the [person](#) under item (cc).

(iii) Availability under [freedom of information act](#).—

(I) First year.—

Off-[site](#) consequence analysis information, and any ranking of [stationary sources](#) derived from the information, shall not be made available under [section 552 of title 5](#) during the 1-year [period](#) beginning on August 5, 1999.

(II) After first year.—

If the regulations under clause (ii) are promulgated on or before the end of the [period](#) described in subclause (I), off-[site](#) consequence analysis information covered by the regulations, and any ranking of [stationary](#)

[sources](#) derived from the information, shall not be made available under [section 552 of title 5](#) after the end of that [period](#).

(III)Applicability.—

Subclauses (I) and (II) apply to off-[site](#) consequence analysis information submitted to the [Administrator](#) before, on, or after August 5, 1999.

(iv)Availability of information during transition period.—

The [Administrator](#) shall make off-[site](#) consequence analysis information available to covered [persons](#) for official use in a manner that meets the requirements of items (cc) through (ee) of clause (ii)(II), and to the public in a form that does not make available any information concerning the identity or location of [stationary sources](#), during the [period](#)—

(I)

beginning on August 5, 1999; and

(II)

ending on the earlier of the date of promulgation of the regulations under clause (ii) or the date that is 1 [year](#) after August 5, 1999.

(v)Prohibition on unauthorized disclosure of information by covered persons.—

(I)In general.—

Beginning on August 5, 1999, a covered [person](#) shall not disclose to the public off-[site](#) consequence analysis information in any form, or any statewide or national ranking of identified [stationary sources](#) derived from such information, except as authorized by this subparagraph (including the regulations promulgated under clause (ii)). After the end of the 1-year [period](#) beginning on August 5, 1999, if regulations have not been promulgated under clause (ii), the preceding sentence shall not apply.

(II)Criminal penalties.—

Notwithstanding [section 7413 of this title](#), a covered [person](#) that willfully violates a restriction or prohibition established by this subparagraph (including the regulations promulgated under clause (ii)) shall, upon conviction, be fined for an infraction under [section 3571 of title 18](#) (but shall not be subject to imprisonment) for each unauthorized disclosure of off-[site](#) consequence analysis information, except that subsection (d) of such section 3571 shall not apply to a case in which the offense results in pecuniary loss unless the defendant knew that such loss would occur. The disclosure of off-[site](#) consequence analysis information for each specific [stationary source](#) shall be considered a separate offense. The total of all penalties that may be imposed on a single [person](#) or organization under this item shall not exceed \$1,000,000 for [violations](#) committed during any 1 calendar [year](#).

(III)Applicability.—If the [owner or operator](#) of a [stationary source](#) makes off-[site](#) consequence analysis information [relating to](#) that [stationary source](#) available to the public without restriction—

(aa)

subclauses (I) and (II) shall not apply with respect to the information; and

(bb)

the [owner or operator](#) shall notify the [Administrator](#) of the public availability of the information.

(IV)List.—

22 March 2019

The [Administrator](#) shall maintain and make publicly available a list of all [stationary sources](#) that have provided notification under subclause (III)(bb).

(vi) Notice.—

The [Administrator](#) shall provide notice of the definition of official use as provided in clause (i)(III) [91](#) and examples of actions that would and would not meet that definition, and notice of the restrictions on further dissemination and the penalties established by this chapter to each covered [person](#) who receives off-[site](#) consequence analysis information under clause (iv) and each covered [person](#) who receives off-[site](#) consequence analysis information for an official use under the regulations promulgated under clause (ii).

(vii) Qualified researchers.—

(I) In general.—

Not later than 180 days after August 5, 1999, the [Administrator](#), in consultation with the Attorney General, shall develop and implement a system for providing off-[site](#) consequence analysis information, including [facility](#) identification, to any qualified researcher, including a qualified researcher from industry or any public interest group.

(II) Limitation on dissemination.—

The system shall not allow the researcher to disseminate, or make available on the Internet, the off-[site](#) consequence analysis information, or any portion of the off-[site](#) consequence analysis information, received under this clause.

(viii) Read-only information technology system.—

In consultation with the Attorney General and the heads of other appropriate Federal agencies, the [Administrator](#) shall establish an information technology system that provides for the availability to the public of off-[site](#) consequence analysis information by [means](#) of a central data base under the control of the Federal Government that contains information that users may read, but that provides no [means](#) by which an electronic or mechanical copy of the information may be made.

(ix) Voluntary industry accident prevention standards.—

The Environmental Protection Agency, the Department of Justice, and other appropriate agencies may provide technical assistance to [owners](#) and operators of [stationary sources](#) and participate in the [development](#) of voluntary industry standards that will help achieve the objectives set forth in paragraph (1).

(x) Effect on state or local law.—

(I) In general.—

Subject to subclause (II), this subparagraph (including the regulations promulgated under this subparagraph) shall supersede any provision of [State](#) or local law that is inconsistent with this subparagraph (including the regulations).

(II) Availability of information under law.—

Nothing in this subparagraph precludes a [State](#) from making available data on the off-[site](#) consequences of chemical releases collected in accordance with [State](#) law.

(xi) Report.—

(I) In general.—

22 March 2019

Not later than 3 [years](#) after August 5, 1999, the Attorney General, in consultation with appropriate [State](#), local, and Federal Government agencies, affected industry, and the public, shall submit to Congress a [report](#) that describes the extent to which regulations promulgated under [this paragraph](#) have resulted in actions, including the design and maintenance of safe facilities, that are effective in detecting, preventing, and minimizing the consequences of releases of [regulated substances](#) that may be caused by criminal activity. As part of this [report](#), the Attorney General, using available data to the extent possible, and a sampling of covered [stationary sources](#) selected at the discretion of the Attorney General, and in consultation with appropriate [State](#), local, and Federal governmental agencies, affected industry, and the public, shall review the vulnerability of covered [stationary sources](#) to criminal and terrorist activity, current industry [practices](#) regarding [site](#) security, and security of transportation of [regulated substances](#). The Attorney General shall submit this [report](#), containing the results of the review, together with recommendations, if any, for reducing vulnerability of covered [stationary sources](#) to criminal and terrorist activity, to the Committee on Commerce of the United [States](#) House of Representatives and the Committee on Environment and Public Works of the United [States](#) Senate and other relevant committees of Congress.

(II) Interim report.—Not later than 12 months after August 5, 1999, the Attorney General shall submit to the Committee on Commerce of the United [States](#) House of Representatives and the Committee on Environment and Public Works of the United [States](#) Senate, and other relevant committees of Congress, an interim [report](#) that includes, at a minimum—

(aa)

the preliminary findings under subclause (I);

(bb)

the methods used to develop the findings; and

(cc)

an explanation of the activities expected to occur that could [cause](#) the findings of the [report](#) under subclause (I) to be different than the preliminary findings.

(III) Availability of information.—

Information that is developed by the Attorney General or requested by the Attorney General and received from a covered [stationary source](#) for the purpose of conducting the review under subclauses (I) and (II) shall be exempt from disclosure under [section 552 of title 5](#) if such information would pose a threat to national security.

(xii) Scope.—This subparagraph—

(I)

applies only to covered [persons](#); and

(II)

does not restrict the dissemination of off-[site](#) consequence analysis information by any covered [person](#) in any manner or form except in the form of a risk management plan or an electronic data base created by the [Administrator](#) from off-[site](#) consequence analysis information.

(xiii) Authorization of appropriations.—

22 March 2019

There are authorized to be appropriated to the [Administrator](#) and the Attorney General such sums as are necessary to carry out this subparagraph (including the regulations promulgated under clause (ii)), to remain available until expended.

(8) RESEARCH ON HAZARD ASSESSMENTS

The [Administrator](#) may collect and publish information on accident scenarios and consequences covering a range of possible events for substances listed under paragraph (3). The [Administrator](#) shall establish a [program](#) of long-term [research](#) to develop and disseminate information on methods and techniques for hazard assessment which may be useful in improving and validating the procedures employed in the preparation of hazard assessments under this subsection.

(9) ORDER AUTHORITY

(A)

In addition to any other action taken, when the [Administrator](#) determines that there may be an imminent and substantial endangerment to the human health or welfare or the environment because of an actual or threatened [accidental release](#) of a [regulated substance](#), the [Administrator](#) may secure such relief as may be necessary to abate such danger or threat, and the district court of the United [States](#) in the district in which the threat occurs shall have jurisdiction to [grant](#) such relief as the public interest and the equities of the case may require. The [Administrator](#) may also, after notice to the [State](#) in which the [stationary source](#) is located, take other action under [this paragraph](#) including, but not limited to, issuing such orders as may be necessary to protect human health. The [Administrator](#) shall take action under [section 7603 of this title](#) rather than [this paragraph](#) whenever the authority of such section is adequate to protect human health and the environment.

(B)

Orders issued pursuant to [this paragraph](#) may be enforced in an action brought in the appropriate United [States](#) district court as if the order were issued under [section 7603 of this title](#).

(C)

Within 180 days after November 15, 1990, the [Administrator](#) shall publish guidance for using the order authorities established by [this paragraph](#). Such guidance shall provide for the coordinated use of the authorities of [this paragraph](#) with other emergency powers authorized by [section 9606 of this title](#), sections 311(c), 308, 309 and 504(a) of the [Federal Water Pollution Control Act](#) [[33 U.S.C. 1321\(c\)](#), 1318, 1319, 1364(a)], sections 3007, 3008, 3013, and 7003 of the [Solid Waste Disposal Act](#) [[42 U.S.C. 6927](#), 6928, 6934, 6973], sections 1445 and 1431 of the [Safe Drinking Water Act](#) [[42 U.S.C. 300j-4](#), 300i], sections 5 and 7 of the [Toxic Substances Control Act](#) [[15 U.S.C. 2604](#), 2606], and sections 7413, 7414, and 7603 of this title.

(10) PRESIDENTIAL REVIEW

The President shall conduct a review of release prevention, mitigation and response authorities of the various Federal agencies and shall clarify and coordinate [agency](#) responsibilities to assure the most effective and efficient implementation of such authorities and to identify any deficiencies in authority or [resources](#) which may exist. The President may utilize

22 March 2019

the [resources](#) and solicit the recommendations of the Chemical Safety and Hazard Investigation [Board](#) in conducting such review. At the conclusion of such review, but not later than 24 months after November 15, 1990, the President shall transmit a message to the Congress on the release prevention, mitigation and response activities of the Federal Government making such recommendations for change in law as the President may deem appropriate. Nothing in [this paragraph](#) shall be interpreted, construed or [applied](#) to authorize the President to modify or reassign release prevention, mitigation or response authorities otherwise established by law.

(11) STATE AUTHORITY

Nothing in this subsection shall preclude, deny or limit any right of a [State](#) or political subdivision thereof to adopt or enforce any regulation, requirement, limitation or standard (including any procedural requirement) that is more stringent than a regulation, requirement, limitation or standard in effect under this subsection or that applies to a substance not subject to this subsection.

(s) PERIODIC REPORT Not later than January 15, 1993 and every 3 [years](#) thereafter, the [Administrator](#) shall prepare and transmit to the Congress a comprehensive [report](#) on the measures taken by the [Agency](#) and by the [States](#) to implement the provisions of this section. The [Administrator](#) shall maintain a database on pollutants and sources subject to the provisions of this section and shall include aggregate information from the database in each annual [report](#). The [report](#) shall include, but not be limited to—

(1)

a status [report](#) on standard-setting under subsections (d) and (f);

(2)

information with respect to compliance with such standards including the [costs](#) of compliance experienced by sources in various categories and subcategories;

(3)

[development](#) and implementation of the national urban air toxics [program](#); and

(4)

recommendations of the Chemical Safety and Hazard Investigation [Board](#) with respect to the prevention and mitigation of [accidental releases](#).

(July 14, 1955, ch. 360, title I, § 112, as added [Pub. L. 91-604](#), § 4(a), Dec. 31, 1970, [84 Stat. 1685](#); amended [Pub. L. 95-95, title I](#), §§ 109(d)(2), 110, title IV, § 401(c), Aug. 7, 1977, [91 Stat. 701](#), 703, 791; [Pub. L. 95-623](#), § 13(b), Nov. 9, 1978, [92 Stat. 3458](#); [Pub. L. 101-549, title III](#), § 301, Nov. 15, 1990, [104 Stat. 2531](#); [Pub. L. 102-187](#), Dec. 4, 1991, [105 Stat. 1285](#); [Pub. L. 105-362, title IV](#), § 402(b), Nov. 10, 1998, [112 Stat. 3283](#); [Pub. L. 106-40](#), §§ 2, 3(a), Aug. 5, 1999, [113 Stat. 207](#), 208.)