



If you own or operate a facility that uses, stores, manufactures, distributes or handles regulated toxic and flammable substances, it is your responsibility to identify and assess your chemical hazards and carry out certain activities designed to reduce the likelihood and severity of accidental chemical releases.

Risk Management Planning for the accidental release of chemicals, as required in Section 112(r) of the amended Clean Air Act, is imperative to protecting the health of your workers, the surrounding community and the environment.



Do You Use, Store, Manufacture, Distribute or Handle Toxic or Flammable Substances?

WHAT YOU NEED TO KNOW ABOUT RISK MANAGEMENT PLANNING

Ecology Fact Sheet

Publication #97-213d

On June 20, 1996, the U.S. Environmental Protection Agency (EPA) announced a final regulation requiring risk management planning to help prevent accidental releases of hazardous chemicals. The risk management planning requirements of the Clean Air Act (CAA), Section 112(r), complement and support the Emergency Planning and Community Right-to-Know Act of 1986 by making public information available on chemical risk and ways to reduce it.

As an owner or operator of a facility that manufactures, stores, distributes, handles, or uses regulated toxic or flammable substances above certain threshold quantities (10,000 lbs. for all flammables and ranging from 500 to 20,000 pounds for toxic substances), it is your responsibility to comply with this planning requirement by June 21, 1999. While this compliance date is nearly two years away, Section 112(r) is complicated and will require an extensive amount of work to determine the applicable requirements and to develop a compliance plan.

Attached to this fact sheet is a list of 139 regulated toxic and flammable substances. Carefully read the list to determine whether you manufacture, store, distribute, handle, or use any of these substances (refer to Section II "Hazardous Ingredients" of your required Material Safety Data Sheets [MSDSs] or other product data sheets to find out what chemicals are contained in your process materials).

For each chemical you use that is on the attached list, determine how much of the substance is on-site at any time and compare that quantity with the threshold quantity (provided on the list) for that particular substance. At any time throughout the calendar year, if on-site quantities (measured in lbs.) are above the established threshold quantities, you must comply with this risk management planning requirement.

Once you determine that 112(r) compliance is necessary, the next step is to identify all specific requirements that apply. The requirements vary from facility to facility and will depend on which "program" (below) applies to your facility.

- **Program 1** — If under a worst-case scenario a release would not produce any off-site impacts and the facility does not have a history of releases.
- **Program 2** — Facilities that do not meet Program 1 or Program 3 criteria.
- **Program 3** — Facilities with the SIC code 2611, 2812, 2819, 2821, 2865, 2869, 2873, 2879, and 2911, or those required to have a Process Safety Management Plan.

Most small businesses need to comply with the requirements in either Program 1 or Program 2. All regulated facilities that meet the criteria for complying with Section 112(r), regardless of program, must prepare a Risk Management Plan. The difference between the programs is the complexity of the prevention and emergency response programs in the Risk Management Plan. The Risk Management Plan must be updated every five years or when another regulated substance exceeds the threshold. Facilities are required to register with EPA, meet all the requirements in their applicable program (*See Table, Page 2*) and have the plan completed by the compliance date of June 21, 1999.

The table on the reverse side outlines the core activities that you need to conduct to be in compliance with Program 1 or Program 2 of Section 112(r).

ACHIEVING COMPLIANCE THROUGH POLLUTION PREVENTION

	Hazard Assessment	Management Program	Prevention Program	Emergency Response	Risk Management Plan Contents
Program 1 Requirements	- Worst-case scenario - 5-year accident history	- None, however facility responsible for safe handling & storage of chemicals	- Certify no additional steps needed - Employee training recommended	- Coordinate with local emergency responders (police, fire hazmat response)	- Executive summary - Registration - Worst-case scenario - 5-year accident history - Certification
Program 2 Requirements	- Program 1 Requirements - Alternative releases	- Document management system	- Program 1 Requirements - Safety information - Hazard review - Operating procedures - Training - Maintenance - Incident investigation - Compliance audit	- Program 1 Requirements - Develop plan and program	- Program 1 Requirements - Alternative release data - Prevention program data - Emergency response data

AN ALTERNATIVE: POLLUTION PREVENTION

Conducting the detailed requirements of the Risk Management Plan can be overwhelming for a business owner. However, there may be action you can take to alleviate some or all of this reporting burden — for example, **stop** using the toxic materials that are regulated. Eliminating or minimizing the use of toxic substances is among the actions known as “pollution prevention.” The following pollution prevention opportunity can help your company:

- meet federal regulations and cut your paperwork burden;
- reduce costs by using fewer raw materials;
- reduce waste transportation and disposal costs; and
- cut liability and insurance costs.

ELIMINATE USING REGULATED CHEMICALS

There are several approaches to eliminating the use of products that contain regulated chemicals. Following are some suggestions:

✓ **Talk to your suppliers.** Explain to them your interest in finding a way to eliminate the use of regulat-

ed chemicals. Ask if they supply other products that can get the job done but do not contain regulated chemicals or have harmful health effects. If your suppliers do not have any suggestions, get recommendations from your peers or potential new suppliers.

✓ **Inquire about changing customer specifications.** If external specifications require that you use a product containing regulated chemicals, ask the customer if a change would be acceptable. Propose a viable alternative that will reduce both your and their liability while improving the safety of the workplace.

✓ **Ask for help from government technical assistance programs.** You can get recommendations for alternative, non-regulated products, as well as help estimating air pollution emissions or other assistance, from government technical assistance programs.

ENFORCEMENT

Your local, state and federal regulatory agencies are determining who is going to administer this rule. Contact your Compliance Assistance contact listed below for a copy of the requirements and further updates.

WHO TO CALL FOR HELP

Through the Washington Department of Ecology’s Compliance Assistance Office, non-enforcement assistance is available for small businesses with air quality questions. Program purposes are to:

- explain the air quality rules and recommend ways to comply;
- provide free, on-site technical assistance visits;
- help businesses estimate their air pollution emissions;
- refer businesses to needed resources; and
- provide information on potential sources of financing for compliance requirements.

For more information, contact:

Compliance Assistance Office

Bernard Brady, 360-407-6803
e-mail: bbra461@ecy.wa.gov

Small Business Advocate

Leighton Pratt, 360-407-7018
e-mail: lptra461@ecy.wa.gov
<http://www.wa.gov/ecology>



TOXIC SUBSTANCES - THRESHOLD QUANTITY

<u>Chemical Name</u>	<u>CAS No.</u>	<u>(lbs)</u>	<u>Chemical Name</u>	<u>CAS No.</u>	<u>(lbs)</u>
Acrolein [2-Propenal]	107-02-8	5,000	Methacrylonitrile [2-Propenenitrile, 2-methyl-]	126-98-7	10,000
Acrylonitrile [2-Propenenitrile]	107-13-1	20,000	Methylchloride		
Acrylylchloride [2-Propenoyl chloride]	814-68-6	5,000	[Methane, chloro-]	74-87-3	10,000
Allyl alcohol [2-Propen-1-ol]	107-18-61	5,000	Methylchloroformate		
Allylamine [2-Propen-1-amine]	107-11-9	10,000	[Carbonochloridic acid, methylester]	79-22-1	5,000
Ammonia (anhydrous)	7664-41-7	10,000	Methylhydrazine		
Ammonia (conc 20% or greater)	7664-41-7	20,000	[Hydrazine, methyl-]	60-34-41	5,000
Arsenoustrichloride	7784-34-11	5,000	Methylisocyanate		
Arsine	7784-42-1	1,000	[Methane, isocyanato-]	624-83-9	10,000
Borontrichloride [Borane, trichloro-]	10294-34-5	5,000	Methylmercaptan [Methanethiol]	74-93-1	10,000
Borontrifluoride [Borane, trifluoro-]	7637-07-2	5,000	Methylthiocyanat		
Borontrifluoride compound with methyl ether (1:1) [Boron, trifluoro[oxybis[metane]]-, T-4-	353-42-4	15,000	[Thiocyanic acid, methylester]	556-64-9	20,000
Bromine	7726-95-6	10,000	Methyltrichlorosilane		
Carbendisulfide	75-15-0	20,000	[Silane, trichloromethyl-]	75-79-6	5,000
Chlorine	7782-50-5	2,500	Nickel carbonyl	13463-39-3	1,000
Chlorinedioxide [Chlorineoxide(ClO2)]	10049-04-4	1,000	Nitric acid (conc 80% or greater)	7697-37-2	15,000
Chloroform [Methane, trichloro-]	67-66-3	20,000	Nitric oxide [Nitrogen oxide (NO)]	10102-43-9	10,000
Chloromethylether			Oleum (Fuming Sulfuric acid)		
[Methane, oxybis[chloro-]	542-88-1	1,000	[Sulfuric acid, mixture with sulfur trioxide] ¹	8014-95-7	10,000
Chloromethylmethylether			Peracetic acid [Ethaneperoxoic acid]	79-21-0	10,000
[Methane, chloromethoxy-]	107-30-2	5,000	Perchloromethylmercaptan		
Crotonaldehyde [2-Butenal]	4170-30-3	20,000	[Methanesulfonyl chloride, trichloro-]	594-42-3	10,000
Crotonaldehyde, (E)-			Phosgene [Carbonic dichloride]	75-44-5	500
[2-Butenal, (E)-]	123-73-9	20,000	Phosphine	7803-51-2	5,000
Cyanogenchloride	506-77-4	10,000	Phosphorus oxychloride		
Cyclohexylamine			[Phosphoryl chloride]	10025-87-3	5,000
[Cyclohexanamine]	108-91-8	15,000	Phosphorus trichloride		
Diborane	19287-45-7	2,500	[Phosphorous trichloride]	7719-12-21	5,000
Dimethyldichlorosilane			Piperidine	110-89-41	5,000
[Silane, dichlorodimethyl-]	75-78-5	5,000	Propionitrile [Propanenitrile]	107-12-0	10,000
1,1-Dimethylhydrazine			Propyl chloroformate		
[Hydrazine, 1,1-dimethyl-]	57-14-71	5,000	[Carbonochloridic acid, propylester]	109-61-51	5,000
Epichlorohydrin			Propyleneimine		
[Oxirane, (chloromethyl)-]	106-89-8	20,000	[Aziridine, 2-methyl-]	75-55-8	10,000
Ethylenediamine			Propylene oxide		
[1,2-Ethanediamine]	107-15-3	20,000	[Oxirane, methyl-]	75-56-9	10,000
Ethyleneimine [Aziridine]	151-56-4	10,000	Sulfur dioxide (anhydrous)	7446-09-5	5,000
Ethyleneoxide [Oxirane]	75-21-8	10,000	Sulfur tetrafluoride		
Fluorine	7782-41-4	1,000	[Sulfur fluoride (SF4), (T-4)-]	7783-60-0	2,500
Formaldehyde (solution)	50-00-0	15,000	Sulfur trioxide	7446-11-9	10,000
Furan	110-00-9	5,000	Tetramethyllead		
Hydrazine	302-01-2	15,000	[Plumbane, tetramethyl-]	75-74-1	10,000
Hydrochloric acid			Tetranitromethane		
(conc 30% or greater)	7647-01-0	15,000	[Methane, tetranitro-]	509-14-8	10,000
Hydrocyanic acid	74-90-8	2,500	Titanium tetrachloride		
Hydrogenchloride (anhydrous)			[Titanium chloride (TiCl4) (T-4)-]	7550-45-0	2,500
[Hydrochloric acid]	7647-01-0	5,000	Toluene 2,4-diisocyanate		
Hydrogenfluoride/Hydrofluoric acid			[Benzene, 2,4-diisocyanato-1- methyl-] ¹	584-84-9	10,000
(conc 50% or greater)			Toluene 2,6-diisocyanate		
[Hydrofluoric acid]	7664-39-3	1,000	[Benzene, 1,3-diisocyanato- 2-methyl-] ¹	91-08-7	10,000
Hydrogenselenide	7783-07-5	500	Toluene diisocyanate		
Hydrogensulfide	7783-06-4	10,000	(unspecified isomer) [Benzene, 1,3-diisocyanatomethyl-] ¹	26471-62-5	10,000
Iron, pentacarbonyl-			Trimethylchlorosilane		
[Ironcarbonyl (Fe(CO)5), (TB-5-11)-]	13463-40-6	2,500	[Silane, chlorotrimethyl-]	75-77-4	10,000
Isobutyronitrile			Vinyl acetate monomer		
[Propanenitrile, 2-methyl-]	78-82-0	20,000	[Acetic acid ethenyl ester]	108-05-4	15,000
Isopropylchloroformate					
[Carbonochloridic acid, 1-methyl-]	108-23-6	15,000			

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

FLAMMABLES - THRESHOLD QUANTITY

<u>Chemical Name</u>	<u>CAS No.</u>	<u>(lbs)</u>	<u>Chemical Name</u>	<u>CAS No.</u>	<u>(lbs)</u>
Acetaldehyde	75-07-0	10,000	Methane	74-82-8	10,000
Acetylene [Ethylyene]	74-86-2	10,000	Methylamine [Methanamine]	74-89-5	10,000
Bromotrifluoroethylene [Ethene, bromotrifluoro-]	598-73-2	10,000	3-Methyl-1-butene	563-45-1	10,000
1,3-Butadiene	106-99-0	10,000	2-Methyl-1-butene	563-46-2	10,000
Butane	106-97-8	10,000	Methyl ether [Methane, oxybis-]	115-10-6	10,000
1-Butene	106-98-9	10,000	Methyl formate		
2-Butene	107-01-7	10,000	[Formic acid, methyl ester]	107-31-3	10,000
Butene	25167-67-3	10,000	2-Methylpropene		
2-Butene-cis	590-18-1	10,000	[1-Propene, 2-methyl-]	115-11-7	10,000
2-Butene-trans			1,3-Pentadiene	504-60-9	10,000
[2-Butene, (E)]	624-64-6	10,000	Pentane	109-66-0	10,000
Carbon oxysulfide			1-Pentene	109-67-1	10,000
[Carbon oxidesulfide (COS)]	463-58-1	10,000	2-Pentene, (E)-	646-04-8	10,000
Chlorine monoxide [Chlorine oxide]	7791-21-1	10,000	2-Pentene, (Z)-	627-20-3	10,000
2-Chloropropylene			Propadiene [1,2-Propadiene]	463-49-0	10,000
[1-Propene, 2-chloro-]	557-98-2	10,000	Propane	74-98-6	10,000
1-Chloropropylene			Propylene [1-Propene]	115-07-1	10,000
[1-Propene, 2-chloro-]	590-21-6	10,000	Propyne [1-Propyne]	74-99-7	10,000
Cyanogen [Ethanedinitrile]	460-19-5	10,000	Silane	7803-62-5	10,000
Dichlorosilane [Silane, dicloro-]	4109-96-0	10,000	Tetrafluoroethylene		
Difluoroethane			[Ethene, tetrafluoro-]	116-14-3	10,000
[Ethane, 1,1-difluoro-]	75-37-6	10,000	Tetramethylsilane		
Dimethylamine			[Silane, tetramethyl-]	75-76-3	10,000
[Methanamine, N=methyl-]	124-40-3	10,000	Trichlorosilane [Silane, trichloro-]	10025-78-2	10,000
2,2-Dimethylpropane			Trifluorochloroethylene		
[Propane, 2-2-dimethyl-]	463-82-1	10,000	[Ethene, chlorotrifluoro-]	79-38-9	10,000
Ethane	74-84-0	10,000	Trimethylamine		
Ethyl acetylene [1-Butyne]	107-00-6	10,000	[Methanamine, N,N-dimethyl-]	75-50-3	10,000
Ethylamine [Ethanamine]	75-04-7	10,000	Vinyl acetylene [1-Buten-3-yne]	689-97-4	10,000
Ethyl chloride [Ethane, chloro-]	75-00-3	10,000	Vinyl chloride [Ethene, chloro-]	75-01-4	10,000
Ethylene [Ethene]	74-85-1	10,000	Vinyl ethyl ether [Ethene, ethoxy-]	109-92-2	10,000
Ethyl ether [Ethane, 1,1'-oxybis-]	60-29-7	10,000	Vinyl fluoride [Ethene, fluoro-]	75-02-5	10,000
Ethyl mercaptan [Ethanethiol]	75-08-1	10,000	Vinylidene chloride		
Ethyl nitrite [Nitrous acid, ethyl ester]	109-95-5	10,000	[Ethene, 1,1-dichloro-]	75-35-4	10,000
Hydrogen	333-74-0	10,000	Vinylidene fluoride		
Isobutane [Propane, 2-methyl]	75-28-5	10,000	[Ethene, 1,1-difluoro-]	75-38-7	10,000
Isopentane [Butane, 2-methyl-]	78-78-4	10,000	Vinyl methyl ether		
Isoprene [1,3-Butadiene, 2-methyl-]	78-79-5	10,000	[Ethene, methoxy-]	107-25-5	10,000
Isopropylamine [2-Propanamine]	75-31-0	10,000			
Isopropyl chloride [Propane, 2-chloro-]	75-29-6	10,000			

