

US EPA ARCHIVE DOCUMENT

Appendix A
40 CFR part 68

Pt. 67, App. A

local agent, any noncompliance penalties owed by the source owner or operator shall be paid to the State or local agent.

**APPENDIX A TO PART 67—TECHNICAL
SUPPORT DOCUMENT**

NOTE: EPA will make copies of appendix A available from: Director, Stationary Source Compliance Division, EN-341, 401 M Street, SW., Washington, DC 20460.

[54 FR 25259, June 20, 1989]

**APPENDIX B TO PART 67—INSTRUCTION
MANUAL**

NOTE: EPA will make copies of appendix B available from: Director, Stationary Source Compliance Division, EN-341, 401 M Street, SW., Washington, DC 20460.

[54 FR 25259, June 20, 1989]

**APPENDIX C TO PART 67—COMPUTER
PROGRAM**

NOTE: EPA will make copies of appendix C available from: Director, Stationary Source Compliance Division, EN-341, 401 M Street, SW., Washington, DC 20460.

[54 FR 25259, June 20, 1989]

**PART 68—CHEMICAL ACCIDENT
PREVENTION PROVISIONS**

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**APPENDIX A TO PART 68—TABLE OF TOXIC
ENDPOINTS**

AUTHORITY: 42 U.S.C. 7412(r), 7601(a)(1), 7661–7661f.

SOURCE: 59 FR 4493, Jan. 31, 1994, unless otherwise noted.

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Subpart A—General

§ 68.1 Scope.

This part sets forth the list of regulated substances and thresholds, the petition process for adding or deleting substances to the list of regulated substances, the requirements for owners or operators of stationary sources concerning the prevention of accidental releases, and the State accidental release prevention programs approved under section 112(r). The list of substances, threshold quantities, and accident prevention regulations promulgated under this part do not limit in any way the general duty provisions under section 112(r)(1).

§ 68.2 Stayed provisions.

(a) Notwithstanding any other provision of this part, the effectiveness of the following provisions is stayed from March 2, 1994 to December 22, 1997.

(1) In Sec. 68.3, the definition of “stationary source,” to the extent that such definition includes naturally occurring hydrocarbon reservoirs or transportation subject to oversight or regulation under a state natural gas or hazardous liquid program for which the state has in effect a certification to DOT under 49 U.S.C. 60105;

(2) Section 68.115(b)(2) of this part, to the extent that such provision requires an owner or operator to treat as a regulated flammable substance:

(i) Gasoline, when in distribution or related storage for use as fuel for internal combustion engines;

(ii) Naturally occurring hydrocarbon mixtures prior to entry into a petroleum refining process unit or a natural gas processing plant. Naturally occurring hydrocarbon mixtures include any of the following: condensate, crude oil, field gas, and produced water, each as defined in paragraph (b) of this section;

(iii) Other mixtures that contain a regulated flammable substance and that do not have a National Fire Protection Association flammability hazard rating of 4, the definition of which is in the NFPA 704, Standard System for the Identification of the Fire Hazards of Materials, National Fire Protection Association, Quincy, MA, 1990, available from the National Fire Pro-

tection Association, 1 Batterymarch Park, Quincy, MA 02269-9101; and

(3) Section 68.130(a).

(b) From March 2, 1994 to December 22, 1997, the following definitions shall apply to the stayed provisions described in paragraph (a) of this section:

Condensate means hydrocarbon liquid separated from natural gas that condenses because of changes in temperature, pressure, or both, and remains liquid at standard conditions.

Crude oil means any naturally occurring, unrefined petroleum liquid.

Field gas means gas extracted from a production well before the gas enters a natural gas processing plant.

Natural gas processing plant means any processing site engaged in the extraction of natural gas liquids from field gas, fractionation of natural gas liquids to natural gas products, or both. A separator, dehydration unit, heater treater, sweetening unit, compressor, or similar equipment shall not be considered a “processing site” unless such equipment is physically located within a natural gas processing plant (gas plant) site.

Petroleum refining process unit means a process unit used in an establishment primarily engaged in petroleum refining as defined in the Standard Industrial Classification code for petroleum refining (2911) and used for the following: Producing transportation fuels (such as gasoline, diesel fuels, and jet fuels), heating fuels (such as kerosene, fuel gas distillate, and fuel oils), or lubricants; separating petroleum; or separating, cracking, reacting, or reforming intermediate petroleum streams. Examples of such units include, but are not limited to, petroleum based solvent units, alkylation units, catalytic hydrotreating, catalytic hydrorefining, catalytic hydrocracking, catalytic reforming, catalytic cracking, crude distillation, lube oil processing, hydrogen production, isomerization, polymerization, thermal processes, and blending, sweetening, and treating processes. Petroleum refining process units include sulfur plants.

Produced water means water extracted from the earth from an oil or natural gas production well, or that is separated from oil or natural gas after extraction.

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(c) Notwithstanding any other provision of this part, the effectiveness of part 68 is stayed from June 21, 1999 to December 21, 1999 with respect to regulated flammable hydrocarbon substances when the substance is intended for use as a fuel and does not exceed 67,000 pounds in a process that is not manufacturing the fuel, does not contain greater than a threshold quantity of another regulated substance, and is not collocated or interconnected to another covered process.

[59 FR 4493, Jan. 31, 1994, as amended at 61 FR 31731, June 20, 1996; 64 FR 29170, May 28, 1999]

§ 68.3 Definitions.

For the purposes of this part:

Accidental release means an unanticipated emission of a regulated substance or other extremely hazardous substance into the ambient air from a stationary source.

Act means the Clean Air Act as amended (42 U.S.C. 7401 *et seq.*)

Administrative controls mean written procedural mechanisms used for hazard control.

Administrator means the administrator of the U.S. Environmental Protection Agency.

AIChE/CCPS means the American Institute of Chemical Engineers/Center for Chemical Process Safety.

API means the American Petroleum Institute.

Article means a manufactured item, as defined under 29 CFR 1910.1200(b), that is formed to a specific shape or design during manufacture, that has end use functions dependent in whole or in part upon the shape or design during end use, and that does not release or otherwise result in exposure to a regulated substance under normal conditions of processing and use.

ASME means the American Society of Mechanical Engineers.

CAS means the Chemical Abstracts Service.

Catastrophic release means a major uncontrolled emission, fire, or explosion, involving one or more regulated substances that presents imminent and substantial endangerment to public health and the environment.

Classified information means “classified information” as defined in the

Classified Information Procedures Act, 18 U.S.C. App. 3, section 1(a) as “any information or material that has been determined by the United States Government pursuant to an executive order, statute, or regulation, to require protection against unauthorized disclosure for reasons of national security.”

Condensate means hydrocarbon liquid separated from natural gas that condenses due to changes in temperature, pressure, or both, and remains liquid at standard conditions.

Covered process means a process that has a regulated substance present in more than a threshold quantity as determined under § 68.115.

Crude oil means any naturally occurring, unrefined petroleum liquid.

Designated agency means the state, local, or Federal agency designated by the state under the provisions of § 68.215(d).

DOT means the United States Department of Transportation.

Environmental receptor means natural areas such as national or state parks, forests, or monuments; officially designated wildlife sanctuaries, preserves, refuges, or areas; and Federal wilderness areas, that could be exposed at any time to toxic concentrations, radiant heat, or overpressure greater than or equal to the endpoints provided in § 68.22(a), as a result of an accidental release and that can be identified on local U. S. Geological Survey maps.

Field gas means gas extracted from a production well before the gas enters a natural gas processing plant.

Hot work means work involving electric or gas welding, cutting, brazing, or similar flame or spark-producing operations.

Implementing agency means the state or local agency that obtains delegation for an accidental release prevention program under subpart E, 40 CFR part 63. The implementing agency may, but is not required to, be the state or local air permitting agency. If no state or local agency is granted delegation, EPA will be the implementing agency for that state.

Injury means any effect on a human that results either from direct exposure to toxic concentrations; radiant heat; or overpressures from accidental

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releases or from the direct consequences of a vapor cloud explosion (such as flying glass, debris, and other projectiles) from an accidental release and that requires medical treatment or hospitalization.

Major change means introduction of a new process, process equipment, or regulated substance, an alteration of process chemistry that results in any change to safe operating limits, or other alteration that introduces a new hazard.

Mechanical integrity means the process of ensuring that process equipment is fabricated from the proper materials of construction and is properly installed, maintained, and replaced to prevent failures and accidental releases.

Medical treatment means treatment, other than first aid, administered by a physician or registered professional personnel under standing orders from a physician.

Mitigation or mitigation system means specific activities, technologies, or equipment designed or deployed to capture or control substances upon loss of containment to minimize exposure of the public or the environment. Passive mitigation means equipment, devices, or technologies that function without human, mechanical, or other energy input. Active mitigation means equipment, devices, or technologies that need human, mechanical, or other energy input to function.

NAICS means North American Industry Classification System.

NFPA means the National Fire Protection Association.

Natural gas processing plant (gas plant) means any processing site engaged in the extraction of natural gas liquids from field gas, fractionation of mixed natural gas liquids to natural gas products, or both, classified as North American Industrial Classification System (NAICS) code 211112 (previously Standard Industrial Classification (SIC) code 1321).

Offsite means areas beyond the property boundary of the stationary source, and areas within the property boundary to which the public has routine and unrestricted access during or outside business hours.

OSHA means the U.S. Occupational Safety and Health Administration. Owner or operator means any person who owns, leases, operates, controls, or supervises a stationary source.

Petroleum refining process unit means a process unit used in an establishment primarily engaged in petroleum refining as defined in NAICS code 32411 for petroleum refining (formerly SIC code 2911) and used for the following: Producing transportation fuels (such as gasoline, diesel fuels, and jet fuels), heating fuels (such as kerosene, fuel gas distillate, and fuel oils), or lubricants; Separating petroleum; or Separating, cracking, reacting, or reforming intermediate petroleum streams. Examples of such units include, but are not limited to, petroleum based solvent units, alkylation units, catalytic hydrotreating, catalytic hydrorefining, catalytic hydrocracking, catalytic reforming, catalytic cracking, crude distillation, lube oil processing, hydrogen production, isomerization, polymerization, thermal processes, and blending, sweetening, and treating processes. Petroleum refining process units include sulfur plants.

Population means the public.

Process means any activity involving a regulated substance including any use, storage, manufacturing, handling, or on-site movement of such substances, or combination of these activities. For the purposes of this definition, any group of vessels that are interconnected, or separate vessels that are located such that a regulated substance could be involved in a potential release, shall be considered a single process.

Produced water means water extracted from the earth from an oil or natural gas production well, or that is separated from oil or natural gas after extraction.

Public means any person except employees or contractors at the stationary source.

Public receptor means offsite residences, institutions (e.g., schools, hospitals), industrial, commercial, and office buildings, parks, or recreational areas inhabited or occupied by the public at any time without restriction by the stationary source where members of the public could be exposed to toxic

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concentrations, radiant heat, or overpressure, as a result of an accidental release.

Regulated substance is any substance listed pursuant to section 112(r)(3) of the Clean Air Act as amended, in § 68.130.

Replacement in kind means a replacement that satisfies the design specifications.

RMP means the risk management plan required under subpart G of this part.

Stationary source means any buildings, structures, equipment, installations, or substance emitting stationary activities which belong to the same industrial group, which are located on one or more contiguous properties, which are under the control of the same person (or persons under common control), and from which an accidental release may occur. The term stationary source does not apply to transportation, including storage incident to transportation, of any regulated substance or any other extremely hazardous substance under the provisions of this part. A stationary source includes transportation containers used for storage not incident to transportation and transportation containers connected to equipment at a stationary source for loading or unloading. Transportation includes, but is not limited to, transportation subject to oversight or regulation under 49 CFR parts 192, 193, or 195, or a state natural gas or hazardous liquid program for which the state has in effect a certification to DOT under 49 U.S.C. section 60105. A stationary source does not include naturally occurring hydrocarbon reservoirs. Properties shall not be considered contiguous solely because of a railroad or pipeline right-of-way.

Threshold quantity means the quantity specified for regulated substances pursuant to section 112(r)(5) of the Clean Air Act as amended, listed in § 68.130 and determined to be present at a stationary source as specified in § 68.115 of this part.

Typical meteorological conditions means the temperature, wind speed, cloud cover, and atmospheric stability class, prevailing at the site based on data gathered at or near the site or from a local meteorological station.

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Vessel means any reactor, tank, drum, barrel, cylinder, vat, kettle, boiler, pipe, hose, or other container.

Worst-case release means the release of the largest quantity of a regulated substance from a vessel or process line failure that results in the greatest distance to an endpoint defined in § 68.22(a).

[59 FR 4493, Jan. 31, 1994, as amended at 61 FR 31717, June 20, 1996; 63 FR 644, Jan. 6, 1998; 64 FR 979, Jan. 6, 1999]

§ 68.10 Applicability.

(a) An owner or operator of a stationary source that has more than a threshold quantity of a regulated substance in a process, as determined under § 68.115, shall comply with the requirements of this part no later than the latest of the following dates:

(1) June 21, 1999;

(2) Three years after the date on which a regulated substance is first listed under § 68.130; or

(3) The date on which a regulated substance is first present above a threshold quantity in a process.

(b) Program 1 eligibility requirements. A covered process is eligible for Program 1 requirements as provided in § 68.12(b) if it meets all of the following requirements:

(1) For the five years prior to the submission of an RMP, the process has not had an accidental release of a regulated substance where exposure to the substance, its reaction products, overpressure generated by an explosion involving the substance, or radiant heat generated by a fire involving the substance led to any of the following off-site:

(i) Death;

(ii) Injury; or

(iii) Response or restoration activities for an exposure of an environmental receptor;

(2) The distance to a toxic or flammable endpoint for a worst-case release assessment conducted under Subpart B and § 68.25 is less than the distance to any public receptor, as defined in § 68.30; and

(3) Emergency response procedures have been coordinated between the stationary source and local emergency planning and response organizations.

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(c) Program 2 eligibility requirements. A covered process is subject to Program 2 requirements if it does not meet the eligibility requirements of either paragraph (b) or paragraph (d) of this section.

(d) Program 3 eligibility requirements. A covered process is subject to Program 3 if the process does not meet the requirements of paragraph (b) of this section, and if either of the following conditions is met:

(1) The process is in NAICS code 32211, 32411, 32511, 325181, 325188, 325192, 325199, 325211, 325311, or 32532; or

(2) The process is subject to the OSHA process safety management standard, 29 CFR 1910.119.

(e) If at any time a covered process no longer meets the eligibility criteria of its Program level, the owner or operator shall comply with the requirements of the new Program level that applies to the process and update the RMP as provided in § 68.190.

(f) The provisions of this part shall not apply to an Outer Continental Shelf ("OCS") source, as defined in 40 CFR 55.2.

[61 FR 31717, June 20, 1996, as amended at 63 FR 645, Jan. 6, 1998; 64 FR 979, Jan. 6, 1999]

§ 68.12 General requirements.

(a) General requirements. The owner or operator of a stationary source subject to this part shall submit a single RMP, as provided in §§ 68.150 to 68.185. The RMP shall include a registration that reflects all covered processes.

(b) Program 1 requirements. In addition to meeting the requirements of paragraph (a) of this section, the owner or operator of a stationary source with a process eligible for Program 1, as provided in § 68.10(b), shall:

(1) Analyze the worst-case release scenario for the process(es), as provided in § 68.25; document that the nearest public receptor is beyond the distance to a toxic or flammable endpoint defined in § 68.22(a); and submit in the RMP the worst-case release scenario as provided in § 68.165;

(2) Complete the five-year accident history for the process as provided in § 68.42 of this part and submit it in the RMP as provided in § 68.168;

(3) Ensure that response actions have been coordinated with local emergency planning and response agencies; and

(4) Certify in the RMP the following: "Based on the criteria in 40 CFR 68.10, the distance to the specified endpoint for the worst-case accidental release scenario for the following process(es) is less than the distance to the nearest public receptor: [list process(es)]. Within the past five years, the process(es) has (have) had no accidental release that caused offsite impacts provided in the risk management program rule (40 CFR 68.10(b)(1)). No additional measures are necessary to prevent offsite impacts from accidental releases. In the event of fire, explosion, or a release of a regulated substance from the process(es), entry within the distance to the specified endpoints may pose a danger to public emergency responders. Therefore, public emergency responders should not enter this area except as arranged with the emergency contact indicated in the RMP. The undersigned certifies that, to the best of my knowledge, information, and belief, formed after reasonable inquiry, the information submitted is true, accurate, and complete. [Signature, title, date signed]."

(c) Program 2 requirements. In addition to meeting the requirements of paragraph (a) of this section, the owner or operator of a stationary source with a process subject to Program 2, as provided in § 68.10(c), shall:

(1) Develop and implement a management system as provided in § 68.15;

(2) Conduct a hazard assessment as provided in §§ 68.20 through 68.42;

(3) Implement the Program 2 prevention steps provided in §§ 68.48 through 68.60 or implement the Program 3 prevention steps provided in §§ 68.65 through 68.87;

(4) Develop and implement an emergency response program as provided in §§ 68.90 to 68.95; and

(5) Submit as part of the RMP the data on prevention program elements for Program 2 processes as provided in § 68.170.

(d) Program 3 requirements. In addition to meeting the requirements of paragraph (a) of this section, the owner or operator of a stationary source with

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a process subject to Program 3, as provided in § 68.10(d) shall:

- (1) Develop and implement a management system as provided in § 68.15;
- (2) Conduct a hazard assessment as provided in §§ 68.20 through 68.42;
- (3) Implement the prevention requirements of §§ 68.65 through 68.87;
- (4) Develop and implement an emergency response program as provided in §§ 68.90 to 68.95 of this part; and
- (5) Submit as part of the RMP the data on prevention program elements for Program 3 processes as provided in § 68.175.

[61 FR 31718, June 20, 1996]

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(a) The owner or operator of a stationary source with processes subject to Program 2 or Program 3 shall develop a management system to oversee the implementation of the risk management program elements.

(b) The owner or operator shall assign a qualified person or position that has the overall responsibility for the development, implementation, and integration of the risk management program elements.

(c) When responsibility for implementing individual requirements of this part is assigned to persons other than the person identified under paragraph (b) of this section, the names or positions of these people shall be documented and the lines of authority defined through an organization chart or similar document.

[61 FR 31718, June 20, 1996]

Subpart B—Hazard Assessment

SOURCE: 61 FR 31718, June 20, 1996, unless otherwise noted.

§ 68.20 Applicability.

The owner or operator of a stationary source subject to this part shall prepare a worst-case release scenario analysis as provided in § 68.25 of this part and complete the five-year accident history as provided in § 68.42. The owner or operator of a Program 2 and 3 process must comply with all sections in this subpart for these processes.

40 CFR Ch. I (7–1–99 Edition)**§ 68.22 Offsite consequence analysis parameters.**

(a) Endpoints. For analyses of offsite consequences, the following endpoints shall be used:

(1) Toxics. The toxic endpoints provided in appendix A of this part.

(2) Flammables. The endpoints for flammables vary according to the scenarios studied:

(i) Explosion. An overpressure of 1 psi.

(ii) Radiant heat/exposure time. A radiant heat of 5 kw/m² for 40 seconds.

(iii) Lower flammability limit. A lower flammability limit as provided in NFPA documents or other generally recognized sources.

(b) Wind speed/atmospheric stability class. For the worst-case release analysis, the owner or operator shall use a wind speed of 1.5 meters per second and F atmospheric stability class. If the owner or operator can demonstrate that local meteorological data applicable to the stationary source show a higher minimum wind speed or less stable atmosphere at all times during the previous three years, these minimums may be used. For analysis of alternative scenarios, the owner or operator may use the typical meteorological conditions for the stationary source.

(c) Ambient temperature/humidity. For worst-case release analysis of a regulated toxic substance, the owner or operator shall use the highest daily maximum temperature in the previous three years and average humidity for the site, based on temperature/humidity data gathered at the stationary source or at a local meteorological station; an owner or operator using the RMP Offsite Consequence Analysis Guidance may use 25 °C and 50 percent humidity as values for these variables. For analysis of alternative scenarios, the owner or operator may use typical temperature/humidity data gathered at the stationary source or at a local meteorological station.

(d) Height of release. The worst-case release of a regulated toxic substance shall be analyzed assuming a ground level (0 feet) release. For an alternative scenario analysis of a regulated toxic substance, release height may be determined by the release scenario.

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(e) Surface roughness. The owner or operator shall use either urban or rural topography, as appropriate. Urban means that there are many obstacles in the immediate area; obstacles include buildings or trees. Rural means there are no buildings in the immediate area and the terrain is generally flat and unobstructed.

(f) Dense or neutrally buoyant gases. The owner or operator shall ensure that tables or models used for dispersion analysis of regulated toxic substances appropriately account for gas density.

(g) Temperature of released substance. For worst case, liquids other than gases liquified by refrigeration only shall be considered to be released at the highest daily maximum temperature, based on data for the previous three years appropriate for the stationary source, or at process temperature, whichever is higher. For alternative scenarios, substances may be considered to be released at a process or ambient temperature that is appropriate for the scenario.

§ 68.25 Worst-case release scenario analysis.

(a) The owner or operator shall analyze and report in the RMP:

(1) For Program 1 processes, one worst-case release scenario for each Program 1 process;

(2) For Program 2 and 3 processes:

(i) One worst-case release scenario that is estimated to create the greatest distance in any direction to an endpoint provided in appendix A of this part resulting from an accidental release of regulated toxic substances from covered processes under worst-case conditions defined in § 68.22;

(ii) One worst-case release scenario that is estimated to create the greatest distance in any direction to an endpoint defined in § 68.22(a) resulting from an accidental release of regulated flammable substances from covered processes under worst-case conditions defined in § 68.22; and

(iii) Additional worst-case release scenarios for a hazard class if a worst-case release from another covered process at the stationary source potentially affects public receptors different from those potentially affected by the worst-

case release scenario developed under paragraphs (a)(2)(i) or (a)(2)(ii) of this section.

(b) *Determination of worst-case release quantity.* The worst-case release quantity shall be the greater of the following:

(1) For substances in a vessel, the greatest amount held in a single vessel, taking into account administrative controls that limit the maximum quantity; or

(2) For substances in pipes, the greatest amount in a pipe, taking into account administrative controls that limit the maximum quantity.

(c) *Worst-case release scenario—toxic gases.* (1) For regulated toxic substances that are normally gases at ambient temperature and handled as a gas or as a liquid under pressure, the owner or operator shall assume that the quantity in the vessel or pipe, as determined under paragraph (b) of this section, is released as a gas over 10 minutes. The release rate shall be assumed to be the total quantity divided by 10 unless passive mitigation systems are in place.

(2) For gases handled as refrigerated liquids at ambient pressure:

(i) If the released substance is not contained by passive mitigation systems or if the contained pool would have a depth of 1 cm or less, the owner or operator shall assume that the substance is released as a gas in 10 minutes;

(ii) If the released substance is contained by passive mitigation systems in a pool with a depth greater than 1 cm, the owner or operator may assume that the quantity in the vessel or pipe, as determined under paragraph (b) of this section, is spilled instantaneously to form a liquid pool. The volatilization rate (release rate) shall be calculated at the boiling point of the substance and at the conditions specified in paragraph (d) of this section.

(d) *Worst-case release scenario—toxic liquids.* (1) For regulated toxic substances that are normally liquids at ambient temperature, the owner or operator shall assume that the quantity in the vessel or pipe, as determined under paragraph (b) of this section, is spilled instantaneously to form a liquid pool.

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(i) The surface area of the pool shall be determined by assuming that the liquid spreads to 1 centimeter deep unless passive mitigation systems are in place that serve to contain the spill and limit the surface area. Where passive mitigation is in place, the surface area of the contained liquid shall be used to calculate the volatilization rate.

(ii) If the release would occur onto a surface that is not paved or smooth, the owner or operator may take into account the actual surface characteristics.

(2) The volatilization rate shall account for the highest daily maximum temperature occurring in the past three years, the temperature of the substance in the vessel, and the concentration of the substance if the liquid spilled is a mixture or solution.

(3) The rate of release to air shall be determined from the volatilization rate of the liquid pool. The owner or operator may use the methodology in the RMP Offsite Consequence Analysis Guidance or any other publicly available techniques that account for the modeling conditions and are recognized by industry as applicable as part of current practices. Proprietary models that account for the modeling conditions may be used provided the owner or operator allows the implementing agency access to the model and describes model features and differences from publicly available models to local emergency planners upon request.

(e) *Worst-case release scenario—flammable gases.* The owner or operator shall assume that the quantity of the substance, as determined under paragraph (b) of this section and the provisions below, vaporizes resulting in a vapor cloud explosion. A yield factor of 10 percent of the available energy released in the explosion shall be used to determine the distance to the explosion endpoint if the model used is based on TNT equivalent methods.

(1) For regulated flammable substances that are normally gases at ambient temperature and handled as a gas or as a liquid under pressure, the owner or operator shall assume that the quantity in the vessel or pipe, as determined under paragraph (b) of this section, is released as a gas over 10 min-

utes. The total quantity shall be assumed to be involved in the vapor cloud explosion.

(2) For flammable gases handled as refrigerated liquids at ambient pressure:

(i) If the released substance is not contained by passive mitigation systems or if the contained pool would have a depth of one centimeter or less, the owner or operator shall assume that the total quantity of the substance is released as a gas in 10 minutes, and the total quantity will be involved in the vapor cloud explosion.

(ii) If the released substance is contained by passive mitigation systems in a pool with a depth greater than 1 centimeter, the owner or operator may assume that the quantity in the vessel or pipe, as determined under paragraph (b) of this section, is spilled instantaneously to form a liquid pool. The volatilization rate (release rate) shall be calculated at the boiling point of the substance and at the conditions specified in paragraph (d) of this section. The owner or operator shall assume that the quantity which becomes vapor in the first 10 minutes is involved in the vapor cloud explosion.

(f) *Worst-case release scenario—flammable liquids.* The owner or operator shall assume that the quantity of the substance, as determined under paragraph (b) of this section and the provisions below, vaporizes resulting in a vapor cloud explosion. A yield factor of 10 percent of the available energy released in the explosion shall be used to determine the distance to the explosion endpoint if the model used is based on TNT equivalent methods.

(1) For regulated flammable substances that are normally liquids at ambient temperature, the owner or operator shall assume that the entire quantity in the vessel or pipe, as determined under paragraph (b) of this section, is spilled instantaneously to form a liquid pool. For liquids at temperatures below their atmospheric boiling point, the volatilization rate shall be calculated at the conditions specified in paragraph (d) of this section.

(2) The owner or operator shall assume that the quantity which becomes vapor in the first 10 minutes is involved in the vapor cloud explosion.

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(g) *Parameters to be applied.* The owner or operator shall use the parameters defined in § 68.22 to determine distance to the endpoints. The owner or operator may use the methodology provided in the RMP Offsite Consequence Analysis Guidance or any commercially or publicly available air dispersion modeling techniques, provided the techniques account for the modeling conditions and are recognized by industry as applicable as part of current practices. Proprietary models that account for the modeling conditions may be used provided the owner or operator allows the implementing agency access to the model and describes model features and differences from publicly available models to local emergency planners upon request.

(h) *Consideration of passive mitigation.* Passive mitigation systems may be considered for the analysis of worst case provided that the mitigation system is capable of withstanding the release event triggering the scenario and would still function as intended.

(i) *Factors in selecting a worst-case scenario.* Notwithstanding the provisions of paragraph (b) of this section, the owner or operator shall select as the worst case for flammable regulated substances or the worst case for regulated toxic substances, a scenario based on the following factors if such a scenario would result in a greater distance to an endpoint defined in § 68.22(a) beyond the stationary source boundary than the scenario provided under paragraph (b) of this section:

(1) Smaller quantities handled at higher process temperature or pressure; and

(2) Proximity to the boundary of the stationary source.

[61 FR 31718, June 20, 1996, as amended at 64 FR 28700, May 26, 1999]

§ 68.28 Alternative release scenario analysis.

(a) The number of scenarios. The owner or operator shall identify and analyze at least one alternative release scenario for each regulated toxic substance held in a covered process(es) and at least one alternative release scenario to represent all flammable substances held in covered processes.

(b) *Scenarios to consider.* (1) For each scenario required under paragraph (a) of this section, the owner or operator shall select a scenario:

(i) That is more likely to occur than the worst-case release scenario under § 68.25; and

(ii) That will reach an endpoint off-site, unless no such scenario exists.

(2) Release scenarios considered should include, but are not limited to, the following, where applicable:

(i) Transfer hose releases due to splits or sudden hose uncoupling;

(ii) Process piping releases from failures at flanges, joints, welds, valves and valve seals, and drains or bleeds;

(iii) Process vessel or pump releases due to cracks, seal failure, or drain, bleed, or plug failure;

(iv) Vessel overfilling and spill, or overpressurization and venting through relief valves or rupture disks; and

(v) Shipping container mishandling and breakage or puncturing leading to a spill.

(c) *Parameters to be applied.* The owner or operator shall use the appropriate parameters defined in § 68.22 to determine distance to the endpoints. The owner or operator may use either the methodology provided in the RMP Offsite Consequence Analysis Guidance or any commercially or publicly available air dispersion modeling techniques, provided the techniques account for the specified modeling conditions and are recognized by industry as applicable as part of current practices. Proprietary models that account for the modeling conditions may be used provided the owner or operator allows the implementing agency access to the model and describes model features and differences from publicly available models to local emergency planners upon request.

(d) *Consideration of mitigation.* Active and passive mitigation systems may be considered provided they are capable of withstanding the event that triggered the release and would still be functional.

(e) *Factors in selecting scenarios.* The owner or operator shall consider the following in selecting alternative release scenarios:

(1) The five-year accident history provided in § 68.42; and

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(2) Failure scenarios identified under § 68.50 or § 68.67.

§ 68.30 Defining offsite impacts—population.

(a) The owner or operator shall estimate in the RMP the population within a circle with its center at the point of the release and a radius determined by the distance to the endpoint defined in § 68.22(a).

(b) *Population to be defined.* Population shall include residential population. The presence of institutions (schools, hospitals, prisons), parks and recreational areas, and major commercial, office, and industrial buildings shall be noted in the RMP.

(c) *Data sources acceptable.* The owner or operator may use the most recent Census data, or other updated information, to estimate the population potentially affected.

(d) *Level of accuracy.* Population shall be estimated to two significant digits.

§ 68.33 Defining offsite impacts—environment.

(a) The owner or operator shall list in the RMP environmental receptors within a circle with its center at the point of the release and a radius determined by the distance to the endpoint defined in § 68.22(a) of this part.

(b) *Data sources acceptable.* The owner or operator may rely on information provided on local U.S. Geological Survey maps or on any data source containing U.S.G.S. data to identify environmental receptors.

68.36 Review and update.

(a) The owner or operator shall review and update the offsite consequence analyses at least once every five years.

(b) If changes in processes, quantities stored or handled, or any other aspect of the stationary source might reasonably be expected to increase or decrease the distance to the endpoint by a factor of two or more, the owner or operator shall complete a revised analysis within six months of the change and submit a revised risk management plan as provided in § 68.190.

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The owner or operator shall maintain the following records on the offsite consequence analyses:

(a) For worst-case scenarios, a description of the vessel or pipeline and substance selected as worst case, assumptions and parameters used, and the rationale for selection; assumptions shall include use of any administrative controls and any passive mitigation that were assumed to limit the quantity that could be released. Documentation shall include the anticipated effect of the controls and mitigation on the release quantity and rate.

(b) For alternative release scenarios, a description of the scenarios identified, assumptions and parameters used, and the rationale for the selection of specific scenarios; assumptions shall include use of any administrative controls and any mitigation that were assumed to limit the quantity that could be released. Documentation shall include the effect of the controls and mitigation on the release quantity and rate.

(c) Documentation of estimated quantity released, release rate, and duration of release.

(d) Methodology used to determine distance to endpoints.

(e) Data used to estimate population and environmental receptors potentially affected.

§ 68.42 Five-year accident history.

(a) The owner or operator shall include in the five-year accident history all accidental releases from covered processes that resulted in deaths, injuries, or significant property damage on site, or known offsite deaths, injuries, evacuations, sheltering in place, property damage, or environmental damage.

(b) *Data required.* For each accidental release included, the owner or operator shall report the following information:

(1) Date, time, and approximate duration of the release;

(2) Chemical(s) released;

(3) Estimated quantity released in pounds and, for mixtures containing regulated toxic substances, percentage concentration by weight of the released regulated toxic substance in the liquid mixture;

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(4) Five- or six-digit NAICS code that most closely corresponds to the process;

(5) The type of release event and its source;

(6) Weather conditions, if known;

(7) On-site impacts;

(8) Known offsite impacts;

(9) Initiating event and contributing factors if known;

(10) Whether offsite responders were notified if known; and

(11) Operational or process changes that resulted from investigation of the release.

(c) *Level of accuracy.* Numerical estimates may be provided to two significant digits.

[61 FR 31718, June 20, 1996, as amended at 64 FR 979, Jan. 6, 1999]

Subpart C—Program 2 Prevention Program

SOURCE: 61 FR 31721, June 20, 1996, unless otherwise noted.

§ 68.48 Safety information.

(a) The owner or operator shall compile and maintain the following up-to-date safety information related to the regulated substances, processes, and equipment:

(1) Material Safety Data Sheets that meet the requirements of 29 CFR 1910.1200(g);

(2) Maximum intended inventory of equipment in which the regulated substances are stored or processed;

(3) Safe upper and lower temperatures, pressures, flows, and compositions;

(4) Equipment specifications; and

(5) Codes and standards used to design, build, and operate the process.

(b) The owner or operator shall ensure that the process is designed in compliance with recognized and generally accepted good engineering practices. Compliance with Federal or state regulations that address industry-specific safe design or with industry-specific design codes and standards may be used to demonstrate compliance with this paragraph.

(c) The owner or operator shall update the safety information if a major

change occurs that makes the information inaccurate.

§ 68.50 Hazard review.

(a) The owner or operator shall conduct a review of the hazards associated with the regulated substances, process, and procedures. The review shall identify the following:

(1) The hazards associated with the process and regulated substances;

(2) Opportunities for equipment malfunctions or human errors that could cause an accidental release;

(3) The safeguards used or needed to control the hazards or prevent equipment malfunction or human error; and

(4) Any steps used or needed to detect or monitor releases.

(b) The owner or operator may use checklists developed by persons or organizations knowledgeable about the process and equipment as a guide to conducting the review. For processes designed to meet industry standards or Federal or state design rules, the hazard review shall, by inspecting all equipment, determine whether the process is designed, fabricated, and operated in accordance with the applicable standards or rules.

(c) The owner or operator shall document the results of the review and ensure that problems identified are resolved in a timely manner.

(d) The review shall be updated at least once every five years. The owner or operator shall also conduct reviews whenever a major change in the process occurs; all issues identified in the review shall be resolved before startup of the changed process.

§ 68.52 Operating procedures.

(a) The owner or operator shall prepare written operating procedures that provide clear instructions or steps for safely conducting activities associated with each covered process consistent with the safety information for that process. Operating procedures or instructions provided by equipment manufacturers or developed by persons or organizations knowledgeable about the process and equipment may be used as a basis for a stationary source's operating procedures.

(b) The procedures shall address the following:

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- (1) Initial startup;
 - (2) Normal operations;
 - (3) Temporary operations;
 - (4) Emergency shutdown and operations;
 - (5) Normal shutdown;
 - (6) Startup following a normal or emergency shutdown or a major change that requires a hazard review;
 - (7) Consequences of deviations and steps required to correct or avoid deviations; and
 - (8) Equipment inspections.
- (c) The owner or operator shall ensure that the operating procedures are updated, if necessary, whenever a major change occurs and prior to startup of the changed process.

§ 68.54 Training.

(a) The owner or operator shall ensure that each employee presently operating a process, and each employee newly assigned to a covered process have been trained or tested competent in the operating procedures provided in § 68.52 that pertain to their duties. For those employees already operating a process on June 21, 1999, the owner or operator may certify in writing that the employee has the required knowledge, skills, and abilities to safely carry out the duties and responsibilities as provided in the operating procedures.

(b) Refresher training. Refresher training shall be provided at least every three years, and more often if necessary, to each employee operating a process to ensure that the employee understands and adheres to the current operating procedures of the process. The owner or operator, in consultation with the employees operating the process, shall determine the appropriate frequency of refresher training.

(c) The owner or operator may use training conducted under Federal or state regulations or under industry-specific standards or codes or training conducted by covered process equipment vendors to demonstrate compliance with this section to the extent that the training meets the requirements of this section.

(d) The owner or operator shall ensure that operators are trained in any updated or new procedures prior to

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startup of a process after a major change.

§ 68.56 Maintenance.

(a) The owner or operator shall prepare and implement procedures to maintain the on-going mechanical integrity of the process equipment. The owner or operator may use procedures or instructions provided by covered process equipment vendors or procedures in Federal or state regulations or industry codes as the basis for stationary source maintenance procedures.

(b) The owner or operator shall train or cause to be trained each employee involved in maintaining the on-going mechanical integrity of the process. To ensure that the employee can perform the job tasks in a safe manner, each such employee shall be trained in the hazards of the process, in how to avoid or correct unsafe conditions, and in the procedures applicable to the employee's job tasks.

(c) Any maintenance contractor shall ensure that each contract maintenance employee is trained to perform the maintenance procedures developed under paragraph (a) of this section.

(d) The owner or operator shall perform or cause to be performed inspections and tests on process equipment. Inspection and testing procedures shall follow recognized and generally accepted good engineering practices. The frequency of inspections and tests of process equipment shall be consistent with applicable manufacturers' recommendations, industry standards or codes, good engineering practices, and prior operating experience.

§ 68.58 Compliance audits.

(a) The owner or operator shall certify that they have evaluated compliance with the provisions of this subpart at least every three years to verify that the procedures and practices developed under the rule are adequate and are being followed.

(b) The compliance audit shall be conducted by at least one person knowledgeable in the process.

(c) The owner or operator shall develop a report of the audit findings.

(d) The owner or operator shall promptly determine and document an

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appropriate response to each of the findings of the compliance audit and document that deficiencies have been corrected.

(e) The owner or operator shall retain the two (2) most recent compliance audit reports. This requirement does not apply to any compliance audit report that is more than five years old.

§ 68.60 Incident investigation.

(a) The owner or operator shall investigate each incident which resulted in, or could reasonably have resulted in a catastrophic release.

(b) An incident investigation shall be initiated as promptly as possible, but not later than 48 hours following the incident.

(c) A summary shall be prepared at the conclusion of the investigation which includes at a minimum:

- (1) Date of incident;
- (2) Date investigation began;
- (3) A description of the incident;
- (4) The factors that contributed to the incident; and,
- (5) Any recommendations resulting from the investigation.

(d) The owner or operator shall promptly address and resolve the investigation findings and recommendations. Resolutions and corrective actions shall be documented.

(e) The findings shall be reviewed with all affected personnel whose job tasks are affected by the findings.

(f) Investigation summaries shall be retained for five years.

Subpart D—Program 3 Prevention Program

SOURCE: 61 FR 31722, June 20, 1996, unless otherwise noted.

§ 68.65 Process safety information.

(a) In accordance with the schedule set forth in § 68.67, the owner or operator shall complete a compilation of written process safety information before conducting any process hazard analysis required by the rule. The compilation of written process safety information is to enable the owner or operator and the employees involved in operating the process to identify and understand the hazards posed by those processes involving regulated sub-

stances. This process safety information shall include information pertaining to the hazards of the regulated substances used or produced by the process, information pertaining to the technology of the process, and information pertaining to the equipment in the process.

(b) Information pertaining to the hazards of the regulated substances in the process. This information shall consist of at least the following:

- (1) Toxicity information;
- (2) Permissible exposure limits;
- (3) Physical data;
- (4) Reactivity data;
- (5) Corrosivity data;
- (6) Thermal and chemical stability data; and
- (7) Hazardous effects of inadvertent mixing of different materials that could foreseeably occur.

NOTE TO PARAGRAPH (b): Material Safety Data Sheets meeting the requirements of 29 CFR 1910.1200(g) may be used to comply with this requirement to the extent they contain the information required by this subparagraph.

(c) Information pertaining to the technology of the process.

(1) Information concerning the technology of the process shall include at least the following:

- (i) A block flow diagram or simplified process flow diagram;
- (ii) Process chemistry;
- (iii) Maximum intended inventory;
- (iv) Safe upper and lower limits for such items as temperatures, pressures, flows or compositions; and,
- (v) An evaluation of the consequences of deviations.

(2) Where the original technical information no longer exists, such information may be developed in conjunction with the process hazard analysis in sufficient detail to support the analysis.

(d) Information pertaining to the equipment in the process.

(1) Information pertaining to the equipment in the process shall include:

- (i) Materials of construction;
- (ii) Piping and instrument diagrams (P&ID's);
- (iii) Electrical classification;
- (iv) Relief system design and design basis;
- (v) Ventilation system design;

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(vi) Design codes and standards employed;

(vii) Material and energy balances for processes built after June 21, 1999; and

(viii) Safety systems (e.g. interlocks, detection or suppression systems).

(2) The owner or operator shall document that equipment complies with recognized and generally accepted good engineering practices.

(3) For existing equipment designed and constructed in accordance with codes, standards, or practices that are no longer in general use, the owner or operator shall determine and document that the equipment is designed, maintained, inspected, tested, and operating in a safe manner.

§ 68.67 Process hazard analysis.

(a) The owner or operator shall perform an initial process hazard analysis (hazard evaluation) on processes covered by this part. The process hazard analysis shall be appropriate to the complexity of the process and shall identify, evaluate, and control the hazards involved in the process. The owner or operator shall determine and document the priority order for conducting process hazard analyses based on a rationale which includes such considerations as extent of the process hazards, number of potentially affected employees, age of the process, and operating history of the process. The process hazard analysis shall be conducted as soon as possible, but not later than June 21, 1999. Process hazards analyses completed to comply with 29 CFR 1910.119(e) are acceptable as initial process hazards analyses. These process hazard analyses shall be updated and revalidated, based on their completion date.

(b) The owner or operator shall use one or more of the following methodologies that are appropriate to determine and evaluate the hazards of the process being analyzed.

- (1) What-If;
- (2) Checklist;
- (3) What-If/Checklist;
- (4) Hazard and Operability Study (HAZOP);
- (5) Failure Mode and Effects Analysis (FMEA);
- (6) Fault Tree Analysis; or

(7) An appropriate equivalent methodology.

(c) The process hazard analysis shall address:

- (1) The hazards of the process;
- (2) The identification of any previous incident which had a likely potential for catastrophic consequences.
- (3) Engineering and administrative controls applicable to the hazards and their interrelationships such as appropriate application of detection methodologies to provide early warning of releases. (Acceptable detection methods might include process monitoring and control instrumentation with alarms, and detection hardware such as hydrocarbon sensors.);

(4) Consequences of failure of engineering and administrative controls;

(5) Stationary source siting;

(6) Human factors; and

(7) A qualitative evaluation of a range of the possible safety and health effects of failure of controls.

(d) The process hazard analysis shall be performed by a team with expertise in engineering and process operations, and the team shall include at least one employee who has experience and knowledge specific to the process being evaluated. Also, one member of the team must be knowledgeable in the specific process hazard analysis methodology being used.

(e) The owner or operator shall establish a system to promptly address the team's findings and recommendations; assure that the recommendations are resolved in a timely manner and that the resolution is documented; document what actions are to be taken; complete actions as soon as possible; develop a written schedule of when these actions are to be completed; communicate the actions to operating, maintenance and other employees whose work assignments are in the process and who may be affected by the recommendations or actions.

(f) At least every five (5) years after the completion of the initial process hazard analysis, the process hazard analysis shall be updated and revalidated by a team meeting the requirements in paragraph (d) of this section, to assure that the process hazard analysis is consistent with the current

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process. Updated and revalidated process hazard analyses completed to comply with 29 CFR 1910.119(e) are acceptable to meet the requirements of this paragraph.

(g) The owner or operator shall retain process hazards analyses and updates or revalidations for each process covered by this section, as well as the documented resolution of recommendations described in paragraph (e) of this section for the life of the process.

§ 68.69 Operating procedures.

(a) The owner or operator shall develop and implement written operating procedures that provide clear instructions for safely conducting activities involved in each covered process consistent with the process safety information and shall address at least the following elements.

(1) Steps for each operating phase:

(i) Initial startup;

(ii) Normal operations;

(iii) Temporary operations;

(iv) Emergency shutdown including the conditions under which emergency shutdown is required, and the assignment of shutdown responsibility to qualified operators to ensure that emergency shutdown is executed in a safe and timely manner.

(v) Emergency operations;

(vi) Normal shutdown; and,

(vii) Startup following a turnaround, or after an emergency shutdown.

(2) Operating limits:

(i) Consequences of deviation; and

(ii) Steps required to correct or avoid deviation.

(3) Safety and health considerations:

(i) Properties of, and hazards presented by, the chemicals used in the process;

(ii) Precautions necessary to prevent exposure, including engineering controls, administrative controls, and personal protective equipment;

(iii) Control measures to be taken if physical contact or airborne exposure occurs;

(iv) Quality control for raw materials and control of hazardous chemical inventory levels; and,

(v) Any special or unique hazards.

(4) Safety systems and their functions.

(b) Operating procedures shall be readily accessible to employees who work in or maintain a process.

(c) The operating procedures shall be reviewed as often as necessary to assure that they reflect current operating practice, including changes that result from changes in process chemicals, technology, and equipment, and changes to stationary sources. The owner or operator shall certify annually that these operating procedures are current and accurate.

(d) The owner or operator shall develop and implement safe work practices to provide for the control of hazards during operations such as lockout/tagout; confined space entry; opening process equipment or piping; and control over entrance into a stationary source by maintenance, contractor, laboratory, or other support personnel. These safe work practices shall apply to employees and contractor employees.

§ 68.71 Training.

(a) *Initial training.* (1) Each employee presently involved in operating a process, and each employee before being involved in operating a newly assigned process, shall be trained in an overview of the process and in the operating procedures as specified in § 68.69. The training shall include emphasis on the specific safety and health hazards, emergency operations including shutdown, and safe work practices applicable to the employee's job tasks.

(2) In lieu of initial training for those employees already involved in operating a process on June 21, 1999 an owner or operator may certify in writing that the employee has the required knowledge, skills, and abilities to safely carry out the duties and responsibilities as specified in the operating procedures.

(b) *Refresher training.* Refresher training shall be provided at least every three years, and more often if necessary, to each employee involved in operating a process to assure that the employee understands and adheres to the current operating procedures of the process. The owner or operator, in consultation with the employees involved

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in operating the process, shall determine the appropriate frequency of refresher training.

(c) *Training documentation.* The owner or operator shall ascertain that each employee involved in operating a process has received and understood the training required by this paragraph. The owner or operator shall prepare a record which contains the identity of the employee, the date of training, and the means used to verify that the employee understood the training.

§ 68.73 Mechanical integrity.

(a) *Application.* Paragraphs (b) through (f) of this section apply to the following process equipment:

- (1) Pressure vessels and storage tanks;
- (2) Piping systems (including piping components such as valves);
- (3) Relief and vent systems and devices;
- (4) Emergency shutdown systems;
- (5) Controls (including monitoring devices and sensors, alarms, and interlocks) and,
- (6) Pumps.

(b) *Written procedures.* The owner or operator shall establish and implement written procedures to maintain the on-going integrity of process equipment.

(c) *Training for process maintenance activities.* The owner or operator shall train each employee involved in maintaining the on-going integrity of process equipment in an overview of that process and its hazards and in the procedures applicable to the employee's job tasks to assure that the employee can perform the job tasks in a safe manner.

(d) *Inspection and testing.* (1) Inspections and tests shall be performed on process equipment.

(2) Inspection and testing procedures shall follow recognized and generally accepted good engineering practices.

(3) The frequency of inspections and tests of process equipment shall be consistent with applicable manufacturers' recommendations and good engineering practices, and more frequently if determined to be necessary by prior operating experience.

(4) The owner or operator shall document each inspection and test that has been performed on process equipment.

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The documentation shall identify the date of the inspection or test, the name of the person who performed the inspection or test, the serial number or other identifier of the equipment on which the inspection or test was performed, a description of the inspection or test performed, and the results of the inspection or test.

(e) *Equipment deficiencies.* The owner or operator shall correct deficiencies in equipment that are outside acceptable limits (defined by the process safety information in § 68.65) before further use or in a safe and timely manner when necessary means are taken to assure safe operation.

(f) *Quality assurance.* (1) In the construction of new plants and equipment, the owner or operator shall assure that equipment as it is fabricated is suitable for the process application for which they will be used.

(2) Appropriate checks and inspections shall be performed to assure that equipment is installed properly and consistent with design specifications and the manufacturer's instructions.

(3) The owner or operator shall assure that maintenance materials, spare parts and equipment are suitable for the process application for which they will be used.

§ 68.75 Management of change.

(a) The owner or operator shall establish and implement written procedures to manage changes (except for "replacements in kind") to process chemicals, technology, equipment, and procedures; and, changes to stationary sources that affect a covered process.

(b) The procedures shall assure that the following considerations are addressed prior to any change:

- (1) The technical basis for the proposed change;
- (2) Impact of change on safety and health;
- (3) Modifications to operating procedures;
- (4) Necessary time period for the change; and,
- (5) Authorization requirements for the proposed change.

(c) Employees involved in operating a process and maintenance and contract employees whose job tasks will be affected by a change in the process shall

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be informed of, and trained in, the change prior to start-up of the process or affected part of the process.

(d) If a change covered by this paragraph results in a change in the process safety information required by § 68.65 of this part, such information shall be updated accordingly.

(e) If a change covered by this paragraph results in a change in the operating procedures or practices required by § 68.69, such procedures or practices shall be updated accordingly.

§ 68.77 Pre-startup review.

(a) The owner or operator shall perform a pre-startup safety review for new stationary sources and for modified stationary sources when the modification is significant enough to require a change in the process safety information.

(b) The pre-startup safety review shall confirm that prior to the introduction of regulated substances to a process:

(1) Construction and equipment is in accordance with design specifications;

(2) Safety, operating, maintenance, and emergency procedures are in place and are adequate;

(3) For new stationary sources, a process hazard analysis has been performed and recommendations have been resolved or implemented before startup; and modified stationary sources meet the requirements contained in management of change, § 68.75.

(4) Training of each employee involved in operating a process has been completed.

§ 68.79 Compliance audits.

(a) The owner or operator shall certify that they have evaluated compliance with the provisions of this subpart at least every three years to verify that procedures and practices developed under this subpart are adequate and are being followed.

(b) The compliance audit shall be conducted by at least one person knowledgeable in the process.

(c) A report of the findings of the audit shall be developed.

(d) The owner or operator shall promptly determine and document an appropriate response to each of the

findings of the compliance audit, and document that deficiencies have been corrected.

(e) The owner or operator shall retain the two (2) most recent compliance audit reports.

[61 FR 31722, June 20, 1996, as amended at 64 FR 979, Jan. 6, 1999]

§ 68.81 Incident investigation.

(a) The owner or operator shall investigate each incident which resulted in, or could reasonably have resulted in a catastrophic release of a regulated substance.

(b) An incident investigation shall be initiated as promptly as possible, but not later than 48 hours following the incident.

(c) An incident investigation team shall be established and consist of at least one person knowledgeable in the process involved, including a contract employee if the incident involved work of the contractor, and other persons with appropriate knowledge and experience to thoroughly investigate and analyze the incident.

(d) A report shall be prepared at the conclusion of the investigation which includes at a minimum:

(1) Date of incident;

(2) Date investigation began;

(3) A description of the incident;

(4) The factors that contributed to the incident; and,

(5) Any recommendations resulting from the investigation.

(e) The owner or operator shall establish a system to promptly address and resolve the incident report findings and recommendations. Resolutions and corrective actions shall be documented.

(f) The report shall be reviewed with all affected personnel whose job tasks are relevant to the incident findings including contract employees where applicable.

(g) Incident investigation reports shall be retained for five years.

§ 68.83 Employee participation.

(a) The owner or operator shall develop a written plan of action regarding the implementation of the employee participation required by this section.

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(b) The owner or operator shall consult with employees and their representatives on the conduct and development of process hazards analyses and on the development of the other elements of process safety management in this rule.

(c) The owner or operator shall provide to employees and their representatives access to process hazard analyses and to all other information required to be developed under this rule.

§ 68.85 Hot work permit.

(a) The owner or operator shall issue a hot work permit for hot work operations conducted on or near a covered process.

(b) The permit shall document that the fire prevention and protection requirements in 29 CFR 1910.252(a) have been implemented prior to beginning the hot work operations; it shall indicate the date(s) authorized for hot work; and identify the object on which hot work is to be performed. The permit shall be kept on file until completion of the hot work operations.

§ 68.87 Contractors.

(a) *Application.* This section applies to contractors performing maintenance or repair, turnaround, major renovation, or specialty work on or adjacent to a covered process. It does not apply to contractors providing incidental services which do not influence process safety, such as janitorial work, food and drink services, laundry, delivery or other supply services.

(b) *Owner or operator responsibilities.* (1) The owner or operator, when selecting a contractor, shall obtain and evaluate information regarding the contract owner or operator's safety performance and programs.

(2) The owner or operator shall inform contract owner or operator of the known potential fire, explosion, or toxic release hazards related to the contractor's work and the process.

(3) The owner or operator shall explain to the contract owner or operator the applicable provisions of subpart E of this part.

(4) The owner or operator shall develop and implement safe work practices consistent with § 68.69(d), to control the entrance, presence, and exit of

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the contract owner or operator and contract employees in covered process areas.

(5) The owner or operator shall periodically evaluate the performance of the contract owner or operator in fulfilling their obligations as specified in paragraph (c) of this section.

(c) *Contract owner or operator responsibilities.* (1) The contract owner or operator shall assure that each contract employee is trained in the work practices necessary to safely perform his/her job.

(2) The contract owner or operator shall assure that each contract employee is instructed in the known potential fire, explosion, or toxic release hazards related to his/her job and the process, and the applicable provisions of the emergency action plan.

(3) The contract owner or operator shall document that each contract employee has received and understood the training required by this section. The contract owner or operator shall prepare a record which contains the identity of the contract employee, the date of training, and the means used to verify that the employee understood the training.

(4) The contract owner or operator shall assure that each contract employee follows the safety rules of the stationary source including the safe work practices required by § 68.69(d).

(5) The contract owner or operator shall advise the owner or operator of any unique hazards presented by the contract owner or operator's work, or of any hazards found by the contract owner or operator's work.

Subpart E—Emergency Response

SOURCE: 61 FR 31725, June 20, 1996, unless otherwise noted.

§ 68.90 Applicability.

(a) Except as provided in paragraph (b) of this section, the owner or operator of a stationary source with Program 2 and Program 3 processes shall comply with the requirements of § 68.95.

(b) The owner or operator of stationary source whose employees will not respond to accidental releases of regulated substances need not comply

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with § 68.95 of this part provided that they meet the following:

(1) For stationary sources with any regulated toxic substance held in a process above the threshold quantity, the stationary source is included in the community emergency response plan developed under 42 U.S.C. 11003;

(2) For stationary sources with only regulated flammable substances held in a process above the threshold quantity, the owner or operator has coordinated response actions with the local fire department; and

(3) Appropriate mechanisms are in place to notify emergency responders when there is a need for a response.

§ 68.95 Emergency response program.

(a) The owner or operator shall develop and implement an emergency response program for the purpose of protecting public health and the environment. Such program shall include the following elements:

(1) An emergency response plan, which shall be maintained at the stationary source and contain at least the following elements:

(i) Procedures for informing the public and local emergency response agencies about accidental releases;

(ii) Documentation of proper first-aid and emergency medical treatment necessary to treat accidental human exposures; and

(iii) Procedures and measures for emergency response after an accidental release of a regulated substance;

(2) Procedures for the use of emergency response equipment and for its inspection, testing, and maintenance;

(3) Training for all employees in relevant procedures; and

(4) Procedures to review and update, as appropriate, the emergency response plan to reflect changes at the stationary source and ensure that employees are informed of changes.

(b) A written plan that complies with other Federal contingency plan regulations or is consistent with the approach in the National Response Team's Integrated Contingency Plan Guidance ("One Plan") and that, among other matters, includes the elements provided in paragraph (a) of this section, shall satisfy the requirements of this section if the owner or operator

also complies with paragraph (c) of this section.

(c) The emergency response plan developed under paragraph (a)(1) of this section shall be coordinated with the community emergency response plan developed under 42 U.S.C. 11003. Upon request of the local emergency planning committee or emergency response officials, the owner or operator shall promptly provide to the local emergency response officials information necessary for developing and implementing the community emergency response plan.

Subpart F—Regulated Substances for Accidental Release Prevention

SOURCE: 59 FR 4493, Jan. 31, 1994, unless otherwise noted. Redesignated at 61 FR 31717, June 20, 1996.

§ 68.100 Purpose.

This subpart designates substances to be listed under section 112(r)(3), (4), and (5) of the Clean Air Act, as amended, identifies their threshold quantities, and establishes the requirements for petitioning to add or delete substances from the list.

§ 68.115 Threshold determination.

(a) A threshold quantity of a regulated substance listed in § 68.130 is present at a stationary source if the total quantity of the regulated substance contained in a process exceeds the threshold.

(b) For the purposes of determining whether more than a threshold quantity of a regulated substance is present at the stationary source, the following exemptions apply:

(1) *Concentrations of a regulated toxic substance in a mixture.* If a regulated substance is present in a mixture and the concentration of the substance is below one percent by weight of the mixture, the amount of the substance in the mixture need not be considered when determining whether more than a threshold quantity is present at the stationary source. Except for oleum, toluene 2,4-diisocyanate, toluene 2,6-diisocyanate, and toluene diisocyanate (unspecified isomer), if the concentration of the regulated substance in the mixture is one percent or greater by

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weight, but the owner or operator can demonstrate that the partial pressure of the regulated substance in the mixture (solution) under handling or storage conditions in any portion of the process is less than 10 millimeters of mercury (mm Hg), the amount of the substance in the mixture in that portion of the process need not be considered when determining whether more than a threshold quantity is present at the stationary source. The owner or operator shall document this partial pressure measurement or estimate.

(2) *Concentrations of a regulated flammable substance in a mixture.* (i) *General provision.* If a regulated substance is present in a mixture and the concentration of the substance is below one percent by weight of the mixture, the mixture need not be considered when determining whether more than a threshold quantity of the regulated substance is present at the stationary source. Except as provided in paragraph (b)(2) (ii) and (iii) of this section, if the concentration of the substance is one percent or greater by weight of the mixture, then, for purposes of determining whether a threshold quantity is present at the stationary source, the entire weight of the mixture shall be treated as the regulated substance unless the owner or operator can demonstrate that the mixture itself does not have a National Fire Protection Association flammability hazard rating of 4. The demonstration shall be in accordance with the definition of flammability hazard rating 4 in the NFPA 704, Standard System for the Identification of the Hazards of Materials for Emergency Response, National Fire Protection Association, Quincy, MA, 1996. Available from the National Fire Protection Association, 1 Batterymarch Park, Quincy, MA 02269-9101. This incorporation by reference was approved by the Director of the Federal Register in accordance with 5 U.S.C. 552(a) and 1 CFR part 51. Copies may be inspected at the Environmental Protection Agency Air Docket (6102), Attn: Docket No. A-96-O8, Waterside Mall, 401 M. St. SW., Washington DC; or at the Office of Federal Register at 800 North Capitol St., NW, Suite 700, Washington, DC. Boiling point and flash point shall be defined and deter-

mined in accordance with NFPA 30, Flammable and Combustible Liquids Code, National Fire Protection Association, Quincy, MA, 1996. Available from the National Fire Protection Association, 1 Batterymarch Park, Quincy, MA 02269-9101. This incorporation by reference was approved by the Director of the Federal Register in accordance with 5 U.S.C. 552(a) and 1 CFR part 51. Copies may be inspected at the Environmental Protection Agency Air Docket (6102), Attn: Docket No. A-96-O8, Waterside Mall, 401 M. St. SW., Washington DC; or at the Office of Federal Register at 800 North Capitol St., NW, Suite 700, Washington, DC. The owner or operator shall document the National Fire Protection Association flammability hazard rating.

(ii) *Gasoline.* Regulated substances in gasoline, when in distribution or related storage for use as fuel for internal combustion engines, need not be considered when determining whether more than a threshold quantity is present at a stationary source.

(iii) *Naturally occurring hydrocarbon mixtures.* Prior to entry into a natural gas processing plant or a petroleum refining process unit, regulated substances in naturally occurring hydrocarbon mixtures need not be considered when determining whether more than a threshold quantity is present at a stationary source. Naturally occurring hydrocarbon mixtures include any combination of the following: condensate, crude oil, field gas, and produced water, each as defined in § 68.3 of this part.

(3) *Articles.* Regulated substances contained in articles need not be considered when determining whether more than a threshold quantity is present at the stationary source.

(4) *Uses.* Regulated substances, when in use for the following purposes, need not be included in determining whether more than a threshold quantity is present at the stationary source:

- (i) Use as a structural component of the stationary source;
- (ii) Use of products for routine janitorial maintenance;
- (iii) Use by employees of foods, drugs, cosmetics, or other personal items containing the regulated substance; and

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(iv) Use of regulated substances present in process water or non-contact cooling water as drawn from the environment or municipal sources, or use of regulated substances present in air used either as compressed air or as part of combustion.

(5) *Activities in laboratories.* If a regulated substance is manufactured, processed, or used in a laboratory at a stationary source under the supervision of a technically qualified individual as defined in § 720.3(ee) of this chapter, the quantity of the substance need not be considered in determining whether a threshold quantity is present. This exemption does not apply to:

- (i) Specialty chemical production;
- (ii) Manufacture, processing, or use of substances in pilot plant scale operations; and
- (iii) Activities conducted outside the laboratory.

[59 FR 4493, Jan. 31, 1994. Redesignated at 61 FR 31717, June 20, 1996, as amended at 63 FR 645, Jan. 6, 1998]

§ 68.120 Petition process.

(a) Any person may petition the Administrator to modify, by addition or deletion, the list of regulated substances identified in § 68.130. Based on the information presented by the petitioner, the Administrator may grant or deny a petition.

(b) A substance may be added to the list if, in the case of an accidental release, it is known to cause or may be reasonably anticipated to cause death, injury, or serious adverse effects to human health or the environment.

(c) A substance may be deleted from the list if adequate data on the health and environmental effects of the substance are available to determine that the substance, in the case of an accidental release, is not known to cause and may not be reasonably anticipated to cause death, injury, or serious adverse effects to human health or the environment.

(d) No substance for which a national primary ambient air quality standard has been established shall be added to the list. No substance regulated under title VI of the Clean Air Act, as amended, shall be added to the list.

(e) The burden of proof is on the petitioner to demonstrate that the criteria

for addition and deletion are met. A petition will be denied if this demonstration is not made.

(f) The Administrator will not accept additional petitions on the same substance following publication of a final notice of the decision to grant or deny a petition, unless new data becomes available that could significantly affect the basis for the decision.

(g) Petitions to modify the list of regulated substances must contain the following:

(1) Name and address of the petitioner and a brief description of the organization(s) that the petitioner represents, if applicable;

(2) Name, address, and telephone number of a contact person for the petition;

(3) Common chemical name(s), common synonym(s), Chemical Abstracts Service number, and chemical formula and structure;

(4) Action requested (add or delete a substance);

(5) Rationale supporting the petitioner's position; that is, how the substance meets the criteria for addition and deletion. A short summary of the rationale must be submitted along with a more detailed narrative; and

(6) Supporting data; that is, the petition must include sufficient information to scientifically support the request to modify the list. Such information shall include:

(i) A list of all support documents;

(ii) Documentation of literature searches conducted, including, but not limited to, identification of the database(s) searched, the search strategy, dates covered, and printed results;

(iii) Effects data (animal, human, and environmental test data) indicating the potential for death, injury, or serious adverse human and environmental impacts from acute exposure following an accidental release; printed copies of the data sources, in English, should be provided; and

(iv) Exposure data or previous accident history data, indicating the potential for serious adverse human health or environmental effects from an accidental release. These data may

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include, but are not limited to, physical and chemical properties of the substance, such as vapor pressure; modeling results, including data and assumptions used and model documentation; and historical accident data, citing data sources.

(h) Within 18 months of receipt of a petition, the Administrator shall publish in the FEDERAL REGISTER a notice either denying the petition or granting the petition and proposing a listing.

§ 68.125 Exemptions.

Agricultural nutrients. Ammonia used as an agricultural nutrient, when held by farmers, is exempt from all provisions of this part.

§ 68.130 List of substances.

(a) Regulated toxic and flammable substances under section 112(r) of the Clean Air Act are the substances listed in Tables 1, 2, 3, and 4. Threshold quantities for listed toxic and flammable substances are specified in the tables.

(b) The basis for placing toxic and flammable substances on the list of regulated substances are explained in the notes to the list.

TABLE 1 TO § 68.130.—LIST OF REGULATED TOXIC SUBSTANCES AND THRESHOLD QUANTITIES FOR ACCIDENTAL RELEASE PREVENTION
[Alphabetical Order—77 Substances]

Chemical name	CAS No.	Threshold quantity (lbs)	Basis for listing
Acrolein [2-Propenal].	107-02-8	5,000	b
Acrylonitrile [2-Propenenitrile].	107-13-1	20,000	b
Acrylyl chloride [2-Propenoyl chloride].	814-68-6	5,000	b
Allyl alcohol [2-Propen-1-ol].	107-18-61	15,000	b
Allylamine [2-Propen-1-amine].	107-11-9	10,000	b
Ammonia (anhydrous).	7664-41-7	10,000	a, b
Ammonia (conc 20% or greater).	7664-41-7	20,000	a, b
Arsenous trichloride.	7784-34-1	15,000	b
Arsine	7784-42-1	1,000	b
Boron trichloride [Borane, trichloro-].	10294-34-5	5,000	b
Boron trifluoride [Borane, trifluoro-].	7637-07-2	5,000	b

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TABLE 1 TO § 68.130.—LIST OF REGULATED TOXIC SUBSTANCES AND THRESHOLD QUANTITIES FOR ACCIDENTAL RELEASE PREVENTION—Continued
[Alphabetical Order—77 Substances]

Chemical name	CAS No.	Threshold quantity (lbs)	Basis for listing
Boron trifluoride compound with methyl ether (1:1) [Boron, trifluoro [oxybis [methane]]-, T-4-.	353-42-4	15,000	b
Bromine	7726-95-6	10,000	a, b
Carbon disulfide	75-15-0	20,000	b
Chlorine	7782-50-5	2,500	a, b
Chlorine dioxide [Chlorine oxide (ClO ₂)].	10049-04-4	1,000	c
Chloroform [Methane, trichloro-].	67-66-3	20,000	b
Chloromethyl ether [Methane, oxybis(chloro-].	542-88-1	1,000	b
Chloromethyl methyl ether [Methane, chloromethoxy-].	107-30-2	5,000	b
Crotonaldehyde [2-Butenal].	4170-30-3	20,000	b
Crotonaldehyde, (E)- [2-Butenal, (E)-].	123-73-9	20,000	b
Cyanogen chloride.	506-77-4	10,000	c
Cyclohexylamine [Cyclohexanamine].	108-91-8	15,000	b
Diborane	19287-45-7	2,500	b
Dimethyldichlorosilane [Silane, dichlorodimethyl-].	75-78-5	5,000	b
1,1-Dimethylhydrazine [Hydrazine, 1,1-dimethyl-].	57-14-7	15,000	b
Epichlorohydrin [Oxirane, (chloromethyl)-].	106-89-8	20,000	b
Ethylenediamine [1,2-Ethanediamine].	107-15-3	20,000	b
Ethyleneimine [Aziridine].	151-56-4	10,000	b
Ethylene oxide [Oxirane].	75-21-8	10,000	a, b
Fluorine	7782-41-4	1,000	b
Formaldehyde (solution).	50-00-0	15,000	b
Furan	110-00-9	5,000	b
Hydrazine	302-01-2	15,000	b
Hydrochloric acid (conc 37% or greater).	7647-01-0	15,000	d
Hydrocyanic acid	74-90-8	2,500	a, b

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TABLE 1 TO § 68.130.—LIST OF REGULATED TOXIC SUBSTANCES AND THRESHOLD QUANTITIES FOR ACCIDENTAL RELEASE PREVENTION—Continued

[Alphabetical Order—77 Substances]

Chemical name	CAS No.	Threshold quantity (lbs)	Basis for listing
Hydrogen chloride (anhydrous) [Hydrochloric acid].	7647-01-0	5,000	a
Hydrogen fluoride/ Hydrofluoric acid (conc 50% or greater) [Hydrofluoric acid].	7664-39-3	1,000	a, b
Hydrogen selenide.	7783-07-5	500	b
Hydrogen sulfide	7783-06-4	10,000	a, b
Iron, pentacarbonyl- [Iron carbonyl (Fe(CO) ₅), (TB-5-11)-].	13463-40-6	2,500	b
Isobutyronitrile [Propanenitrile, 2-methyl-].	78-82-0	20,000	b
Isopropyl chloroformate [Carbonochloridic acid, 1-methylethyl ester].	108-23-6	15,000	b
Methacrylonitrile [2-Propenenitrile, 2-methyl-].	126-98-7	10,000	b
Methyl chloride [Methane, chloro-].	74-87-3	10,000	a
Methyl chloroformate [Carbonochloridic acid, methylester].	79-22-1	5,000	b
Methyl hydrazine [Hydrazine, methyl-].	60-34-4	15,000	b
Methyl isocyanate [Methane, isocyanato-].	624-83-9	10,000	a, b
Methyl mercaptan [Methanethiol].	74-93-1	10,000	b
Methyl thiocyanate [Thiocyanic acid, methyl ester].	556-64-9	20,000	b
Methyltrichlorosilane [Silane, trichloromethyl-].	75-79-6	5,000	b
Nickel carbonyl ...	13463-39-3	1,000	b
Nitric acid (conc 80% or greater).	7697-37-2	15,000	b
Nitric oxide [Nitrogen oxide (NO)].	10102-43-9	10,000	b

TABLE 1 TO § 68.130.—LIST OF REGULATED TOXIC SUBSTANCES AND THRESHOLD QUANTITIES FOR ACCIDENTAL RELEASE PREVENTION—Continued

[Alphabetical Order—77 Substances]

Chemical name	CAS No.	Threshold quantity (lbs)	Basis for listing
Oleum (Fuming Sulfuric acid) [Sulfuric acid, mixture with sulfur trioxide] ¹ .	8014-95-7	10,000	e
Peracetic acid [Ethaneperoxoic acid].	79-21-0	10,000	b
Perchloromethylmercaptan [Methanesulfenyl chloride, trichloro-].	594-42-3	10,000	b
Phosgene [Carbonic dichloride].	75-44-5	500	a, b
Phosphine	7803-51-2	5,000	b
Phosphorus oxychloride [Phosphoryl chloride].	10025-87-3	5,000	b
Phosphorus trichloride [Phosphorous trichloride].	7719-12-2	15,000	b
Piperidine	110-89-4	15,000	b
Propionitrile [Propanenitrile].	107-12-0	10,000	b
Propyl chloroformate [Carbonochloridic acid, propylester].	109-61-5	15,000	b
Propyleneimine [Aziridine, 2-methyl-].	75-55-8	10,000	b
Propylene oxide [Oxirane, methyl-].	75-56-9	10,000	b
Sulfur dioxide (anhydrous).	7446-09-5	5,000	a, b
Sulfur tetrafluoride [Sulfur fluoride (SF ₄), (T-4)-].	7783-60-0	2,500	b
Sulfur trioxide	7446-11-9	10,000	a, b
Tetramethyllead [Plumbane, tetramethyl-].	75-74-1	10,000	b
Tetranitromethane [Methane, tetranitro-].	509-14-8	10,000	b
Titanium tetrachloride [Titanium chloride (TiCl ₄) (T-4)-].	7550-45-0	2,500	b
Toluene 2,4-diisocyanate [Benzene, 2,4-diisocyanato-1-methyl-] ¹ .	584-84-9	10,000	a

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TABLE 1 TO § 68.130.—LIST OF REGULATED TOXIC SUBSTANCES AND THRESHOLD QUANTITIES FOR ACCIDENTAL RELEASE PREVENTION—Continued

[Alphabetical Order—77 Substances]

Chemical name	CAS No.	Threshold quantity (lbs)	Basis for listing
Toluene 2,6-diisocyanate [Benzene, 1,3-diisocyanato-2-methyl-] ¹ .	91-08-7	10,000	a
Toluene diisocyanate (unspecified isomer) [Benzene, 1,3-diisocyanatomethyl-] ¹ .	26471-62-5	10,000	a
Trimethylchlorosilane [Silane, chlorotrimethyl-].	75-77-4	10,000	b

TABLE 1 TO § 68.130.—LIST OF REGULATED TOXIC SUBSTANCES AND THRESHOLD QUANTITIES FOR ACCIDENTAL RELEASE PREVENTION—Continued

[Alphabetical Order—77 Substances]

Chemical name	CAS No.	Threshold quantity (lbs)	Basis for listing
Vinyl acetate monomer [Acetic acid ethenyl ester].	108-05-4	15,000	b

¹ The mixture exemption in § 68.115(b)(1) does not apply to the substance.

NOTE: Basis for Listing:

- a Mandated for listing by Congress.
- b On EHS list, vapor pressure 10 mmHg or greater.
- c Toxic gas.
- d Toxicity of hydrogen chloride, potential to release hydrogen chloride, and history of accidents.
- e Toxicity of sulfur trioxide and sulfuric acid, potential to release sulfur trioxide, and history of accidents.

TABLE 2 TO § 68.130.—LIST OF REGULATED TOXIC SUBSTANCES AND THRESHOLD QUANTITIES FOR ACCIDENTAL RELEASE PREVENTION

[CAS Number Order—77 Substances]

CAS No.	Chemical name	Threshold quantity (lbs)	Basis for listing
50-00-0	Formaldehyde (solution)	15,000	b
57-14-7	1,1-Dimethylhydrazine [Hydrazine, 1,1-dimethyl-]	15,000	b
60-34-4	Methyl hydrazine [Hydrazine, methyl-]	15,000	b
67-66-3	Chloroform [Methane, trichloro-]	20,000	b
74-87-3	Methyl chloride [Methane, chloro-]	10,000	a
74-90-8	Hydrocyanic acid	2,500	a, b
74-93-1	Methyl mercaptan [Methanethiol]	10,000	b
75-15-0	Carbon disulfide	20,000	b
75-21-8	Ethylene oxide [Oxirane]	10,000	a, b
75-44-5	Phosgene [Carbonic dichloride]	500	a, b
75-55-8	Propyleneimine [Aziridine, 2-methyl-]	10,000	b
75-56-9	Propylene oxide [Oxirane, methyl-]	10,000	b
75-74-1	Tetramethyllead [Plumbane, tetramethyl-]	10,000	b
75-77-4	Trimethylchlorosilane [Silane, chlorotrimethyl-]	10,000	b
75-78-5	Dimethyldichlorosilane [Silane, dichlorodimethyl-]	5,000	b
75-79-6	Methyltrichlorosilane [Silane, trichloromethyl-]	5,000	b
78-82-0	Isobutyronitrile [Propanenitrile, 2-methyl-]	20,000	b
79-21-0	Peracetic acid [Ethaneperoxyic acid]	10,000	b
79-22-1	Methyl chloroformate [Carbonochloridic acid, methylester]	5,000	b
91-08-7	Toluene 2,6-diisocyanate [Benzene, 1,3-diisocyanato-2-methyl-] ¹	10,000	a
106-89-8	Epichlorohydrin [Oxirane, (chloromethyl)-]	20,000	b
107-02-8	Acrolein [2-Propenal]	5,000	b
107-11-9	Allylamine [2-Propen-1-amine]	10,000	b
107-12-0	Propionitrile [Propanenitrile]	10,000	b
107-13-1	Acrylonitrile [2-Propenenitrile]	20,000	b
107-15-3	Ethylenediamine [1,2-Ethanediamine]	20,000	b
107-18-6	Allyl alcohol [2-Propen-1-ol]	15,000	b
107-30-2	Chloromethyl methyl ether [Methane, chloromethoxy-]	5,000	b
108-05-4	Vinyl acetate monomer [Acetic acid ethenyl ester]	15,000	b
108-23-6	Isopropyl chloroformate [Carbonochloridic acid, 1-methylethyl ester]	15,000	b
108-91-8	Cyclohexylamine [Cyclohexanamine]	15,000	b
109-61-5	Propyl chloroformate [Carbonochloridic acid, propylester]	15,000	b
110-00-9	Furan	5,000	b
110-89-4	Piperidine	15,000	b
123-73-9	Crotonaldehyde, (E)- [2-Butenal, (E)-]	20,000	b
126-98-7	Methacrylonitrile [2-Propenenitrile, 2-methyl-]	10,000	b
151-56-4	Ethyleneimine [Aziridine]	10,000	b
302-01-2	Hydrazine	15,000	b
353-42-4	Boron trifluoride compound with methyl ether (1:1) [Boron, trifluoro[oxybis(methane)]-, T-4-.	15,000	b

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TABLE 2 TO § 68.130.—LIST OF REGULATED TOXIC SUBSTANCES AND THRESHOLD QUANTITIES FOR ACCIDENTAL RELEASE PREVENTION—Continued
[CAS Number Order—77 Substances]

CAS No.	Chemical name	Threshold quantity (lbs)	Basis for listing
506-77-4	Cyanogen chloride	10,000	c
509-14-8	Tetranitromethane [Methane, tetranitro-]	10,000	b
542-88-1	Chloromethyl ether [Methane, oxybis(chloro-)]	1,000	b
556-64-9	Methyl thiocyanate [Thiocyanic acid, methyl ester]	20,000	b
584-84-9	Toluene 2,4-diisocyanate [Benzene, 2,4-diisocyanato-1-methyl-] ¹	10,000	a
594-42-3	Perchloromethylmercaptan [Methanesulfonyl chloride, trichloro-]	10,000	b
624-83-9	Methyl isocyanate [Methane, isocyanato-]	10,000	a, b
814-68-6	Acrylyl chloride [2-Propenoyl chloride]	5,000	b
4170-30-3	Crotonaldehyde [2-Butenal]	20,000	b
7446-09-5	Sulfur dioxide (anhydrous)	5,000	a, b
7446-11-9	Sulfur trioxide	10,000	a, b
7550-45-0	Titanium tetrachloride [Titanium chloride (TiCl ₄) (T-4)-]	2,500	b
7637-07-2	Boron trifluoride [Borane, trifluoro-]	5,000	b
7647-01-0	Hydrochloric acid (conc 37% or greater)	15,000	d
7647-01-0	Hydrogen chloride (anhydrous) [Hydrochloric acid]	5,000	a
7664-39-3	Hydrogen fluoride/Hydrofluoric acid (conc 50% or greater) [Hydrofluoric acid]	1,000	a, b
7664-41-7	Ammonia (anhydrous)	10,000	a, b
7664-41-7	Ammonia (conc 20% or greater)	20,000	a, b
7697-37-2	Nitric acid (conc 80% or greater)	15,000	b
7719-12-2	Phosphorus trichloride [Phosphorous trichloride]	15,000	b
7726-95-6	Bromine	10,000	a, b
7782-41-4	Fluorine	1,000	b
7782-50-5	Chlorine	2,500	a, b
7783-06-4	Hydrogen sulfide	10,000	a, b
7783-07-5	Hydrogen selenide	500	b
7783-60-0	Sulfur tetrafluoride [Sulfur fluoride (SF ₄), (T-4)-]	2,500	b
7784-34-1	Arsenous trichloride	15,000	b
7784-42-1	Arsine	1,000	b
7803-51-2	Phosphine	5,000	b
8014-95-7	Oleum (Fuming Sulfuric acid) [Sulfuric acid, mixture with sulfur trioxide] ¹	10,000	e
10025-87-3	Phosphorus oxychloride [Phosphoryl chloride]	5,000	b
10049-04-4	Chlorine dioxide [Chlorine oxide (ClO ₂)]	1,000	c
10102-43-9	Nitric oxide [Nitrogen oxide (NO)]	10,000	b
10294-34-5	Boron trichloride [Borane, trichloro-]	5,000	b
13463-39-3	Nickel carbonyl	1,000	b
13463-40-6	Iron, pentacarbonyl- [Iron carbonyl (Fe(CO) ₅), (TB-5-11)-]	2,500	b
19287-45-7	Diborane	2,500	b
26471-62-5	Toluene diisocyanate (unspecified isomer) [Benzene, 1,3-diisocyanatomethyl-1] ¹	10,000	a

¹The mixture exemption in § 68.115(b)(1) does not apply to the substance.

NOTE: Basis for Listing:

a Mandated for listing by Congress.

b On EHS list, vapor pressure 10 mmHg or greater.

c Toxic gas.

d Toxicity of hydrogen chloride, potential to release hydrogen chloride, and history of accidents.

e Toxicity of sulfur trioxide and sulfuric acid, potential to release sulfur trioxide, and history of accidents.

TABLE 3 TO § 68.130.—LIST OF REGULATED FLAMMABLE SUBSTANCES AND THRESHOLD QUANTITIES FOR ACCIDENTAL RELEASE PREVENTION
[Alphabetical Order—63 Substances]

Chemical name	CAS No.	Threshold quantity (lbs)	Basis for listing
Acetaldehyde	75-07-0	10,000	g
Acetylene [Ethyne]	74-86-2	10,000	f
Bromotrifluoroethylene [Ethene, bromotrifluoro-]	598-73-2	10,000	f
1,3-Butadiene	106-99-0	10,000	f
Butane	106-97-8	10,000	f
1-Butene	106-98-9	10,000	f
2-Butene	107-01-7	10,000	f
Butene	25167-67-3	10,000	f
2-Butene-cis	590-18-1	10,000	f
2-Butene-trans [2-Butene, (E)]	624-64-6	10,000	f
Carbon oxysulfide [Carbon oxide sulfide (COS)]	463-58-1	10,000	f
Chlorine monoxide [Chlorine oxide]	7791-21-1	10,000	f
2-Chloropropylene [1-Propene, 2-chloro-]	557-98-2	10,000	g

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TABLE 3 TO § 68.130.—LIST OF REGULATED FLAMMABLE SUBSTANCES AND THRESHOLD QUANTITIES FOR ACCIDENTAL RELEASE PREVENTION—Continued
[Alphabetical Order—63 Substances]

Chemical name	CAS No.	Threshold quantity (lbs)	Basis for listing
1-Chloropropylene [1-Propene, 1-chloro-]	590–21–6	10,000	g
Cyanogen [Ethanedinitrile]	460–19–5	10,000	f
Cyclopropane	75–19–4	10,000	f
Dichlorosilane [Silane, dichloro-]	4109–96–0	10,000	f
Difluoroethane [Ethane, 1,1-difluoro-]	75–37–6	10,000	f
Dimethylamine [Methanamine, N-methyl-]	124–40–3	10,000	f
2,2-Dimethylpropane [Propane, 2,2-dimethyl-]	463–82–1	10,000	f
Ethane	74–84–0	10,000	f
Ethyl acetylene [1-Butyne]	107–00–6	10,000	f
Ethylamine [Ethanamine]	75–04–7	10,000	f
Ethyl chloride [Ethane, chloro-]	75–00–3	10,000	f
Ethylene [Ethene]	74–85–1	10,000	f
Ethyl ether [Ethane, 1,1'-oxybis-]	60–29–7	10,000	g
Ethyl mercaptan [Ethanethiol]	75–08–1	10,000	g
Ethyl nitrite [Nitrous acid, ethyl ester]	109–95–5	10,000	f
Hydrogen	1333–74–0	10,000	f
Isobutane [Propane, 2-methyl]	75–28–5	10,000	f
Isopentane [Butane, 2-methyl-]	78–78–4	10,000	g
Isoprene [1,3-Butadiene, 2-methyl-]	78–79–5	10,000	g
Isopropylamine [2-Propanamine]	75–31–0	10,000	g
Isopropyl chloride [Propane, 2-chloro-]	75–29–6	10,000	g
Methane	74–82–8	10,000	f
Methylamine [Methanamine]	74–89–5	10,000	f
3-Methyl-1-butene	563–45–1	10,000	f
2-Methyl-1-butene	563–46–2	10,000	g
Methyl ether [Methane, oxybis-]	115–10–6	10,000	f
Methyl formate [Formic acid, methyl ester]	107–31–3	10,000	g
2-Methylpropene [1-Propene, 2-methyl-]	115–11–7	10,000	f
1,3-Pentadiene	504–60–9	10,000	f
Pentane	109–66–0	10,000	g
1-Pentene	109–67–1	10,000	g
2-Pentene, (E)-	646–04–8	10,000	g
2-Pentene, (Z)-	627–20–3	10,000	g
Propadiene [1,2-Propadiene]	463–49–0	10,000	f
Propane	74–98–6	10,000	f
Propylene [1-Propene]	115–07–1	10,000	f
Propyne [1-Propyne]	74–99–7	10,000	f
Silane	7803–62–5	10,000	f
Tetrafluoroethylene [Ethene, tetrafluoro-]	116–14–3	10,000	f
Tetramethylsilane [Silane, tetramethyl-]	75–76–3	10,000	g
Trichlorosilane [Silane, trichloro-]	10025–78–2	10,000	g
Trifluorochloroethylene [Ethene, chlorotrifluoro-]	79–38–9	10,000	f
Trimethylamine [Methanamine, N,N-dimethyl-]	75–50–3	10,000	f
Vinyl acetylene [1-Buten-3-yne]	689–97–4	10,000	f
Vinyl chloride [Ethene, chloro-]	75–01–4	10,000	a, f
Vinyl ethyl ether [Ethene, ethoxy-]	109–92–2	10,000	g
Vinyl fluoride [Ethene, fluoro-]	75–02–5	10,000	f
Vinylidene chloride [Ethene, 1,1-dichloro-]	75–35–4	10,000	g
Vinylidene fluoride [Ethene, 1,1-difluoro-]	75–38–7	10,000	f
Vinyl methyl ether [Ethene, methoxy-]	107–25–5	10,000	f

NOTE: Basis for Listing:
a Mandated for listing by Congress.
f Flammable gas.
g Volatile flammable liquid.

TABLE 4 TO § 68.130.—LIST OF REGULATED FLAMMABLE SUBSTANCES AND THRESHOLD QUANTITIES FOR ACCIDENTAL RELEASE PREVENTION
[CAS Number Order—63 Substances]

CAS No.	Chemical name	CAS No.	Threshold quantity (lbs)	Basis for listing
60–29–7	Ethyl ether [Ethane, 1,1'-oxybis-]	60–29–7	10,000	g
74–82–8	Methane	74–82–8	10,000	f
74–84–0	Ethane	74–84–0	10,000	f
74–85–1	Ethylene [Ethene]	74–85–1	10,000	f

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TABLE 4 TO § 68.130.—LIST OF REGULATED FLAMMABLE SUBSTANCES AND THRESHOLD QUANTITIES
FOR ACCIDENTAL RELEASE PREVENTION—Continued
[CAS Number Order—63 Substances]

CAS No.	Chemical name	CAS No.	Threshold quantity (lbs)	Basis for listing
74-86-2	Acetylene [Ethyne]	74-86-2	10,000	f
74-89-5	Methylamine [Methanamine]	74-89-5	10,000	f
74-98-6	Propane	74-98-6	10,000	f
74-99-7	Propyne [1-Propyne]	74-99-7	10,000	f
75-00-3	Ethyl chloride [Ethane, chloro-]	75-00-3	10,000	f
75-01-4	Vinyl chloride [Ethene, chloro-]	75-01-4	10,000	a, f
75-02-5	Vinyl fluoride [Ethene, fluoro-]	75-02-5	10,000	f
75-04-7	Ethylamine [Ethanamine]	75-04-7	10,000	f
75-07-0	Acetaldehyde	75-07-0	10,000	g
75-08-1	Ethyl mercaptan [Ethanethiol]	75-08-1	10,000	g
75-19-4	Cyclopropane	75-19-4	10,000	f
75-28-5	Isobutane [Propane, 2-methyl]	75-28-5	10,000	f
75-29-6	Isopropyl chloride [Propane, 2-chloro-]	75-29-6	10,000	g
75-31-0	Isopropylamine [2-Propanamine]	75-31-0	10,000	g
75-35-4	Vinylidene chloride [Ethene, 1,1-dichloro-]	75-35-4	10,000	g
75-37-6	Difluoroethane [Ethane, 1,1-difluoro-]	75-37-6	10,000	f
75-38-7	Vinylidene fluoride [Ethene, 1,1-difluoro-]	75-38-7	10,000	f
75-50-3	Trimethylamine [Methanamine, N, N-dimethyl-]	75-50-3	10,000	f
75-76-3	Tetramethylsilane [Silane, tetramethyl-]	75-76-3	10,000	g
78-78-4	Isopentane [Butane, 2-methyl-]	78-78-4	10,000	g
78-79-5	Isoprene [1,3-Butadiene, 2-methyl-]	78-79-5	10,000	g
79-38-9	Trifluorochloroethylene [Ethene, chlorotrifluoro-]	79-38-9	10,000	f
106-97-8	Butane	106-97-8	10,000	f
106-98-9	1-Butene	106-98-9	10,000	f
196-99-0	1,3-Butadiene	106-99-0	10,000	f
107-00-6	Ethyl acetylene [1-Butyne]	107-00-6	10,000	f
107-01-7	2-Butene	107-01-7	10,000	f
107-25-5	Vinyl methyl ether [Ethene, methoxy-]	107-25-5	10,000	f
107-31-3	Methyl formate [Formic acid, methyl ester]	107-31-3	10,000	g
109-66-0	Pentane	109-66-0	10,000	g
109-67-1	1-Pentene	109-67-1	10,000	g
109-92-2	Vinyl ethyl ether [Ethene, ethoxy-]	109-92-2	10,000	g
109-95-5	Ethyl nitrite [Nitrous acid, ethyl ester]	109-95-5	10,000	f
115-07-1	Propylene [1-Propene]	115-07-1	10,000	f
115-10-6	Methyl ether [Methane, oxybis-]	115-10-6	10,000	f
115-11-7	2-Methylpropene [1-Propene, 2-methyl-]	115-11-7	10,000	f
116-14-3	Tetrafluoroethylene [Ethene, tetrafluoro-]	116-14-3	10,000	f
124-40-3	Dimethylamine [Methanamine, N-methyl-]	124-40-3	10,000	f
460-19-5	Cyanogen [Ethanedinitrile]	460-19-5	10,000	f
463-49-0	Propadiene [1,2-Propadiene]	463-49-0	10,000	f
463-58-1	Carbon oxysulfide [Carbon oxide sulfide (COS)]	463-58-1	10,000	f
463-82-1	2,2-Dimethylpropane [Propane, 2,2-dimethyl-]	463-82-1	10,000	f
504-60-9	1,3-Pentadiene	504-60-9	10,000	f
557-98-2	2-Chloropropylene [1-Propene, 2-chloro-]	557-98-2	10,000	g
563-45-1	3-Methyl-1-butene	563-45-1	10,000	f
563-46-2	2-Methyl-1-butene	563-46-2	10,000	g
590-18-1	2-Butene-cis	590-18-1	10,000	f
590-21-6	1-Chloropropylene [1-Propene, 1-chloro-]	590-21-6	10,000	g
598-73-2	Bromotrifluoroethylene [Ethene, bromotrifluoro-]	598-73-2	10,000	f
624-64-6	2-Butene-trans [2-Butene, (E)]	624-64-6	10,000	f
627-20-3	2-Pentene, (Z)-	627-20-3	10,000	g
646-04-8	2-Pentene, (E)-	646-04-8	10,000	g
689-97-4	Vinyl acetylene [1-Buten-3-yne]	689-97-4	10,000	f
1333-74-0	Hydrogen	1333-74-0	10,000	f
4109-96-0	Dichlorosilane [Silane, dichloro-]	4109-96-0	10,000	f
7791-21-1	Chlorine monoxide [Chlorine oxide]	7791-21-1	10,000	f
7803-62-5	Silane	7803-62-5	10,000	f
10025-78-2	Trichlorosilane [Silane, trichloro-]	10025-78-2	10,000	g
25167-67-3	Butene	25167-67-3	10,000	f

Note: Basis for Listing: a Mandated for listing by Congress. f Flammable gas. g Volatile flammable liquid.

[59 FR 4493, Jan. 31, 1994, Redesignated at 61 FR 31717, June 20, 1996, as amended at 62 FR 45132, Aug. 25, 1997; 63 FR 645, Jan. 6, 1998]

§ 68.150**40 CFR Ch. I (7–1–99 Edition)****Subpart G—Risk Management Plan**

SOURCE: 61 FR 31726, June 20, 1996, unless otherwise noted.

§ 68.150 Submission.

(a) The owner or operator shall submit a single RMP that includes the information required by §§ 68.155 through 68.185 for all covered processes. The RMP shall be submitted in a method and format to a central point as specified by EPA prior to June 21, 1999.

(b) The owner or operator shall submit the first RMP no later than the latest of the following dates:

(1) June 21, 1999;

(2) Three years after the date on which a regulated substance is first listed under § 68.130; or

(3) The date on which a regulated substance is first present above a threshold quantity in a process.

(c) Subsequent submissions of RMPs shall be in accordance with § 68.190.

(d) Notwithstanding the provisions of §§ 68.155 to 68.190, the RMP shall exclude classified information. Subject to appropriate procedures to protect such information from public disclosure, classified data or information excluded from the RMP may be made available in a classified annex to the RMP for review by Federal and state representatives who have received the appropriate security clearances.

(e) Procedures for asserting that information submitted in the RMP is entitled to protection as confidential business information are set forth in §§ 68.151 and 68.152.

[61 FR 31726, June 20, 1996, as amended at 64 FR 979, Jan. 6, 1999]

§ 68.151 Assertion of claims of confidential business information.

(a) Except as provided in paragraph (b) of this section, an owner or operator of a stationary source required to report or otherwise provide information under this part may make a claim of confidential business information for any such information that meets the criteria set forth in 40 CFR 2.301.

(b) Notwithstanding the provisions of 40 CFR part 2, an owner or operator of a stationary source subject to this part

may not claim as confidential business information the following information:

(1) Registration data required by § 68.160(b)(1) through (b)(6) and (b)(8), (b)(10) through (b)(13) and NAICS code and Program level of the process set forth in § 68.160(b)(7);

(2) Offsite consequence analysis data required by § 68.165(b)(4), (b)(9), (b)(10), (b)(11), and (b)(12).

(3) Accident history data required by § 68.168;

(4) Prevention program data required by § 68.170(b), (d), (e)(1), (f) through (k);

(5) Prevention program data required by § 68.175(b), (d), (e)(1), (f) through (p); and

(6) Emergency response program data required by § 68.180.

(c) Notwithstanding the procedures specified in 40 CFR part 2, an owner or operator asserting a claim of CBI with respect to information contained in its RMP, shall submit to EPA at the time it submits the RMP the following:

(1) The information claimed confidential, provided in a format to be specified by EPA;

(2) A sanitized (redacted) copy of the RMP, with the notation “CBI” substituted for the information claimed confidential, except that a generic category or class name shall be substituted for any chemical name or identity claimed confidential; and

(3) The document or documents substantiating each claim of confidential business information, as described in § 68.152.

[64 FR 979, Jan. 6, 1999]

§ 68.152 Substantiating claims of confidential business information.

(a) An owner or operator claiming that information is confidential business information must substantiate that claim by providing documentation that demonstrates that the claim meets the substantive criteria set forth in 40 CFR 2.301.

(b) Information that is submitted as part of the substantiation may be claimed confidential by marking it as confidential business information. Information not so marked will be treated as public and may be disclosed without notice to the submitter. If information that is submitted as part of the substantiation is claimed confidential,

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the owner or operator must provide a sanitized and unsanitized version of the substantiation.

(c) The owner, operator, or senior official with management responsibility of the stationary source shall sign a certification that the signer has personally examined the information submitted and that based on inquiry of the persons who compiled the information, the information is true, accurate, and complete, and that those portions of the substantiation claimed as confidential business information would, if disclosed, reveal trade secrets or other confidential business information.

[64 FR 980, Jan. 6, 1999]

§ 68.155 Executive summary.

The owner or operator shall provide in the RMP an executive summary that includes a brief description of the following elements:

- (a) The accidental release prevention and emergency response policies at the stationary source;
- (b) The stationary source and regulated substances handled;
- (c) The worst-case release scenario(s) and the alternative release scenario(s), including administrative controls and mitigation measures to limit the distances for each reported scenario;
- (d) The general accidental release prevention program and chemical-specific prevention steps;
- (e) The five-year accident history;
- (f) The emergency response program; and
- (g) Planned changes to improve safety.

§ 68.160 Registration.

(a) The owner or operator shall complete a single registration form and include it in the RMP. The form shall cover all regulated substances handled in covered processes.

(b) The registration shall include the following data:

- (1) Stationary source name, street, city, county, state, zip code, latitude and longitude, method for obtaining latitude and longitude, and description of location that latitude and longitude represent;
- (2) The stationary source Dun and Bradstreet number;

(3) Name and Dun and Bradstreet number of the corporate parent company;

(4) The name, telephone number, and mailing address of the owner or operator;

(5) The name and title of the person or position with overall responsibility for RMP elements and implementation;

(6) The name, title, telephone number, and 24-hour telephone number of the emergency contact;

(7) For each covered process, the name and CAS number of each regulated substance held above the threshold quantity in the process, the maximum quantity of each regulated substance or mixture in the process (in pounds) to two significant digits, the five- or six-digit NAICS code that most closely corresponds to the process, and the Program level of the process;

(8) The stationary source EPA identifier;

(9) The number of full-time employees at the stationary source;

(10) Whether the stationary source is subject to 29 CFR 1910.119;

(11) Whether the stationary source is subject to 40 CFR part 355;

(12) If the stationary source has a CAA Title V operating permit, the permit number; and

(13) The date of the last safety inspection of the stationary source by a Federal, state, or local government agency and the identity of the inspecting entity.

(14) Source or Parent Company E-Mail Address (Optional);

(15) Source Homepage address (Optional)

(16) Phone number at the source for public inquiries (Optional);

(17) Local Emergency Planning Committee (Optional);

(18) OSHA Voluntary Protection Program status (Optional);

[61 FR 31726, June 20, 1996, as amended at 64 FR 980, Jan. 6, 1999]

§ 68.165 Offsite consequence analysis.

(a) The owner or operator shall submit in the RMP information:

(1) One worst-case release scenario for each Program 1 process; and

(2) For Program 2 and 3 processes, one worst-case release scenario to represent all regulated toxic substances

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held above the threshold quantity and one worst-case release scenario to represent all regulated flammable substances held above the threshold quantity. If additional worst-case scenarios for toxics or flammables are required by § 68.25(a)(2)(iii), the owner or operator shall submit the same information on the additional scenario(s). The owner or operator of Program 2 and 3 processes shall also submit information on one alternative release scenario for each regulated toxic substance held above the threshold quantity and one alternative release scenario to represent all regulated flammable substances held above the threshold quantity.

(b) The owner or operator shall submit the following data:

- (1) Chemical name;
- (2) Percentage weight of the chemical in a liquid mixture (toxics only);
- (3) Physical state (toxics only);
- (4) Basis of results (give model name if used);
- (5) Scenario (explosion, fire, toxic gas release, or liquid spill and evaporation);
- (6) Quantity released in pounds;
- (7) Release rate;
- (8) Release duration;
- (9) Wind speed and atmospheric stability class (toxics only);
- (10) Topography (toxics only);
- (11) Distance to endpoint;
- (12) Public and environmental receptors within the distance;
- (13) Passive mitigation considered; and
- (14) Active mitigation considered (alternative releases only);

[61 FR 31726, June 20, 1996, as amended at 64 FR 980, Jan. 6, 1999]

§ 68.168 Five-year accident history.

The owner or operator shall submit in the RMP the information provided in § 68.42(b) on each accident covered by § 68.42(a).

§ 68.170 Prevention program/Program 2.

(a) For each Program 2 process, the owner or operator shall provide in the RMP the information indicated in paragraphs (b) through (k) of this section. If the same information applies to more than one covered process, the

owner or operator may provide the information only once, but shall indicate to which processes the information applies.

(b) The five- or six-digit NAICS code that most closely corresponds to the process.

(c) The name(s) of the chemical(s) covered.

(d) The date of the most recent review or revision of the safety information and a list of Federal or state regulations or industry-specific design codes and standards used to demonstrate compliance with the safety information requirement.

(e) The date of completion of the most recent hazard review or update.

(1) The expected date of completion of any changes resulting from the hazard review;

(2) Major hazards identified;

(3) Process controls in use;

(4) Mitigation systems in use;

(5) Monitoring and detection systems in use; and

(6) Changes since the last hazard review.

(f) The date of the most recent review or revision of operating procedures.

(g) The date of the most recent review or revision of training programs;

(1) The type of training provided—classroom, classroom plus on the job, on the job; and

(2) The type of competency testing used.

(h) The date of the most recent review or revision of maintenance procedures and the date of the most recent equipment inspection or test and the equipment inspected or tested.

(i) The date of the most recent compliance audit and the expected date of completion of any changes resulting from the compliance audit.

(j) The date of the most recent incident investigation and the expected date of completion of any changes resulting from the investigation.

(k) The date of the most recent change that triggered a review or revision of safety information, the hazard review, operating or maintenance procedures, or training.

[61 FR 31726, June 20, 1996, as amended at 64 FR 980, Jan. 6, 1999]

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(a) For each Program 3 process, the owner or operator shall provide the information indicated in paragraphs (b) through (p) of this section. If the same information applies to more than one covered process, the owner or operator may provide the information only once, but shall indicate to which processes the information applies.

(b) The five- or six-digit NAICS code that most closely corresponds to the process.

(c) The name(s) of the substance(s) covered.

(d) The date on which the safety information was last reviewed or revised.

(e) The date of completion of the most recent PHA or update and the technique used.

(1) The expected date of completion of any changes resulting from the PHA;

(2) Major hazards identified;

(3) Process controls in use;

(4) Mitigation systems in use;

(5) Monitoring and detection systems in use; and

(6) Changes since the last PHA.

(f) The date of the most recent review or revision of operating procedures.

(g) The date of the most recent review or revision of training programs;

(1) The type of training provided—classroom, classroom plus on the job, on the job; and

(2) The type of competency testing used.

(h) The date of the most recent review or revision of maintenance procedures and the date of the most recent equipment inspection or test and the equipment inspected or tested.

(i) The date of the most recent change that triggered management of change procedures and the date of the most recent review or revision of management of change procedures.

(j) The date of the most recent pre-startup review.

(k) The date of the most recent compliance audit and the expected date of completion of any changes resulting from the compliance audit;

(l) The date of the most recent incident investigation and the expected date of completion of any changes resulting from the investigation;

(m) The date of the most recent review or revision of employee participation plans;

(n) The date of the most recent review or revision of hot work permit procedures;

(o) The date of the most recent review or revision of contractor safety procedures; and

(p) The date of the most recent evaluation of contractor safety performance.

[61 FR 31726, June 20, 1996, as amended at 64 FR 980, Jan. 6, 1999]

§ 68.180 Emergency response program.

(a) The owner or operator shall provide in the RMP the following information:

(1) Do you have a written emergency response plan?

(2) Does the plan include specific actions to be taken in response to an accidental releases of a regulated substance?

(3) Does the plan include procedures for informing the public and local agencies responsible for responding to accidental releases?

(4) Does the plan include information on emergency health care?

(5) The date of the most recent review or update of the emergency response plan;

(6) The date of the most recent emergency response training for employees.

(b) The owner or operator shall provide the name and telephone number of the local agency with which emergency response activities and the emergency response plan is coordinated.

(c) The owner or operator shall list other Federal or state emergency plan requirements to which the stationary source is subject.

[61 FR 31726, June 20, 1996, as amended at 64 FR 980, Jan. 6, 1999]

§ 68.185 Certification.

(a) For Program 1 processes, the owner or operator shall submit in the RMP the certification statement provided in § 68.12(b)(4).

(b) For all other covered processes, the owner or operator shall submit in the RMP a single certification that, to

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the best of the signer's knowledge, information, and belief formed after reasonable inquiry, the information submitted is true, accurate, and complete.

§ 68.190 Updates.

(a) The owner or operator shall review and update the RMP as specified in paragraph (b) of this section and submit it in a method and format to a central point specified by EPA prior to June 21, 1999.

(b) The owner or operator of a stationary source shall revise and update the RMP submitted under § 68.150 as follows:

(1) Within five years of its initial submission or most recent update required by paragraphs (b)(2) through (b)(7) of this section, whichever is later.

(2) No later than three years after a newly regulated substance is first listed by EPA;

(3) No later than the date on which a new regulated substance is first present in an already covered process above a threshold quantity;

(4) No later than the date on which a regulated substance is first present above a threshold quantity in a new process;

(5) Within six months of a change that requires a revised PHA or hazard review;

(6) Within six months of a change that requires a revised offsite consequence analysis as provided in § 68.36; and

(7) Within six months of a change that alters the Program level that applied to any covered process.

(c) If a stationary source is no longer subject to this part, the owner or operator shall submit a revised registration to EPA within six months indicating that the stationary source is no longer covered.

Subpart H—Other Requirements

SOURCE: 61 FR 31728, June 20, 1996, unless otherwise noted.

§ 68.200 Recordkeeping.

The owner or operator shall maintain records supporting the implementation of this part for five years unless otherwise provided in subpart D of this part.

40 CFR Ch. I (7–1–99 Edition)**§ 68.210 Availability of information to the public.**

(a) The RMP required under subpart G of this part shall be available to the public under 42 U.S.C. 7414(c).

(b) The disclosure of classified information by the Department of Defense or other Federal agencies or contractors of such agencies shall be controlled by applicable laws, regulations, or executive orders concerning the release of classified information.

§ 68.215 Permit content and air permitting authority or designated agency requirements.

(a) These requirements apply to any stationary source subject to this part 68 and parts 70 or 71 of this chapter. The 40 CFR part 70 or part 71 permit for the stationary source shall contain:

(1) A statement listing this part as an applicable requirement;

(2) Conditions that require the source owner or operator to submit:

(i) A compliance schedule for meeting the requirements of this part by the date provided in § 68.10(a) or;

(ii) As part of the compliance certification submitted under 40 CFR 70.6(c)(5), a certification statement that the source is in compliance with all requirements of this part, including the registration and submission of the RMP.

(b) The owner or operator shall submit any additional relevant information requested by the air permitting authority or designated agency.

(c) For 40 CFR part 70 or part 71 permits issued prior to the deadline for registering and submitting the RMP and which do not contain permit conditions described in paragraph (a) of this section, the owner or operator or air permitting authority shall initiate permit revision or reopening according to the procedures of 40 CFR 70.7 or 71.7 to incorporate the terms and conditions consistent with paragraph (a) of this section.

(d) The state may delegate the authority to implement and enforce the requirements of paragraph (e) of this section to a state or local agency or agencies other than the air permitting authority. An up-to-date copy of any delegation instrument shall be maintained by the air permitting authority.

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The state may enter a written agreement with the Administrator under which EPA will implement and enforce the requirements of paragraph (e) of this section.

(e) The air permitting authority or the agency designated by delegation or agreement under paragraph (d) of this section shall, at a minimum:

(1) Verify that the source owner or operator has registered and submitted an RMP or a revised plan when required by this part;

(2) Verify that the source owner or operator has submitted a source certification or in its absence has submitted a compliance schedule consistent with paragraph (a)(2) of this section;

(3) For some or all of the sources subject to this section, use one or more mechanisms such as, but not limited to, a completeness check, source audits, record reviews, or facility inspections to ensure that permitted sources are in compliance with the requirements of this part; and

(4) Initiate enforcement action based on paragraphs (e)(1) and (e)(2) of this section as appropriate.

§ 68.220 Audits.

(a) In addition to inspections for the purpose of regulatory development and enforcement of the Act, the implementing agency shall periodically audit RMPs submitted under subpart G of this part to review the adequacy of such RMPs and require revisions of RMPs when necessary to ensure compliance with subpart G of this part.

(b) The implementing agency shall select stationary sources for audits based on any of the following criteria:

(1) Accident history of the stationary source;

(2) Accident history of other stationary sources in the same industry;

(3) Quantity of regulated substances present at the stationary source;

(4) Location of the stationary source and its proximity to the public and environmental receptors;

(5) The presence of specific regulated substances;

(6) The hazards identified in the RMP; and

(7) A plan providing for neutral, random oversight.

(c) Exemption from audits. A stationary source with a Star or Merit ranking under OSHA's voluntary protection program shall be exempt from audits under paragraph (b)(2) and (b)(7) of this section.

(d) The implementing agency shall have access to the stationary source, supporting documentation, and any area where an accidental release could occur.

(e) Based on the audit, the implementing agency may issue the owner or operator of a stationary source a written preliminary determination of necessary revisions to the stationary source's RMP to ensure that the RMP meets the criteria of subpart G of this part. The preliminary determination shall include an explanation for the basis for the revisions, reflecting industry standards and guidelines (such as AIChE/CCPS guidelines and ASME and API standards) to the extent that such standards and guidelines are applicable, and shall include a timetable for their implementation.

(f) *Written response to a preliminary determination.* (1) The owner or operator shall respond in writing to a preliminary determination made in accordance with paragraph (e) of this section. The response shall state the owner or operator will implement the revisions contained in the preliminary determination in accordance with the timetable included in the preliminary determination or shall state that the owner or operator rejects the revisions in whole or in part. For each rejected revision, the owner or operator shall explain the basis for rejecting such revision. Such explanation may include substitute revisions.

(2) The written response under paragraph (f)(1) of this section shall be received by the implementing agency within 90 days of the issue of the preliminary determination or a shorter period of time as the implementing agency specifies in the preliminary determination as necessary to protect public health and the environment. Prior to the written response being due and upon written request from the owner or operator, the implementing agency may provide in writing additional time for the response to be received.

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(g) After providing the owner or operator an opportunity to respond under paragraph (f) of this section, the implementing agency may issue the owner or operator a written final determination of necessary revisions to the stationary source's RMP. The final determination may adopt or modify the revisions contained in the preliminary determination under paragraph (e) of this section or may adopt or modify the substitute revisions provided in the response under paragraph (f) of this section. A final determination that adopts a revision rejected by the owner or operator shall include an explanation of the basis for the revision. A final determination that fails to adopt a substitute revision provided under paragraph (f) of this section shall include an explanation of the basis for finding such substitute revision unreasonable.

(h) Thirty days after completion of the actions detailed in the implementation schedule set in the final determination under paragraph (g) of this section, the owner or operator shall be in violation of subpart G of this part and this section unless the owner or operator revises the RMP prepared under subpart G of this part as required by the final determination, and submits the revised RMP as required under § 68.150.

(i) The public shall have access to the preliminary determinations, responses, and final determinations under this section in a manner consistent with § 68.210.

(j) Nothing in this section shall preclude, limit, or interfere in any way with the authority of EPA or the state to exercise its enforcement, investigatory, and information gathering authorities concerning this part under the Act.

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APPENDIX A TO PART 68—TABLE OF TOXIC ENDPOINTS
[As defined in §68.22 of this part]

CAS No.	Chemical name	Toxic end-point (mg/L)
107-02-8	Acrolein [2-Propenal]	0.0011
107-13-1	Acrylonitrile [2-Propenenitrile]	0.076
814-68-6	Acrylyl chloride [2-Propenoyl chloride]	0.00090
107-18-6	Allyl alcohol [2-Propen-1-ol]	0.036
107-11-9	Allylamine [2-Propen-1-amine]	0.0032
7664-41-7	Ammonia (anhydrous)	0.14
7664-41-7	Ammonia (conc 20% or greater)	0.14
7784-34-1	Arsenous trichloride	0.010
7784-42-1	Arsine	0.0019
10294-34-5	Boron trichloride [Borane, trichloro-]	0.010
7637-07-2	Boron trifluoride [Borane, trifluoro-]	0.028
353-42-4	Boron trifluoride compound with methyl ether (1:1) [Boron, trifluoro[oxybis(methane)]-, T-4	0.023
7726-95-6	Bromine	0.0065
75-15-0	Carbon disulfide	0.16
7782-50-5	Chlorine	0.0087
10049-04-4	Chlorine dioxide [Chlorine oxide (ClO ₂)]	0.0028
67-66-3	Chloroform [Methane, trichloro-]	0.49
542-88-1	Chloromethyl ether [Methane, oxybis(chloro-)]	0.00025
107-30-2	Chloromethyl methyl ether [Methane, chloromethoxy-]	0.0018
4170-30-3	Crotonaldehyde [2-Butenal]	0.029
123-73-9	Crotonaldehyde, (E)-, [2-Butenal, (E)-]	0.029
506-77-4	Cyanogen chloride	0.030
108-91-8	Cyclohexylamine [Cyclohexanamine]	0.16
19287-45-7	Diborane	0.0011
75-78-5	Dimethyldichlorosilane [Silane, dichlorodimethyl-]	0.026
57-14-7	1,1-Dimethylhydrazine [Hydrazine, 1,1-dimethyl-]	0.012
106-89-8	Epichlorohydrin [Oxirane, chloromethyl-]	0.076
107-15-3	Ethylenediamine [1,2-Ethanediamine]	0.49
151-56-4	Ethylenimine [Aziridine]	0.018
75-21-8	Ethylene oxide [Oxirane]	0.090
7782-41-4	Fluorine	0.0039
50-00-0	Formaldehyde (solution)	0.012
110-00-9	Furan	0.0012
302-01-2	Hydrazine	0.011
7647-01-0	Hydrochloric acid (conc 37% or greater)	0.030
74-90-8	Hydrocyanic acid	0.011
7647-01-0	Hydrogen chloride (anhydrous) [Hydrochloric acid]	0.030
7664-39-3	Hydrogen fluoride/Hydrofluoric acid (conc 50% or greater) [Hydrofluoric acid]	0.016
7783-07-5	Hydrogen selenide	0.0066
7783-06-4	Hydrogen sulfide	0.042
13463-40-6	Iron, pentacarbonyl- [Iron carbonyl (Fe(CO) ₅), (TB-S-11)-]	0.0044
78-82-0	Isobutyronitrile [Propanenitrile, 2-methyl-]	0.14
108-23-6	Isopropyl chloroformate [Carbonochloride acid, 1-methylethyl ester]	0.10
126-98-7	Methacrylonitrile [2-Propenenitrile, 2-methyl-]	0.0027

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APPENDIX A TO PART 68—TABLE OF TOXIC ENDPOINTS—Continued
[As defined in §68.22 of this part]

CAS No.	Chemical name	Toxic end-point (mg/L)
74-87-3	Methyl chloride [Methane, chloro-]	0.82
79-22-1	Methyl chloroformate [Carbonochloric acid, methylester]	0.0019
60-34-4	Methyl hydrazine [Hydrazine, methyl-]	0.0094
624-83-9	Methyl isocyanate [Methane, isocyanato-]	0.0012
74-93-1	Methyl mercaptan [Methanethiol]	0.049
556-64-9	Methyl thiocyanate [Thiocyanic acid, methyl ester]	0.085
75-79-6	Methyltrichlorosilane [Silane, trichloromethyl-]	0.018
13463-39-3	Nickel carbonyl	0.00067
7697-37-2	Nitric acid (conc 80% or greater)	0.026
10102-43-9	Nitric oxide [Nitrogen oxide (NO)]	0.031
8014-95-7	Oleum (Fuming Sulfuric acid) [Sulfuric acid, mixture with sulfur trioxide]	0.010
79-21-0	Peracetic acid [Ethaneperoxy acid]	0.0045
594-42-3	Perchloromethylmercaptan [Methanesulfonyl chloride, trichloro-]	0.0076
75-44-5	Phosgene [Carbonic dichloride]	0.00081
7803-51-2	Phosphine	0.0035
10025-87-3	Phosphorus oxychloride [Phosphoryl chloride]	0.0030
7719-12-2	Phosphorus trichloride [Phosphorous trichloride]	0.028
110-89-4	Piperidine	0.022
107-12-0	Propionitrile [Propanenitrile]	0.0037
109-61-5	Propyl chloroformate [Carbonochloric acid, propylester]	0.010
75-55-8	Propyleneimine [Aziridine, 2-methyl-]	0.12
75-56-9	Propylene oxide [Oxirane, methyl-]	0.59
7446-09-5	Sulfur dioxide (anhydrous)	0.0078
7783-60-0	Sulfur tetrafluoride [Sulfur fluoride (SF4), (T-4)-]	0.0092
7446-11-9	Sulfur trioxide	0.010
75-74-1	Tetramethyllead [Plumbane, tetramethyl-]	0.0040
509-14-8	Tetranitromethane [Methane, tetranitro-]	0.0040
7750-45-0	Titanium tetrachloride [Titanium chloride (TiCl4) (T-4)-]	0.020
584-84-9	Toluene 2,4-disocyanate [Benzene, 2,4-disocyanato-1-methyl-]	0.0070
91-08-7	Toluene 2,6-disocyanate [Benzene, 1,3-disocyanato-2-methyl-]	0.0070
26471-62-5	Toluene diisocyanate (unspecified isomer) [Benzene, 1,3-disocyanatomethyl-]	0.0070
75-77-4	Trimethylchlorosilane [Silane, chlorotrimethyl-]	0.050
108-05-4	Vinyl acetate monomer [Acetic acid ethenyl ester]	0.26

[61 FR 31729, June 20, 1996, as amended at 62 FR 45132, Aug. 25, 1997]

finding that notice and public procedure is impracticable, unnecessary or contrary to the public interest. This determination must be supported by a brief statement (5 U.S.C. 808(2)).

As stated previously, we have made such a good cause finding, including the reasons therefore, and established an effective date of March 13, 2000. The EPA will submit a report containing this rule and other required information to the U.S. Senate, the U.S. House of Representatives, and the Comptroller General of the United States prior to publication of the rule in the **Federal Register**. This action is not a "major rule" as defined by 5 U.S.C. 804(2).

List of Subjects in 40 CFR Part 60

Environmental protection, Administrative practice and procedure, Air pollution control, Intergovernmental relations, Nitrogen oxides, Recordkeeping and reporting requirements.

Dated: March 2, 2000.

Robert Perciasepe,

Assistant Administrator, Office of Air and Radiation.

For the reasons set out in the preamble, title 40, chapter I, part 60, of the Code of Federal Regulations is amended as follows:

PART 60—[AMENDED]

1. The authority citation for part 60 continues to read as follows:

Authority: 42 U.S.C. 7401–7601.

Subpart Db—Standards of Performance for Industrial-Commercial-Institutional Steam Generating Units

2. Section 60.49b is amended by revising paragraph (s) and adding paragraph (w) to read as follows:

§ 60.49b Reporting and recordkeeping requirements.

* * * * *

(s) Facility specific nitrogen oxides standard for Cytec Industries Fortier Plant's C.AOG incinerator located in Westwego, Louisiana:

(1) Definitions.

Oxidation zone is defined as the portion of the C.AOG incinerator that extends from the inlet of the oxidizing zone combustion air to the outlet gas stack.

Reducing zone is defined as the portion of the C.AOG incinerator that extends from the burner section to the inlet of the oxidizing zone combustion air.

Total inlet air is defined as the total amount of air introduced into the

C.AOG incinerator for combustion of natural gas and chemical by-product waste and is equal to the sum of the air flow into the reducing zone and the air flow into the oxidation zone.

(2) *Standard for nitrogen oxides.* (i) When fossil fuel alone is combusted, the nitrogen oxides emission limit for fossil fuel in § 60.44b(a) applies.

(ii) When natural gas and chemical by-product waste are simultaneously combusted, the nitrogen oxides emission limit is 289 ng/J (0.67 lb/million Btu) and a maximum of 81 percent of the total inlet air provided for combustion shall be provided to the reducing zone of the C.AOG incinerator.

(3) *Emission monitoring.* (i) The percent of total inlet air provided to the reducing zone shall be determined at least every 15 minutes by measuring the air flow of all the air entering the reducing zone and the air flow of all the air entering the oxidation zone, and compliance with the percentage of total inlet air that is provided to the reducing zone shall be determined on a 3-hour average basis.

(ii) The nitrogen oxides emission limit shall be determined by the compliance and performance test methods and procedures for nitrogen oxides in § 60.46b(i).

(iii) The monitoring of the nitrogen oxides emission limit shall be performed in accordance with § 60.48b.

(4) *Reporting and recordkeeping requirements.* (i) The owner or operator of the C.AOG incinerator shall submit a report on any excursions from the limits required by paragraph (a)(2) of this section to the Administrator with the quarterly report required by paragraph (i) of this section.

(ii) The owner or operator of the C.AOG incinerator shall keep records of the monitoring required by paragraph (a)(3) of this section for a period of 2 years following the date of such record.

(iii) The owner or operator of the C.AOG incinerator shall perform all the applicable reporting and recordkeeping requirements of this section.

* * * * *

(w) The reporting period for the reports required under this subpart is each 6 month period. All reports shall be submitted to the Administrator and shall be postmarked by the 30th day following the end of the reporting period.

[FR Doc. 00–5797 Filed 3–10–00; 8:45 am]

BILLING CODE 6560–50–P

ENVIRONMENTAL PROTECTION AGENCY

40 CFR Part 68

[FRL–6550–1]

RIN 2050–AE74

Amendments to the List of Regulated Substances and Thresholds for Accidental Release Prevention; Flammable Substances Used as Fuel or Held for Sale as Fuel at Retail Facilities

AGENCY: Environmental Protection Agency (EPA).

ACTION: Final rule.

SUMMARY: EPA is modifying its chemical accident prevention regulations to conform to the fuels provision of the recently enacted Chemical Safety Information, Site Security and Fuels Regulatory Relief Act (Pub. L. 106–40). In accordance with the new law, today's rule revises the list of regulated flammable substances to exclude those substances when used as a fuel or held for sale as a fuel at a retail facility. EPA is also announcing there will be no further action on a previous proposal concerning flammable substances, since the new law resolves the issue addressed by the proposal.

DATES: Effective March 13, 2000.

ADDRESSES: Docket. Supporting material used in developing the final rule is contained in Docket No. A–99–36. The docket is available for public inspection and copying between 8:00 am and 5:30 pm, Monday through Friday (except government holidays) at EPA's Air Docket, Room 1500, Waterside Mall, 401 M Street, SW, Washington, DC 20460; phone number: 202–260–7548. A reasonable fee may be charged for copying.

FOR FURTHER INFORMATION CONTACT: Breda Reilly, Chemical Emergency Preparedness and Prevention Office, Environmental Protection Agency, Ariel Rios Building, 1200 Pennsylvania Ave, NW (5104), Washington, DC 20460, (202) 260–0716.

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I. Introduction and Background

A. Statutory Authority

This rule is being issued under section 112(r) of the Clean Air Act (CAA) as amended by the Chemical Safety Information, Site Security and Fuels Regulatory Relief Act (the Act), which President Clinton signed into law on August 5, 1999. Section 2 of the Act immediately removed EPA's authority to "list a flammable substance when used as a fuel or held for sale as a fuel at a retail facility * * * 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."

The Act defines "retail facility" as "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."

B. Background on Chemical Accident Prevention Regulations

CAA section 112(r) contains requirements for the prevention and mitigation of accidental chemical releases. The focus is on those chemicals that pose the greatest risk to public health and the environment in the event of an accidental release. Section 112(r)(3) mandates that EPA identify at least 100 such chemicals and promulgate a list of "regulated substances" with threshold quantities. Section 112(r)(7) directs EPA to issue regulations requiring stationary sources that contain more than a threshold quantity of a regulated substance to develop and implement a risk management program and submit a risk management plan (RMP).

EPA promulgated the initial list of regulated substances on January 31, 1994 (59 FR 4478) (the "List Rule"). The Agency identified two categories of regulated substances—toxic and flammable—and listed substances accordingly. EPA included 77 chemicals on the toxic substances list based on each chemical's acute toxicity and several other factors—the chemical's physical state, physical/chemical properties and accident history—relevant to the likelihood that an accidental release of the chemical would lead to significant offsite consequences. The Agency also placed 63 substances on the flammable substances list, including vinyl chloride, a substance mandated for listing by Congress. EPA selected chemicals for the flammable substances list based on their flammability rating and the other factors related to likelihood of significant offsite consequences.

Of the originally listed substances, 14 met the criteria for both toxic and flammable substances (arsine, cyanogen chloride, diborane, ethylene oxide, formaldehyde, furan, hydrocyanic acid, hydrogen selenide, hydrogen sulfide, methyl chloride, methyl mercaptan, phosphine, propyleneimine, and propylene oxide). EPA placed these 14 substances on only the toxic substances list, because their toxicity poses the greater threat to human health and the environment.

Following promulgation of the List Rule, EPA issued a rule establishing the accidental release prevention requirements on June 20, 1996 (61 FR 31668) ("the RMP Rule"). Together these rules are codified at 40 CFR part 68.

In accordance with section 112(r)(7), the RMP rule requires that any stationary source with more than a threshold quantity of a regulated substance in a process develop and implement a risk management program and submit an RMP describing the source's program as well as its five-year accident history and potential offsite consequences. The rule further provides that RMPs be submitted by June 21, 1999 for sources with more than a threshold quantity of a regulated substance in a process by that date, or within a specified time of the source first exceeding the applicable threshold.

EPA has amended the List and RMP Rules several times. On August 25, 1997 (62 FR 45132), EPA amended the List Rule to change the listed concentration of hydrochloric acid. On January 6, 1998 (63 FR 640), EPA again amended the List Rule to delist Division 1.1 explosives (classified by the Department

of Transportation (DOT)), to clarify certain provisions related to regulated flammable substances, and to clarify the transportation exemption. EPA amended the RMP Rule on January 6, 1999 (64 FR 964) to add several mandatory and optional RMP data elements, to establish procedures for protecting confidential business information, to adopt a new industry classification system and to make technical corrections and clarifications. EPA also amended the RMP Rule on May 26, 1999 (64 FR 28696) to modify the requirements for conducting worst case release scenario analyses for flammable substances and to clarify its interpretation of CAA sections 112(1) and 112(r)(11) as they relate to DOT requirements under the Federal Hazardous Transportation Law.

II. Discussion of Modification

A. Affected Substances

The new Act provides that EPA shall not list a flammable substance when used as a fuel,¹ or held for sale as a fuel at a retail facility solely because of its explosive or flammable properties, except under certain circumstances. The purpose of today's rule is to revise the List Rule as needed to conform to the Act.

As described above, the List Rule currently contains two lists—one of toxic substances and one of flammable substances. The toxic substances list contains those chemicals that meet the criteria listing as toxic substances, even if they also meet the criteria for listing as flammable substances. Accordingly, every chemical on the toxic substances list was listed for its toxicity at least and not solely because of its explosive or flammable properties. The substances on the toxics list are thus not affected by the new Act.

The substances on the flammables list, on the other hand, are listed "solely" because they meet a certain flammability rating, taking other risk factors into account. In deciding what flammable substances to list, EPA concentrated on those substances that have the potential to result in significant offsite consequences. Accidents involving flammable substances may lead to vapor cloud explosions, vapor cloud fires, boiling liquid expanding vapor explosions (BLEVEs), pool fires, and jet fires, depending on the type of substance involved and the

¹ EPA has received a number of questions as to whether the fuel use exclusion is available only to retail facilities. EPA believes that the statute and legislative history are clear that the fuel use exclusion is available to any facility that uses a flammable substance as a fuel.

circumstances of the accident. Historically, flammable substance accidents having significant offsite impacts involved either vapor cloud explosions at refineries and chemical plants, or BLEVEs at sources storing large quantities of flammable substances. Vapor cloud explosions produce blast waves that potentially can cause offsite damage and kill or injure people. High overpressure levels can cause death or injury as a direct result of an explosion; such effects generally occur close to the site of an explosion. People can also be killed or injured because of indirect effects of the blast (e.g., collapse of buildings, flying glass or debris); these effects can occur farther from the site of the blast.

By contrast, the effects of vapor cloud fires, in which the vapor cloud burns but does not explode, are limited primarily to the area covered by the burning cloud. BLEVEs, which generally involve the rupture of a container, can cause container fragments to be thrown substantial distances; such fragments have the potential to cause damage and injury.

Thermal radiation is the primary hazard of pool and jet fires. The potential effects of thermal radiation generally do not extend for as great a distance as those of blast waves and are related to the duration of exposure; people at some distance from a fire would likely be able to escape.

Based on this analysis and available accident history data, the Agency concluded that vapor cloud explosions and BLEVEs pose the greatest potential hazard from flammable substances to the public and environment. For purposes of the List Rule, EPA consequently focused on those chemicals with the potential to result in vapor cloud explosions or BLEVEs in the event of an accidental release. The Agency determined that chemicals meeting the highest flammability rating of the National Fire Protection Agency (NFPA) had this potential and used that rating as the principal criterion for including chemicals on the flammable substances list.

The other factors EPA considered in listing flammable substances—physical state, physical/chemical properties and accident history—all relate to a chemical's potential to be accidentally released in a way that could lead to a vapor cloud explosion or BLEVE. In short, the Agency included chemicals on the flammable substances list "solely" because of their explosive potential, a basis now disallowed by the new Act for flammable substances when used as a fuel or held for sale as a fuel at a retail facility.

The new Act nevertheless allows EPA to list a flammable substance when used as a fuel, or held for sale as a fuel where a fire or explosion caused by the substance will result in acute adverse health effects from human exposure to the substance or its combustion byproducts. EPA believes, however, that no listed substances on the flammable substances list is a candidate for this exception. As noted above, flammable substances that meet the listing criteria for toxic substances are on the toxic substances list only. Therefore, none of the chemicals on the flammable substances list will qualify for the exception based on acute health effects from exposure to the substance itself.

Further, combustion byproducts are generally not relevant to listing flammable substances. For hydrocarbons, including the listed flammable substances commonly used as fuels, typical combustion products include water vapor, carbon dioxide, carbon monoxide, and relatively small amounts of other oxidized inorganic substances and do not meet the listing criteria for toxic substances. Several other listed flammable substances may result in combustion byproducts that meet the listing criteria for toxic substances, but these substances are not commonly used as fuels. Further, any toxic combustion byproducts will be a fraction of the total mass and not likely to exceed the applicable threshold for coverage by the RMP rule. Quantities below the threshold are unlikely to have significant offsite consequences.

For these reasons, EPA believes that none of the listed flammable substances meet the new statute's test for listing fuels. Consequently, all of the listed flammable substances are potentially affected by the Act.

B. Use or Sale as a Fuel

The Act prohibits the listing of flammable substances "when used as a fuel or held for sale as a fuel at a retail facility." In limiting EPA's authority to list flammable substances used as a fuel, or sold as a fuel at retail facilities, Congress sought greater consistency between the RMP program and the Process Safety Management (PSM) Standard implemented by the Occupational Health and Safety Administration (OSHA). OSHA's PSM Standard is the workplace counterpart of EPA's RMP program. PSM requirements protect workers from accidental releases of highly hazardous substances in the workplace, while the RMP rule protects the public and environment from the offsite consequences of those releases.

The PSM and RMP programs are similar in many ways, covering mostly the same chemicals. Establishments subject to the PSM Standard must comply with the prevention program requirements which are the same as the RMP rule's Program 3 requirements (subpart D of the Part 68 regulations). However, OSHA provides an exemption from the PSM Standard for hydrocarbon fuels used solely for workplace consumption as a fuel (e.g., propane used for comfort heating), if such fuels are not part of a process containing another highly hazardous chemical covered by the standard. It also exempts such substances when sold by retail facilities.

The two prongs of the limitation on EPA's authority to list flammable substances (*i.e.*, use as a fuel or held for sale as a fuel by a retail facility) largely follow the OSHA exemptions relating to fuel. EPA will therefore look to OSHA precedent and coordinate with OSHA in interpreting and applying the limitations to the extent they parallel OSHA's exemptions. For example, the new Act does not define the term "fuel," but OSHA has given "fuel" its ordinary meaning in applying the PSM fuel-related exemptions. Webster's Ninth New Collegiate Dictionary (1990) defines fuel as "a material used to produce heat or power by burning," and EPA has no reason to believe that "fuel" as used by the new Act should be defined differently.

Using the ordinary meaning of fuel, EPA reviewed the chemicals on its flammable substances list to determine which are used as fuel. Several of the listed substances are typically used as fuel, including propane, liquified petroleum gas (propane and/or butane often with small amounts of propylene and butylene); hydrogen; and gaseous natural gas (methane). EPA is aware of the possibility of other flammable substances being used as a fuel in particular circumstances. The following is a list of regulated flammable substances that EPA believes have been used as a fuel.

TABLE 1.—LIST OF COMMON FUELS

Chemical name	CAS No.
Acetylene [Ethyne]	74-86-2
Butane	106-97-8
1-Butene	106-98-9
2-Butene	107-01-7
Butene	25167-67-3
2-Butene-cis	590-18-1
2-Butene-trans [2-Butene, (E)]	624-64-6
Ethane	74-84-0
Ethylene [Ethene]	74-85-1
Hydrogen	1333-74-0

TABLE 1.—LIST OF COMMON FUELS—
Continued

Chemical name	CAS No.
Isobutane [Propane, 2-methyl-]	75–28–5
Isopentane [Butane, 2-methyl-]	78–78–4
Methane	74–82–8
Pentane	109–66–0
1-Pentene	109–67–1
2-Pentene, (E)-	646–04–8
2-Pentene, (Z)-	627–20–3
Propane	74–98–6
Propylene	115–07–1

At the same time, all of the substances listed above are sometimes used as feedstock chemicals instead of fuel. Further, every listed flammable substance has the potential to be used as fuel, since it may be burned to create heat or power. Consequently, the List Rule cannot be conformed to the new law by deleting particular chemicals from the flammable substances list. Instead, EPA has added a provision to part 68, Subpart F (listing regulated substances) that excludes flammable substances when used as a fuel, or held for sale as a fuel at a retail facility from the list of regulated substances. The Agency has also annotated both versions of the flammable substances list (one version lists the substances alphabetically, the other by Chemical Abstract Service (CAS) number) to indicate that any flammable substance, when used as a fuel, or held for sale as a fuel at a retail facility, is excluded from the list.

As previously mentioned, the Act defines a “retail facility” as 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. The income test portion of the definition follows the definition of “retail facility” used by the OSHA in enforcing its PSM Standard (OSHA Directive CPL2–2.45A CH–1-Process Safety Management of Highly Hazardous Chemicals—Compliance Guidelines and Enforcement Procedures): “an establishment that would otherwise be subject to the PSM standard at which more than half of the income is obtained from direct sales to end users.”

The effect of the income test portion of the new Act’s retail facility definition is to provide relief to the same facilities that qualify for OSHA’s retail facility exemption, and conversely, to require facilities that do not qualify for OSHA’s exemption, and thus are subject to the PSM program, to also be subject to the

RMP program, provided no other exemption applies. EPA will consequently coordinate its interpretation and application of the income test portion of the retail facility definition with OSHA.

The second portion of the retail facility definition—concerning cylinder exchange programs—goes beyond that developed by OSHA and so provides greater relief than the OSHA retail facility exemption. In general, cylinder exchange programs represent a link between major retailers (for example, hardware stores, home centers and convenience stores) and propane distributors. The retailer typically provides space outdoors and manages transactions with end users such as homeowners; the propane distributor typically provides racks, filled cylinders, promotional materials, and training to the retailer’s employees. Propane distributors may have several markets, including cylinder exchange; temporary heat during construction; commercial cooking, heating, and water heating; fuel to power vehicles, forklifts, and tractors; agricultural drying and heating; and others.

For propane or other fuel distributors which meet the definition of retail facility through either direct sales to end users or a cylinder exchange program, the fuel they hold is no longer covered by the RMP rule. For propane or other fuel distributors that do not meet the definition, the fuel they hold is *not* exempted from the RMP rule by the new law or today’s action. EPA has added to part 68 a definition of “retail facility” that mirrors the statutory definition.

III. Previous Actions Related to Fuels

A. Previous Proposed Rule and Administrative Stay

After promulgating the RMP rule, EPA became aware that a significant number of small, commercial sources use regulated flammable substances, particularly propane, as fuel in quantities in excess of the applicable threshold quantity (10,000 lbs in a process). As a result, these small sources, including farms, restaurants, hotels, and other commercial operations, were covered by the RMP requirements. Many of these sources are in rural locations where accidental releases are less likely to have significant offsite consequences. In light of the purpose of section 112(r)—to focus comprehensive accident prevention requirements on the most potentially dangerous sources—EPA reexamined whether farms and other small fuel users should be covered by the RMP rule.

On May 28, 1999, EPA issued a proposed amendment to the List Rule to create an exemption from threshold quantity determinations for processes containing 67,000 pounds or less of a listed flammable hydrocarbon fuel (64 FR 29171). EPA estimated that the proposed amendment, if promulgated, would reduce the universe of regulated sources from 69,485 to 50,300. At the same time (64 FR 29167), EPA published a temporary stay of the effectiveness of the RMP rule for those sources that would be exempted under the proposal. This stay, which expired on December 21, 1999, was in addition to, and did not affect, a stay of the rule for propane processes entered by the U.S. Court of Appeals for the D.C. Circuit (See *Litigation and Court Stay*).

While EPA was seeking comment on the proposed rule, Congress also studied the fuel issue and considered ways to provide regulatory relief to fuel users and retailers. Congress was concerned that the RMP rule placed a significant regulatory burden on facilities that were not previously covered by the OSHA PSM Standard. Congress decided to amend section 112(r) of the CAA to remove EPA’s authority to list any flammable substance when used as a fuel, or held for sale as a fuel at a retail facility, except under specified circumstances.

While the new law and EPA’s proposed rule and temporary stay all offer regulatory relief with respect to fuels, the new law reaches farther than EPA’s actions. The new law provides relief for all fuels, not just hydrocarbon fuels. It also removes fuels from the RMP program regardless of the amount a stationary source uses or holds for retail sale, whereas EPA’s proposal and stay only affects sources having no more than 67,000 lbs of fuel in a process. The new law does limit relief for fuel sellers to fuel retailers, whereas EPA’s stay does not distinguish between types of fuel sellers. However, EPA believes that virtually no fuel wholesaler qualifies for the Agency’s stay because wholesalers typically hold fuel in quantities far greater than 67,000 lbs. Even if a few wholesalers would have benefitted from EPA’s proposed rule, the Agency believes that Congress has addressed the issue of how to provide regulatory relief to fuel users and sellers, and that EPA should thus implement Congress’ approach without making exceptions to it.

Therefore, EPA is today withdrawing the proposed rule as it takes final action to amend the List Rule to conform to the new law. As previously mentioned, EPA’s temporary stay of effectiveness expired on December 21, 1999.

B. Litigation and Court Stay

Following promulgation of the RMP rule in 1996, several petitions for judicial review of the rule were filed, including one by the National Propane Gas Association (NPGA). At NPGA's request, the U.S. Court of Appeals for the District of Columbia Circuit entered a temporary stay of the RMP rule as it applies to propane (*Chlorine Institute v. Environmental Protection Agency*, No. 96-1279, and consolidated cases (Nos. 96-1284, 96-1288, and 96-1290), Order of April 27, 1999). The judicial stay meant that any stationary source, or process at a stationary source, subject to the RMP rule only by virtue of propane was not subject to the RMP rule requirements, including those calling for a hazard assessment, accident prevention program, emergency response planning, and submission of (or inclusion in) an RMP by June 21, 1999.

On Jan. 5, 2000, the Court lifted its temporary stay in response to a joint motion by EPA and NPGA to dismiss the case and lift the stay. As of that date, part 68, as revised by the Act, is in effect with respect to any facility having more than the 10,000 pounds of propane in a process unless the facility uses the propane as a fuel or sells the propane as a retail facility. Facilities that use propane in their manufacturing processes or hold propane for purposes other than on-site fuel use at a non-retail facility must immediately come into compliance with Section 112(r) of the CAA.

IV. RMP's Submitted Prior to Today's Action

EPA has received about 1,966 RMP's that address one or more of the 19 listed flammable substances that EPA has identified as likely to be used as a fuel. EPA cannot unilaterally delete any of the RMP's submitted for flammable substances from the RMP database, however, because the determination of whether a facility is eligible for the exclusion is based on information which is not reported to EPA, namely, whether a facility uses the flammable substance as a fuel or holds it for retail sale. Instead, EPA plans to send a letter to each of the 1,966 facilities to notify them of the exclusion, to ask them to evaluate their eligibility for the exclusion, and to describe the process the facilities should use to request a withdrawal of or to update these RMP's.

For about 950 of the 1,966 RMP's that reported a potential flammable fuel, only one chemical is reported. For these cases, the facilities will be asked to evaluate whether they qualify for the

exclusion based on use or retail sales. If they determine that they do not qualify, no further action is required. If they determine that they do qualify, they may request that EPA withdraw their submission and EPA will delete it from the RMP database. Facilities will have the option of using the form that EPA developed to facilitate the withdrawal or simply stating their request in a letter. Alternatively, facilities can leave the RMP as a voluntary submission in the database and need not take further action.

The balance of the RMP's reported more than one substance. About 200 RMP's reported a toxic chemical substance in addition to the potential flammable fuel. For these cases, the facilities will be asked to evaluate whether their flammable substance qualifies for the exclusion based on use or retail sales. If they determine that they do not qualify, no further action is required. If they determine that they do qualify, they may resubmit their RMP, reporting only on the toxic substances. Alternatively, facilities can leave the original RMP including the flammable fuel submission in the database and need not take further action.

About 745 RMP's reported multiple flammable substances. For these cases, the facilities will be asked to evaluate whether each reported flammable substance qualifies for the exclusion based on use or retail sales. If they determine that none of their reported flammable substances qualify, no further action is required. If they determine that all of the reported substances qualify, they may request that EPA withdraw their submission and EPA will delete it from the RMP database. Facilities will have the option of using the formal withdrawal process or simply sending a letter. Alternatively, facilities can leave the RMP as a voluntary submission in the database and need not take further action. If they determine that only some of the flammable substances reported qualify, they will need to check their flammable worst case scenario and off-site consequence analysis (OCA). If their original worst case analysis is based on a flammable substance that is excluded, the facility should revise their RMP to provide appropriate OCA. Within its enforcement discretion, EPA plans to treat this similarly to the existing requirement to revise RMP's within 6 months of a process change, giving facilities 6 months to revise their RMP's. If their original worst case analysis is based on a flammable substance that is not excluded, the facility won't need to update their RMP, except as part of the regular reporting cycle.

V. Rationale for Issuance of Rule Without Prior Notice

Section 553 of the Administrative Procedure Act, 5 U.S.C. 553(b)(B), provides that, when an agency for good cause finds that notice and public procedure are impracticable, unnecessary or contrary to the public interest, the agency may issue a rule without providing notice and an opportunity for public comment.

EPA is taking this action without prior notice and opportunity to comment. As previously mentioned, section 2 of the new Act, which took effect on August 5, 1999, immediately removed EPA's authority to list flammable substances when used as a fuel, or held for sale as a fuel at a retail facility. Consequently, EPA's regulation containing the list of regulated substances subject to the RMP rule needs to be modified to reflect the new law.

EPA has determined that there is good cause for making today's rule final without prior proposal and opportunity for comment because the Agency is codifying legislation which focuses clearly on a particular set of regulations and requires little interpretation by the Agency. In addition, EPA believes it is in the public interest to issue the revised list as soon as possible, to avoid confusion about the coverage of the RMP rule. As of August 5, 1999, there is no statutory basis for extending the RMP rule to listed flammable substances when used as a fuel, or held for sale as a fuel at a retail facility, except under certain circumstances. The Agency's rule should therefore be revised to reflect the change in authority as soon as possible. A comment period is unnecessary because today's action is nondiscretionary. A comment period would also be contrary to the public interest because the resulting delay would contribute to confusion about the coverage of the RMP rule. Thus, notice and public procedure are unnecessary and contrary to the public interest. EPA finds that this constitutes good cause under 5 U.S.C. 553(b)(B).

The Agency is also issuing this rule with an immediate effective date. Since its effect is to relieve a restriction (*i.e.*, the requirement to comply with the RMP rule), EPA may make it effective upon promulgation. Further, EPA believes it is in the public interest to make it immediately effective, for the same reasons given above for dispensing with prior notice and comment.

VI. Summary of Revisions to Rule

This section summarizes the changes to the rule.

Section 68.3, Definitions, has been revised to add a definition of retail facility, as defined in the new law.

Section 68.126 has been added to create an exclusion for regulated flammable substances used as fuel or held for sale as fuel at retail facilities. The exclusion is derived from the new law.

In Section 68.130, footnotes have been added to Tables 3 and 4. These two tables list the regulated flammable substances and their threshold quantities. Table 3 lists the regulated flammable substances in alphabetical order while Table 4 lists them in CAS number order. The footnotes remind the reader of the exclusion for regulated flammable substances. The reference to each footnote appears as an asterisk following the term "flammable substance" in the titles of Tables 3 and 4.

VII. Administrative Requirements

A. Docket

The docket is an organized and complete file of all the information considered by the EPA in the development of this rulemaking. The docket is a dynamic file, because it allows members of the public and industries involved to readily identify and locate documents so that they can effectively participate in the rulemaking process. Along with the proposed and promulgated rules and their preambles, the contents of the docket serve as the record in the case of judicial review. (See section 307(d)(7)(A) of the CAA.) The official record for this rulemaking has been established under Docket A-99-36, and is available for inspection from 8:00 a.m. to 5:30 p.m., Monday through Friday, excluding legal holidays. The official rulemaking record is located at the address in ADDRESSES at the beginning of this document.

B. Executive Order 12866

Under Executive Order 12866 (58 FR 51735, October 4, 1993), the Agency must determine whether the regulatory action is "significant" and therefore subject to OMB review and the requirements of the Executive Order. The Order defines "significant regulatory action" as one that is likely to result in a rule that may:

(1) Have an annual effect on the economy of \$100 million or more or adversely affect in a material way the economy, a sector of the economy, productivity, competition, jobs, the environment, public health or safety, or State, local, or tribal governments or communities;

(2) Create a serious inconsistency or otherwise interfere with an action taken or planned by another agency;

(3) Materially alter the budgetary impact of entitlements, grants, user fees, or loan programs or the rights and obligations of recipients thereof; or

(4) Raise novel legal or policy issues arising out of legal mandates, the President's priorities, or the principles set forth in the Executive Order.

It has been determined that this rule is not a "significant regulatory action" under the terms of Executive Order 12866 and is therefore not subject to OMB review.

C. Executive Order 13045

Executive Order 13045: "Protection of Children from Environmental Health Risks and Safety Risks," (62 FR 19885, April 23, 1997), applies to any rule that:

(1) Is determined to be "economically significant" as defined under E.O. 12866, and (2) concerns an environmental health or safety risk that EPA has reason to believe may have a disproportionate effect on children. If the regulatory action meets both criteria, the Agency must evaluate the environmental health or safety effects of the planned rule on children, and explain why the planned regulation is preferable to other potentially effective and reasonably feasible alternatives considered by the Agency.

EPA interprets E.O. 13045 as applying only to those regulatory actions that are based on health or safety risks, such that the analysis required under Section 5-501 of the Order has the potential to influence the regulation.

This action is not subject to this Executive Order because it is not economically significant as defined in E.O. 12866, and because it does not establish an environmental standard intended to mitigate health or safety risks.

D. Executive Order 13084

Under Executive Order 13084, EPA may not issue a regulation that is not required by statute, that significantly or uniquely affects the communities of Indian tribal governments, and that imposes substantial direct compliance costs on those communities, unless the Federal government provides the funds necessary to pay the direct compliance costs incurred by the tribal governments, or EPA consults with those governments.

If EPA complies by consulting, Executive Order 13084 requires EPA to provide to the Office of Management and Budget, in a separately identified section of the preamble to the rule, a description of the extent of EPA's prior

consultation with representatives of affected tribal governments, a summary of the nature of their concerns, and a statement supporting the need to issue the regulation. In addition, Executive Order 13084 requires EPA to develop an effective process permitting elected officials and other representatives of Indian tribal governments "to provide meaningful and timely input in the development of regulatory policies on matters that significantly or uniquely affect their communities."

Today's rule does not significantly or uniquely affect the communities of Indian tribal governments. This action reduces burden on flammable fuel users, which may include some sources owned or operated by Indian tribal governments. Accordingly, the requirements of section 3(b) of Executive Order 13084 do not apply to this rule.

E. Executive Order 13132

Executive Order 13132, entitled "Federalism" (64 FR 43255, August 10, 1999), requires EPA to develop an accountable process to ensure "meaningful and timely input by State and local officials in the development of regulatory policies that have federalism implications." "Policies that have federalism implications" is defined in the Executive Order to include regulations that have "substantial direct effects on the States, on the relationship between the national government and the States, or on the distribution of power and responsibilities among the various levels of government."

Under Section 6 of Executive Order 13132, EPA may not issue a regulation that has federalism implications, that imposes substantial direct compliance costs, and that is not required by statute, unless the Federal government provides the funds necessary to pay the direct compliance costs incurred by State and local governments, or EPA consults with State and local officials early in the process of developing the proposed regulation. EPA also may not issue a regulation that has federalism implications and that preempts State law, unless the Agency consults with State and local officials early in the process of developing the proposed regulation.

This final rule does not have federalism implications. It will not have substantial direct effects on the States, on the relationship between the national government and the States, or on the distribution of power and responsibilities among the various levels of government, as specified in Executive Order 13132. Today's rule reduces the burden for those state, local,

or tribal governments that may own or operate sources that use flammable fuels. Thus, the requirements of section 6 of the Executive Order do not apply to this rule.

F. Regulatory Flexibility Act (RFA), as Amended by the Small Business Regulatory Enforcement Fairness Act of 1996 (SBREFA), 5 U.S.C. 601 et seq.

Under the Regulatory Flexibility Act (RFA) of 1980 (5 U.S.C. 601, *et seq.*), as amended by the Small Business Regulatory Enforcement Fairness Act of 1996 (SBREFA), the Agency is required to give special consideration to the effect of Federal regulations on small entities and to consider regulatory options that might mitigate any such impacts. Small entities include small businesses, small not-for-profit enterprises, and small governmental jurisdictions.

Today's final rule is not subject to RFA, which generally requires an agency to prepare a regulatory flexibility analysis for any rule that will have a significant economic impact on a substantial number of small entities. The RFA applies only to rules subject to notice-and-comment rulemaking requirements under the Administrative Procedure Act (APA) or any other statute. The rule is subject to the APA, but as described in Section IV of this preamble, the Agency has invoked the "good cause" exemption under APA Section 553(b), which does not require notice and comment. Although this final rule is not subject to the RFA, EPA nonetheless has assessed the potential of this rule to adversely impact small entities subject to the rule. EPA does not believe the rule will adversely impact small entities. This action excludes flammable substances when used as a fuel, or held for sale as a fuel at a retail facility from the list of substances regulated by 40 CFR part 68, which will reduce burden on many small entities that otherwise would be covered by these requirements.

G. Paperwork Reduction Act

This action does not impose any new information collection burden. The Office of Management and Budget (OMB) has previously approved the information collection requirements contained in the existing regulations 40 CFR part 68 under the provisions of the *Paperwork Reduction Act*, 44 U.S.C. 3501 *et seq.* and has assigned OMB control number 2050-0144 (EPA ICR No.1656.06). EPA estimates a burden hour reduction of 70,400 hours.

Burden means the total time, effort, or financial resources expended by persons to generate, maintain, retain, or disclose

or provide information to or for a Federal agency. This includes the time needed to review instructions; develop, acquire, install, and utilize technology and systems for the purposes of collecting, validating, and verifying information, processing and maintaining information, and disclosing and providing information; adjust the existing ways to comply with any previously applicable instructions and requirements; train personnel to be able to respond to a collection of information; search data sources; complete and review the collection of information; and transmit or otherwise disclose the information. An Agency may not conduct or sponsor, and a person is not required to respond to a collection of information unless it displays a currently valid OMB control number. The OMB control numbers for EPA's regulations are listed in 40 CFR part 9 and 48 CFR Chapter 15.

H. Unfunded Mandates Reform Act

Title II of the Unfunded Mandates Reform Act of 1995 (UMRA), Public Law 104-4, establishes requirements for Federal agencies to assess the effects of their regulatory actions on State, local, and tribal governments and the private sector. Under section 202 of the UMRA, EPA generally must prepare a written statement, including a cost-benefit analysis, for proposed and final rules with "Federal mandates" that may result in expenditures to State, local, and tribal governments, in the aggregate, or to the private sector, of \$100 million or more in any one year. Before promulgating an EPA rule for which a written statement is needed, section 205 of the UMRA generally requires EPA to identify and consider a reasonable number of regulatory alternatives and adopt the least costly, most cost-effective or least burdensome alternative that achieves the objectives of the rule. The provisions of section 205 do not apply when they are inconsistent with applicable law. Moreover, section 205 allows EPA to adopt an alternative other than the least costly, most cost-effective or least burdensome alternative if the Administrator publishes with the final rule an explanation why that alternative was not adopted.

Before EPA establishes any regulatory requirements that may significantly or uniquely affect small governments, including tribal governments, it must have developed under section 203 of the UMRA a small government agency plan. The plan must provide for notifying potentially affected small governments, enabling officials of affected small governments to have meaningful and timely input in the development of EPA

regulatory proposals with significant Federal intergovernmental mandates, and informing, educating, and advising small governments on compliance with the regulatory requirements.

Because the Agency has made a "good cause" finding that this action is not subject to notice-and-comment requirements under the Administrative Procedures Act or any or any other statute (see Section IV of this preamble), it is not subject to sections 202 and 205 of the Unfunded Mandates Reform Act of 1995 (UMRA) (Public Law 104-4).

Pursuant to Section 203 of UMRA, EPA has determined that this rule contains no regulatory requirements that might significantly or uniquely affect small governments. This rule does not contain any additional requirements, rather it reduces the burden on small government sources that use flammable substances as fuel.

I. National Technology Transfer and Advancement Act

Section 12(d) of the National Technology Transfer and Advancement Act of 1995 ("NTTAA"), Public Law 104-113, section 12(d) (15 U.S.C. 272 note) directs EPA to use voluntary consensus standards in its regulatory activities unless to do so would be inconsistent with applicable law or otherwise impractical. Voluntary consensus standards are technical standards (*e.g.*, materials specifications, test methods, sampling procedures, and business practices) that are developed or adopted by voluntary consensus standards bodies. The NTTAA directs EPA to provide Congress, through OMB, explanations when the Agency decides not to use available and applicable voluntary consensus standards.

This action does not involve technical standards. Therefore, EPA did not consider the use of any voluntary consensus standards.

J. Congressional Review Act

The Congressional Review Act, 5 U.S.C. 801 *et seq.*, as added by the Small Business Regulatory Enforcement Fairness Act of 1996, generally provides that before a rule may take effect, the agency promulgating the rule must submit a rule report, which includes a copy of the rule, to each House of the Congress and to the Comptroller General of the United States. EPA will submit a report containing this rule and other required information to the U.S. Senate, the U.S. House of Representatives, and the Comptroller General of the United States prior to publication of the rule in the **Federal Register**. A "major rule" cannot take effect until 60 days after it is published in the **Federal Register**.

This action is not a "major rule" as defined by 5 U.S.C. 804(2). It takes effect today.

List of Subjects in 40 CFR Part 68

Environmental protection, Chemicals, Chemical accident prevention.

Dated: March 3, 2000.

Carol M. Browner,
Administrator.

For the reasons stated in the preamble, EPA amends 40 CFR part 68 as follows:

PART 68—[AMENDED]

1. The authority section for part 68 is revised to read as follows:

Authority: 42 U.S.C 7412(r), 7601 (a) (1).

Subpart A—[Amended]

2. Section 68.3 is amended to add the following definition in alphabetical order:

§ 68.3 Definitions.

* * * * *

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.

* * * * *

Subpart F—[Amended]

3. Section 68.126 is added to subpart F to read as follows:

§ 68.126 Exclusion.

Flammable Substances Used as Fuel or Held for Sale as Fuel at Retail Facilities. A flammable substance listed in Tables 3 and 4 of § 68.130 is nevertheless excluded from all provisions of this part when the substance is used as a fuel or held for sale as a fuel at a retail facility.

4. Section 68.130 is amended by:

A. Revising the heading of Table 3;

B. Revising the notes to Table 3 and adding a new footnote 1;

C. Revising the heading to Table 4; and

D. Revising the notes to Table 4 and adding a new footnote 1.

The revisions and additions read as follows:

§ 68.130 List of substances.

* * * * *

TABLE 3 TO § 68.130.—LIST OF REGULATED FLAMMABLE SUBSTANCES¹ AND THRESHOLD QUANTITIES FOR ACCIDENTAL RELEASE PREVENTION
[Alphabetical Order—63 Substances]

* * * * *

¹ A flammable substance when used as a fuel or held for sale as a fuel at a retail facility is excluded from all provisions of this part (see § 68.126).

Note: Basis for Listing:

^a Mandated for listing by Congress.

^f Flammable gas.

^v Volatile flammable liquid.

TABLE 4 TO § 68.130.—LIST OF REGULATED FLAMMABLE SUBSTANCES¹ AND THRESHOLD QUANTITIES FOR ACCIDENTAL RELEASE PREVENTION
[CAS Number Order—63 Substances]

* * * * *

¹ A flammable substance when used as a fuel or held for sale as a fuel at a retail facility is excluded from all provisions of this part (see § 68.126).

Note: Basis for Listing:

^a Mandated for listing by Congress.

^f Flammable gas.

^v Volatile flammable liquid.

[FR Doc. 00–5935 Filed 3–10–00; 8:45 am]

BILLING CODE 6560–50–P

FEDERAL COMMUNICATIONS COMMISSION

47 CFR Part 73

[DA No. 00–494, MM Docket No. 99–256; RM–9527]

Radio Broadcasting Services; Refugio and Taft, TX

AGENCY: Federal Communications Commission.

ACTION: Final rule.

SUMMARY: This document substitutes Channel 293C2 for Channel 291C3 at Refugio, Texas, reallocates Channel 293C2 from Refugio, Texas, to Taft, Texas, and modifies the license for Station

KT KY(FM) to specify operation on Channel 293C2 at Taft in response to a petition filed by Pacific Broadcasting of Missouri, L.L.C. See 64 FR 39963, July 23, 1999. The coordinates for Channel 293C2 at Taft are 27–52–00 and 97–13–08. We shall also allot Channel 291A to Refugio, Texas, at coordinates 28–21–58 and 97–19–11. Mexican concurrence has been received for the allotments at Refugio and Taft, Texas. With this action, this proceeding is terminated.

EFFECTIVE DATE: April 17, 2000.

FOR FURTHER INFORMATION CONTACT:

Kathleen Scheuerle, Mass Media Bureau, (202) 418–2180.

SUPPLEMENTARY INFORMATION: This is a summary of the Commission's Report and Order, MM Docket No. 99–256, adopted February 23, 2000, and released March 3, 2000. The full text of this Commission decision is available for inspection and copying during normal business hours in the Commission's Reference Center, 445 12th Street, SW, Washington, DC. The complete text of this decision may also be purchased from the Commission's copy contractors, International Transcription Services, Inc., 1231 20th Street, NW., Washington, DC 20036, (202) 857–3800, facsimile (202) 857–3805.

List of Subjects in 47 CFR Part 73

Radio broadcasting.

Part 73 of title 47 of the Code of Federal Regulations is amended as follows:

PART 73—[AMENDED]

1. The authority citation for Part 73 continues to read as follows:

Authority: 47 U.S.C. 154, 303, 334 and 336.

§ 73.202 [Amended]

2. Section 73.202(b), the Table of FM Allotments under Texas, is amended by removing Channel 291C3 and adding Channel 291A at Refugio and adding Taft, Channel 293C2.

Federal Communications Commission.

John A. Karousos,

Chief, Allocations Branch, Policy and Rules Division, Mass Media Bureau.

[FR Doc. 00–6052 Filed 3–10–00; 8:45 am]

BILLING CODE 6712–01–U

Appendix B
Selected NAICS Codes

SELECTED 1997 NAICS CODES

11 Agriculture

11111 Soybean Farming
 11113 Dry Pea and Bean Farming
 11114 Wheat Farming
 11115 Corn Farming
 111191 Oilseed and Grain Farming
 111199 All Other Grain Farming
 111211 Potato Farming
 111219 Other Vegetable and Melon Farming
 11131 Orange Groves
 11132 Other Citrus
 111331 Apple Orchards
 111332 Grape Vineyards
 111339 Other Non Citrus Fruit Farming
 111422 Floriculture Production
 11191 Tobacco Farming
 11192 Cotton Farming
 11199 All Other Crop Farming
 11211 Beef Cattle Ranching and Farming
 11213 Dual Purpose Cattle Ranching and Farming
 11221 Hog and Pig Farming
 11231 Chicken Egg Production
 11232 Broilers and Other Chicken Production
 11233 Turkey Production
 11234 Poultry Hatcheries
 11239 Other Poultry Production
 112511 Finfish Farming and Fish Hatcheries
 11291 Apiculture
 11299 All Other Animal Production
 115111 Cotton Ginning
 115112 Soil Preparation
 115114 Post Harvest Crop Activities
 11521 Support for Animal Production

21 Mining

211 Oil and Gas Extraction
 211111 Crude Petroleum and Natural Gas Extraction
 211112 Natural Gas Liquid Extraction
 21211 Coal Mining
 21221 Iron Ore Mining
 21222 Gold and Silver Ore Mining
 21223 Copper, Nickel, Lead, and Zinc Mining
 21229 Other Metal Ore Mining
 21231 Stone Mining and Quarrying
 212322 Industrial Sand Mining
 212324 Kaolin and Bal Clay Mining
 21239 Other Non-Metallic Mineral Mining
 21311 Support Activities for Mining

22 Utilities

22111 Electric Power Generation
 221111 Hydroelectric Power Generation
 221112 Fossil Fuel Electric Power Generation
 221113 Nuclear Electric Power Generation

221119 Other Electric Power Generation
 2213 Water, Sewage and Other Systems
 22131 Water Supply and Irrigation Systems
 22132 Sewage Treatment Facilities
 22133 Steam and Air Conditioning Supply

23 Constuction

2333 Nonresidential Building Construction

31-33 Manufacturing

311 Food Manufacturing

3111 Animal Food Manufacturing
 311111 Dog and Cat Food Manufacturing
 311119 Other Animal Food Manufacturing
 31121 Flour Milling and Malt Manufacturing
 311211 Flour Milling
 31122 Starch and Vegetable Fats and Oils Manufacturing
 311221 Wet Corn Milling
 311222 Soybean Processing
 311223 Other Oilseed Processing
 311225 Fats and Oils Refining and Blending
 31123 Breakfast Cereal Manufacturing
 311313 Beet Sugar Manufacturing
 31132 Chocolate and Confectionery Manufacturing from Cacao Beans
 31133 Confectionery Manufacturing from Purchased Chocolate
 311411 Frozen Fruit, Juice and Vegetable Manufacturing
 311412 Frozen Specialty Food Manufacturing
 311421 Fruit and Vegetable Canning
 311422 Specialty Canning
 311423 Dried and Dehydrated Food Manufacturing
 311511 Fluid Milk Manufacturing
 311512 Creamery Butter Manufacturing
 311513 Cheese Manufacturing
 311514 Dry, Condensed, and Evaporated Dairy Product Manufacturing
 31152 Ice Cream and Frozen Dessert Manufacturing
 311611 Animal (except Poultry) Slaughtering
 311612 Meat Processed from Carcasses
 311613 Rendering and Meat By-product Processing
 311615 Poultry Processing
 311711 Seafood Canning
 311712 Fresh and Frozen Seafood Processing
 311811 Retail Bakeries
 311812 Commercial Bakeries
 311813 Frozen Cakes, Pies, and Other Pastries Manufacturing
 311821 Cookie and Cracker Manufacturing
 311822 Flour Mixes and Dough Manufacturing from Purchased Flour
 311823 Dry Pasta Manufacturing
 31191 Snack Food Manufacturing

311911 Roasted Nuts and Peanut Butter Manufacturing
 311919 Other Snack Food Manufacturing
 31192 Coffee and Tea Manufacturing
 31193 Flavoring Syrup and Concentrate Manufacturing
 311941 Mayonnaise, Dressing and Other Prepared
 Sauce Manufacturing
 311991 Perishable Prepared Food Manufacturing
 311999 All Other Miscellaneous Food Manufacturing

312 Beverage and Tobacco Product Manufacturing

312111 Soft Drink Manufacturing
 312113 Ice Manufacturing
 31212 Breweries
 31213 Wineries
 31214 Distilleries
 31222 Tobacco Product Manufacturing

313 Textile Mills

313111 Yarn Spinning Mills
 31323 Nonwoven Fabric Mills
 31324 Knit Fabric Mills
 313241 Weft Knit Fabric Mills
 31331 Textile and Fabric Finishing Mills
 313311 Broadwoven Fabric Finishing Mills

314 Textile Product Mills

31411 Carpet and Rug Mills
 31499 All Other Textile Product Mills
 314992 Tire Cord and Tire Fabric Mills
 314999 All Other Miscellaneous Textile Product Mills

315 Apparel Manufacturing

315111 Sheer Hosiery Mills
 31522 Men's and Boys' Cut and Sew Apparel

321 Wood Product Manufacturing

321219 Reconstituted Wood Product Manufacturing

322 Paper Manufacturing

32211 Pulp Mills
 32212 Paper Mills
 322121 Paper (except Newsprint) Mills
 322122 Newsprint Mills
 32213 Paperboard Mills

323 Printing and Related Support Activities

323111 Commercial Gravure Printing
 323117 Book Printing
 323119 Other Commercial Printing

324 Petroleum and Coal Products Manufacturing

32411 Petroleum Refineries

 324121 Asphalt Paving Mixture and Block
 Manufacturing

324191 Petroleum Lubricating Oil and Grease
 Manufacturing
 324199 All Other Petroleum and Coal Products
 Manufacturing

325 Chemical Manufacturing

3251 Basic Chemical Manufacturing
 32511 Petrochemical Manufacturing
 32512 Industrial Gas Manufacturing
 32513 Synthetic Dye and Pigment Manufacturing
 325131 Inorganic Dye and Pigment Manufacturing
 325132 Synthetic Organic Dye and Pigment
 Manufacturing
 32518 Other Basic Inorganic Chemical Manufacturing
 325181 Alkalies and Chlorine Manufacturing
 325182 Carbon Black Manufacturing
 325188 All Other Basic Inorganic Chemical
 Manufacturing
 32519 Other Basic Organic Chemical Manufacturing
 325191 Gum and Wood Chemical Manufacturing
 325192 Cyclic Crude and Intermediate Manufacturing
 325193 Ethyl Alcohol Manufacturing
 325199 All Other Basic Organic Chemical
 Manufacturing
 3252 Resin, Synthetic Rubber, and Artificial and
 Synthetic Fibers and Filaments Manufacturing
 32521 Resin and Synthetic Rubber Manufacturing
 325211 Plastics Material and Resin Manufacturing
 325212 Synthetic Rubber Manufacturing
 32522 Artificial and Synthetic Fibers and Filaments
 Manufacturing
 325221 Cellulosic Organic Fiber Manufacturing
 325222 Noncellulosic Organic Fiber Manufacturing
 3253 Pesticide, Fertilizer and Other Agricultural
 Chemical Manufacturing
 32531 Fertilizer Manufacturing
 325311 Nitrogenous Fertilizer Manufacturing
 325312 Phosphatic Fertilizer Manufacturing
 325314 Fertilizer (Mixing Only) Manufacturing
 32532 Pesticide and Other Agricultural Chemical
 Manufacturing
 3254 Pharmaceutical and Medicine Manufacturing
 32541 Pharmaceutical and Medicine Manufacturing
 325411 Medicinal and Botanical Manufacturing
 325412 Pharmaceutical Preparation Manufacturing
 325413 In-Vitro Diagnostic Substance Manufacturing
 325414 Biological Product (except Diagnostic)
 Manufacturing
 3255 Paint, Coating, and Adhesive Manufacturing
 32551 Paint and Coating Manufacturing
 32552 Adhesive Manufacturing
 3256 Soap, Cleaning Compound and Toilet Preparation
 Manufacturing
 32561 Soap and Cleaning Compound Manufacturing
 325611 Soap and Other Detergent Manufacturing

325612 Polish and Other Sanitation Good Manufacturing
 325613 Surface Active Agent Manufacturing
 32562 Toilet Preparation Manufacturing
 3259 Other Chemical Product Manufacturing
 32591 Printing Ink Manufacturing
 32592 Explosives Manufacturing
 32599 All Other Chemical Product and Preparation Manufacturing
 325991 Custom Compounding of Purchased Resin
 325992 Photographic Film, Paper, Plate and Chemical Manufacturing
 325998 All Other Miscellaneous Chemical Product and Preparation Manufacturing

326 Plastics and Rubber Products Manufacturing

32611 Unsupported Plastics Film, Sheet and Bag Manufacturing
 326113 Unsupported Plastics Film and Sheet (except Packaging) Manufacturing
 326121 Unsupported Plastics Profile Shape Manufacturing
 32613 Laminated Plastics Plate, Sheet and Shape Manufacturing
 32614 Polystyrene Foam Product Manufacturing
 32615 Urethane and Other Foam Product (except Polystyrene) Manufacturing
 32616 Plastics Bottle Manufacturing
 32619 Other Plastics Product Manufacturing
 326192 Resilient Floor Covering Manufacturing
 326199 All Other Plastics Product Manufacturing
 3262 Rubber Product Manufacturing
 326211 Tire Manufacturing (except Retreading)
 32629 Other Rubber Product Manufacturing
 326299 All Other Rubber Product Manufacturing

327 Nonmetallic Mineral Product Manufacturing

32711 Pottery, Ceramics, and Plumbing Fixture Manufacturing
 327111 Vitreous China Plumbing Fixtures and China and Earthenware Bathroom Accessories Manufacturing
 327125 Nonclay Refractory Manufacturing
 32721 Glass and Glass Product Manufacturing
 327211 Flat Glass Manufacturing
 327212 Other Pressed and Blown Glass and Glassware Manufacturing
 327213 Glass Container Manufacturing
 327215 Glass Product Manufacturing Made of Purchased Glass
 32731 Cement Manufacturing
 32732 Ready-Mix Concrete Manufacturing
 32739 Other Concrete Product Manufacturing
 32742 Gypsum Product Manufacturing
 32791 Abrasive Product Manufacturing
 327992 Ground or Treated Mineral and Earth

Manufacturing
 327993 Mineral Wool Manufacturing
 327999 All Other Miscellaneous Nonmetallic Mineral Product Manufacturing

331 Primary Metal Manufacturing

33111 Iron and Steel Mills and Ferroalloy Manufacturing
 331111 Iron and Steel Mills
 331312 Primary Aluminum Production
 331314 Secondary Smelting and Alloying of Aluminum
 331315 Aluminum Sheet, Plate and Foil Manufacturing
 331316 Aluminum Extruded Product Manufacturing
 331319 Other Aluminum Rolling and Drawing
 33141 Nonferrous Metal (except Aluminum) Smelting and Refining
 331411 Primary Smelting and Refining of Copper
 331419 Primary Smelting and Refining of Nonferrous Metal (except Copper and Aluminum)
 331421 Copper Rolling, Drawing and Extruding
 331423 Secondary Smelting, Refining, and Alloying of Copper
 33149 Nonferrous Metal (except Copper and Aluminum) Rolling, Drawing, Extruding and Alloying
 331491 Nonferrous Metal (except Copper and Aluminum) Rolling, Drawing and Extruding
 331492 Secondary Smelting, Refining, and Alloying of Nonferrous Metal (except Copper and Aluminum)
 33151 Ferrous Metal Foundries
 331511 Iron Foundries
 331513 Steel Foundries, (except Investment)
 33152 Nonferrous Metal Foundries
 331521 Aluminum Die-Casting Foundries
 331522 Nonferrous (except Aluminum) Die-Casting Foundries
 331524 Aluminum Foundries (except Die-Casting)
 331525 Copper Foundries (except Die-Casting)
 331528 Other Nonferrous Foundries (except Die-Casting)

332 Fabricated Metal Product Manufacturing

33211 Forging and Stamping
 332111 Iron and Steel Forging
 332112 Nonferrous Forging
 332116 Metal Stamping
 332117 Powder Metallurgy Part Manufacturing
 33221 Cutlery and Hand Tool Manufacturing
 332211 Cutlery and Flatware (except Precious) Manufacturing
 332321 Metal Window and Door Manufacturing
 332322 Sheet Metal Work Manufacturing
 33243 Metal Can, Box, and Other Metal Container (Light Gauge) Manufacturing
 33251 Hardware Manufacturing

Appendix B
NAICS Codes

B-4

332612 Spring (Light Gauge) Manufacturing
33281 Coating, Engraving, Heat Treating, and Allied Activities
332811 Metal Heat Treating
332812 Metal Coating, Engraving (except Jewelry and Silverware), and Allied Services to Manufacturers
332813 Electroplating, Plating, Polishing, Anodizing and Coloring
332912 Fluid Power Valve and Hose Fitting Manufacturing
332919 Other Metal Valve and Pipe Fitting Manufacturing
33299 All Other Fabricated Metal Product Manufacturing
332991 Ball and Roller Bearing Manufacturing
332992 Small Arms Ammunition Manufacturing
332999 All Other Miscellaneous Fabricated Metal Product Manufacturing

333 Machinery Manufacturing

33311 Agricultural Implement Manufacturing
333111 Farm Machinery and Equipment Manufacturing
333112 Lawn and Garden Tractor and Home Lawn and Garden Equipment Manufacturing
33312 Construction Machinery Manufacturing
333295 Semiconductor Machinery Manufacturing
333298 All Other Industrial Machinery Manufacturing
333311 Automatic Vending Machine Manufacturing
333314 Optical Instrument and Lens Manufacturing
333315 Photographic and Photocopying Equipment Manufacturing
333319 Other Commercial and Service Industry Machinery Manufacturing
333415 Air-Conditioning and Warm Air Heating Equipment and Commercial and Industrial Refrigeration Equipment Manufacturing
33351 Metalworking Machinery Manufacturing
333511 Industrial Mold Manufacturing
333512 Machine Tool (Metal Cutting Types) Manufacturing
333515 Cutting Tool and Machine Tool Accessory Manufacturing
333611 Turbine and Turbine Generator Set Unit Manufacturing
333613 Mechanical Power Transmission Equipment Manufacturing
333618 Other Engine Equipment Manufacturing
333911 Pump and Pumping Equipment Manufacturing
333924 Industrial Truck, Tractor, Trailer and Stacker Machinery Manufacturing
333995 Fluid Power Cylinder and Actuator Manufacturing
333996 Fluid Power Pump and Motor Manufacturing
333999 All Other Miscellaneous General Purpose Machinery Manufacturing

334 Computer and Electronic Product Manufacturing

33411 Computer and Peripheral Equipment Manufacturing
334111 Electronic Computer Manufacturing
334112 Computer Storage Device Manufacturing
334113 Computer Terminal Manufacturing
334119 Other Computer Peripheral Equipment Manufacturing
33422 Radio and Television Broadcasting and Wireless Communications Equipment Manufacturing
33441 Semiconductor and Other Electronic Component Manufacturing
334411 Electron Tube Manufacturing
334412 Bare Printed Circuit Board Manufacturing
334413 Semiconductor and Related Device Manufacturing
334414 Electronic Capacitor Manufacturing
334415 Electronic Resistor Manufacturing
334416 Electronic Coil, Transformer, and Other Inductor Manufacturing
334417 Electronic Connector Manufacturing
334418 Printed Circuit Assembly (Electronic Assembly) Manufacturing
334419 Other Electronic Component Manufacturing
334519 Other Measuring and Controlling Device Manufacturing
334613 Magnetic and Optical Recording Media Manufacturing

335 Electrical Equipment, Appliance and Component Manufacturing

33511 Electric Lamp Bulb and Part Manufacturing
33512 Commercial, Industrial and Institutional Electric Lighting Fixture Manufacturing
335129 Other Lighting Equipment Manufacturing
33522 Major Appliance Manufacturing
335222 Household Refrigerator and Home Freezer Manufacturing
33531 Electrical Equipment Manufacturing
335311 Power, Distribution and Specialty Transformer Manufacturing
335312 Motor and Generator Manufacturing
33591 Battery Manufacturing
335911 Storage Battery Manufacturing
335912 Primary Battery Manufacturing
335921 Fiber Optic Cable Manufacturing

33599 All Other Electrical Equipment and Component Manufacturing
335991 Carbon and Graphite Product Manufacturing
335999 All Other Miscellaneous Electrical Equipment and Component Manufacturing

336 Transportation Equipment Manufacturing

33611 Automobile and Light Duty Motor Vehicle

Manufacturing

336111 Automobile Manufacturing

336112 Light Truck and Utility Vehicle Manufacturing

33612 Heavy Duty Truck Manufacturing

33621 Motor Vehicle Body and Trailer Manufacturing

336211 Motor Vehicle Body Manufacturing

336212 Truck Trailer Manufacturing

336213 Motor Home Manufacturing

336214 Travel Trailer and Camper Manufacturing

33631 Motor Vehicle Gasoline Engine and Engine Parts Manufacturing

336311 Carburetor, Piston, Piston Ring and Valve Manufacturing

336312 Gasoline Engine and Engine Parts Manufacturing

33632 Motor Vehicle Electrical and Electronic Equipment Manufacturing

336321 Vehicular Lighting Equipment Manufacturing

336322 Other Motor Vehicle Electrical and Electronic Equipment Manufacturing

33633 Motor Vehicle Steering and Suspension Components (except Spring) Manufacturing

33634 Motor Vehicle Brake System Manufacturing

33635 Motor Vehicle Transmission and Power Train Parts Manufacturing

33636 Motor Vehicle Seating and Interior Trim Manufacturing

33637 Motor Vehicle Metal Stamping

33639 Other Motor Vehicle Parts Manufacturing

336391 Motor Vehicle Air-Conditioning Manufacturing

336399 All Other Motor Vehicle Parts Manufacturing

33641 Aerospace Product and Parts Manufacturing

336411 Aircraft Manufacturing

336412 Aircraft Engine and Engine Parts Manufacturing

336413 Other Aircraft Part and Auxiliary Equipment Manufacturing

336414 Guided Missile and Space Vehicle Manufacturing

336415 Guided Missile and Space Vehicle Propulsion Unit and Propulsion Unit Parts Manufacturing

336419 Other Guided Missile and Space Vehicle Parts and Auxiliary Equipment Manufacturing

33651 Railroad Rolling Stock Manufacturing

33661 Ship and Boat Building

336611 Ship Building and Repairing

336612 Boat Building

33699 Other Transportation Equipment Manufacturing

336991 Motorcycle, Bicycle and Parts Manufacturing

336992 Military Armored Vehicle, Tank and Tank Component Manufacturing

336999 All Other Transportation Equipment Manufacturing

337 Furniture and Related Product Manufacturing

33712 Household and Institutional Furniture Manufacturing

337211 Wood Office Furniture Manufacturing

339 Miscellaneous Manufacturing

33911 Medical Equipment and Supplies Manufacturing

339112 Surgical and Medical Instrument Manufacturing

339113 Surgical Appliance and Supplies Manufacturing

339114 Dental Equipment and Supplies Manufacturing

3399 Other Miscellaneous Manufacturing

33991 Jewelry and Silverware Manufacturing

339911 Jewelry (except Costume) Manufacturing

339912 Silverware and Plated Ware Manufacturing

339913 Jewelers' Material and Lapidary Work Manufacturing

339914 Costume Jewelry and Novelty Manufacturing

339991 Gasket, Packing, and Sealing Device Manufacturing

339994 Broom, Brush and Mop Manufacturing

339999 All Other Miscellaneous Manufacturing

42 Wholesale Trade

421 Wholesale Trade, Durable Goods

42149 Other Professional Equipment and Supplies

42171 Hardware Wholesalers

42181 Construction and Mining Machinery

42184 Industrial Supplies

422 Wholesale Trade, Nondurable Goods

42211 Printing and Writing Paper Wholesalers

4224 Grocery and Related Product Wholesalers

42241 General Line Grocery Wholesalers

42242 Packaged Frozen Food Wholesalers

42243 Dairy Product (except Dried or Canned) Wholesalers

42244 Poultry and Poultry Product Wholesalers

42246 Fish and Seafood Wholesalers

42247 Meat and Meat Product Wholesalers

42248 Fresh Fruit and Vegetable Wholesalers

42249 Other Grocery and Related Products Wholesalers

4225 Farm Product Raw Material Wholesalers

42251 Grain and Field Bean Wholesalers

42252 Livestock Wholesalers

42259 Other Farm Product Raw Material Wholesalers

4226 Chemical and Allied Products Wholesalers

42261 Plastics Materials and Basic Forms and Shapes Wholesalers

42269 Other Chemical and Allied Products Wholesalers

42271 Petroleum Bulk Stations and Terminals

42272 Petroleum and Petroleum Products Wholesalers (except Bulk Stations and Terminals)

42281 Beer and Ale Wholesalers

42282 Wine and Distilled Alcoholic Beverage Wholesalers

4229 Miscellaneous Nondurable Goods Wholesalers

42291 Farm Supplies Wholesalers

42299 Other Miscellaneous Nondurable Goods

44-45 Retail Trade

4411 Automobile Dealers
442291 Window Treatment Stores
4441 Building Material and Supplies Dealers
4442 Nursery and Garden Centers
44511 Grocery Stores
44523 Fruit and Vegetable Markets
44711 Gasoline Stations
45291 Warehouse Clubs and Superstores
45399 All Other Miscellaneous Store Retailers

48-49 Transportation and Warehousing
488 Support Activities for Transportation

48211 Rail Transportation
48311 Water Transportation
4842 Specialized Freight Trucking
48511 Urban Transit Systems
486 Pipeline Transportation
48811 Airport Operations
488119 Other Airport Operations
48819 Other Support Activities for Air Transportation
48821 Support Activities for Rail Transportation
48832 Marine Cargo Handling
48839 Other Support Activities for Water Transportation

493 Warehousing and Storage

49311 General Warehousing and Storage
49312 Refrigerated Warehousing and Storage
49313 Farm Product Warehousing and Storage
49319 Other Warehousing and Storage

54 Professional, Scientific, and Technical Services

54138 Testing Labs
54171 Research and Development in the Physical,
Engineering, and Life Sciences

**56 Administrative and Support, Waste Management
and Remediation Services**

561431 Private Mail Centers
56179 Other Services to Buildings
56221 Waste Treatment and Disposal
562211 Hazardous Waste Treatment and Disposal
562212 Solid Waste Landfill
562213 Solid Waste Combustors and Incinerators
562219 Other Nonhazardous Waste Treatment and
Disposal
5629 Remediation and Other Waste Management
Services
56291 Remediation Services
56292 Materials Recovery Facilities
56299 All Other Waste Management Services
562998 All Other Miscellaneous Waste Management
Services

61 Educational Services

6111 Elementary and Secondary Schools
61131 Colleges, Universities, Professional Schools

62 Health Care and Social Assistance

62151 Medical and Diagnostic Laboratories
621511 Medical Laboratories
62211 General Medical and Surgical Hospitals
6222 Psychiatric and Substance Abuse Hospitals
62221 Psychiatric and Substance Abuse Hospitals
6223 Specialty (except Psychiatric and Substance
Abuse) Hospitals
62231 Specialty (except Psychiatric and Substance
Abuse) Hospitals