

Section 112r of the CAAA of 1990 requires that all stationary sources that have a regulated substance present in a process in excess of a threshold quantity (See Table Below) develop a risk management plan (RMP) by June 21, 1999. Section 112r requires that the company provide an analysis of the worst case release scenario, provide a five-year accident history, and develop and implement an emergency response plan for each regulated substance present at the facility.

RMP Toxic Chemicals, Threshold Quantities (TQ) and Toxic Endpoints

Chemical Name	CAS No.	EPA RMP TQ	Toxic Endpoint (mg/L)
Acrolein [2-Propenal]	107-02-8	5,000	
Acrylonitrile [2-Propenenitrile]	107-13-1	20,000	0.076
Acrylyl chloride [2-Propenoyl chloride]	814-68-6	5,000	0.00090
Allyl alcohol [2-Propen-1-ol]	107-18-61	15,000	0.036
Allylamine [2-Propen-1-amine]	107-11-9	10,000	0.0032
Ammonia [anhydrous]	7664-41-7	10,000	0.14
Ammonia [conc. 20% or greater]	7664-41-7	20,000	0.14
Arsenous trichloride	7784-34-1	15,000	0.010
Arsine	7784-42-1	1,000	0.0019
Boron trichloride [Borane, trichloro-]	10294-34-5	5,000	0.0
Boron trifluoride [Borane, trifluoro-]	7637-07-2	5,000	0.028

RMP Toxic Chemicals, Threshold Quantities (TQ) and Toxic Endpoints

Chemical Name	CAS No.	EPA RMP TQ	Toxic Endpoint (mg/L)
Boron trifluoride compound with methyl ether (1:1) [Boron, trifluoro [oxybis [metane]]-, T-4-Bromine	353-42-4	15,000	0.023
Bromine	7726-95-6	10,000	0.0065
Carbon disulfide	75-15-0	20,000	0.16
Chlorine	7782-50-5	2,500	0.0087
Chlorine dioxide [Chlorine oxide (ClO₂)]	10049-04-4	1,000	0.0028
Chloroform [Methane, trichloro-]	67-66-3	20,000	0.49
Chloromethyl ether [Methane, oxybis [chloro-]]	542-88-1	1,000	0.00025
Chloromethyl methyl ether [Methane, chloromethoxy-]	107-30-2	5,000	0.0018
Crotonaldehyde [2-Butenal]	4170-30-3	20,000	0.029
Crotonaldehyde, (E)-[2-Butenal, (E)-]	123-73-9	20,000	0.029

RMP Toxic Chemicals, Threshold Quantities (TQ) and Toxic Endpoints

Chemical Name	CAS No	EPA RMP TQ	Toxic Endpoint (mg/L)
Cyanogen chloride	506-77-4	10,000	0.030
Cyclohexylamine [Cyclohexanamine]	108-91-8	15,000	0.16
Diborane	19287-45-7	2,500	0.0011
Dimethyldichlorosilane [Silane, dichlorodimethyl-]	75-78-5	5,000	0.026
1,1-Dimethylhydrazine [Hydrazine, 1,1-dimethyl-]	57-14-7	15,000	0.012
Epichlorohydrin [Oxirane, (chloromethyl)-]	106-89-8	20,000	0.076
Ethylenediamine [1,2-Ethanediamine]	107-15-3	20,000	0.49
Ethyleneimine [Aziridine]	151-56-4	10,000	0.018
Ethylene oxide [Oxirane]	75-21-8	10,000	0.090
Fluorine	7782-41-4	1,000	0.0039
Formaldehyde (solution)	50-00-0	15,000	0.012

RMP Toxic Chemicals, Threshold Quantities (TQ) and Toxic Endpoints

Chemical Name	CAS No.	EPA RMP TQ	Toxic Endpoint (mg/L)
Furan	110-00-9	5,000	0.0012
Hydrazine	302-01-2	15,000	0.011
Hydrochloric acid (conc. 37% or greater)	7647-01-0	15,000	0.030
Hydrocyanic acid	74-90-8	2,500	0.011
Hydrogen chloride (anhydrous) [Hydrochloric acid]	7647-01-0	5,000	0.030
Hydrogen fluoride/Hydrofluoric acid (conc. 50% or greater) [Hydrofluoric acid]	7664-39-3	1,000	0.016
Hydrogen selenide	7783-07-5	500	0.00066
Hydrogen sulfide	7783-06-4	10,000	0.042
Iron, pentacarbonyl- [Iron carbonyl (Fe(CO)₅), (TB-5-11)-]	13463-40-6	2,500	0.00044
Isobutyronitrile [Propanenitrile, 2-methyl-]	78-82-0	20,000	0.14
Isopropyl chloroformate [Carbonochloridic acid, 1-methylethyl ester]	108-23-6	15,000	0.10

RMP Toxic Chemicals, Threshold Quantities (TQ) and Toxic Endpoints

Chemical Name	CAS No.	EPA RMP TQ	Toxic Endpoi (mg/L)
Methacrylonitrile [2-Propenenitrile, 2-methyl-]	126-98-7	10,000	0.0027
Methyl chloride [Methane, chloro-]	74-87-3	10,000	0.82
Methyl chloroformate [Carbonochloridic acid, methylester]	79-22-1	5,000	0.0019
Methyl hydrazine [Hydrazine, methyl-]	60-34-4	15,000	0.0094
Methyl isocyanate [Methane, isocyanato-]	624-83-9	10,000	0.0012
Methyl mercaptan [Methanethiol]	74-93-1	10,000	0.049
Methyl thiocyanate [Thiocyanic acid, methyl ester]	556-64-9	20,000	0.085
Methyltrichlorosilane [Silane, trichloromethyl-]	75-79-6	5,000	0.018
Nickel carbonyl	13463-39-3	1,000	0.00067
Nitric acid (conc. 80% or greater)	7697-37-2	15,000	0.026
Nitric oxide [Nitrogen oxide (NO)]	10102-43-9	10,000	0.031
Oleum (Fuming Sulfuric acid) [Sulfuric acid, mixture with sulfur trioxide] \1\	8014-95-7	10,000	0.010

RMP Toxic Chemicals, Threshold Quantities (TQ) and Toxic Endpoints

Chemical Name	CAS No.	EPA RMP TQ	Toxic Endpoint (mg/L)
Peracetic acid [Ethaneperoxoic acid]	79-21-0	10,000	0.0045
Perchloromethylmercaptan [Methanesulfenyl chloride, trichloro-]	594-42-3	10,000	0.0076
Phosgene [Carbonic dichloride]	75-44-5	500	0.00081
Phosphine	7803-51-2	5,000	0.0035
Phosphorus oxychloride [Phosphoryl chloride]	10025-87-3	5,000	0.0030
Phosphorus trichloride [Phosphorous trichloride]	7719-12-2	15,000	0.028
Piperidine	110-89-4	15,000	0.022
Propionitrile [Propanenitrile]	107-12-0	10,000	0.0037
Propyleneimine [Aziridine, 2-methyl-]	75-55-8	10,000	0.12
Propyl chloroformate [Carbonochloridic acid, propylester]	109-61-5	15,000	0.010

RMP Toxic Chemicals, Threshold Quantities (TQ) and Toxic Endpoints

Chemical Name	CAS No.	EPA RMP TQ	Toxic Endpoint (mg/L)
Propylene oxide [Oxirane, methyl-]	75-56-9	10,000	0.59
Sulfur dioxide (anhydrous)	7446-09-5	5,000	0.0078
Sulfur tetrafluoride [Sulfur fluoride (SF₄), (T-4)-]	7783-60-0	2,500	0.0092
Sulfur trioxide	7446-11-9	10,000	0.010
Tetramethyllead [Plumbane, tetramethyl-]	75-74-1	10,000	0.0040
Tetranitromethane [Methane, tetranitro-]	509-14-8	10,000	0.0040
Titanium tetrachloride [Titanium chloride (TiCl₄) (T-4)-]	7550-45-0	2,500	0.020
Toluene 2, 4-diisocyanate [Benzene, 2, 4-diisocyanato-1-methyl-] \1\	584-84-9	10,000	0.0070
Toluene 2, 6-diisocyanate [Benzene, 1, 3-diisocyanato-2-methyl-] \1\	91-08-7	10,000	0.0070
Toluene diisocyanate (unspecified isomer) [Benzene, 1,3-diisocyanatomethyl-] \1\	26471-62-5	10,000	0.0070
Trimethylchlorosilane [Silane, chlorotrimethyl-]	75-77-4	10,000	0.050
Vinyl acetate monomer [Acetic acid ethenyl ester]	108-05-4	15,000	0.26

RMP FLAMMABLE SUBSTANCES AND THRESHOLD QUANTITIES

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

**SECTION 112(r)-RISK
 MANAGEMENT PLAN (RMP)
 FLAMMABLE SUBSTANCES
 (CONT.)**

RMP FLAMMABLE SUBSTANCES AND THRESHOLD QUANTITIES

Chemical Name	CAS No.	EPA RMP TQ
1-Chloropropylene [1-Propene, 1-chloro-]	590-21-6	10,000
Cyanogen [Ethanedinitrile]	460-19-5	10,000
Cyclopropane	75-19-4	10,000
Dichlorosilane [Silane, dichloro-]	4109-96-0	10,000
Difluoroethane [Ethane, 1,1-difluoro-]	75-37-6	10,000
Dimethylamine [Methanamine, N-methyl-]	124-40-3	10,000
2,2-Dimethylpropane [Propane, 2,2-dimethyl-]	463-82-1	10,000
Ethane	74-84-0	10,000
Ethyl acetylene [1-Butyne]	107-00-6	10,000
Ethylamine [Ethanamine]	75-04-7	10,000
Ethyl chloride [Ethane, chloro-]	75-00-3	10,000
Ethylene [Ethene]	74-85-1	10,000
Ethyl ether [Ethane, 1,1'-oxybis-]	60-29-7	10,000

**SECTION 112(r)-RISK
MANAGEMENT PLAN (RMP)
FLAMMABLE SUBSTANCES
(CONT.)**

RMP FLAMMABLE SUBSTANCES AND THRESHOLD QUANTITIES

Chemical Name	CAS No.	EPA RMP TQ
Ethyl mercaptan [Ethanethiol]	75-08-1	10,000
Ethyl nitrite [Nitrous acid, ethyl ester]	109-95-5	10,000
Hydrogen	1333-74-0	10,000
Isobutane [Propane, 2-methyl]	75-28-5	10,000
Isopentane [Butane, 2-methyl-]	78-78-4	10,000
Isoprene [1,3-Butadiene, 2-methyl-]	78-79-5	10,000
Isopropylamine [2-Propanamine]	75-31-0	10,000
Isopropyl chloride [Propane, 2-chloro-]	75-29-6	10,000
Methane	74-82-8	10,000
Methylamine [Methanamine]	74-89-5	10,000
3-Methyl-1-butene	563-45-1	10,000
2-Methyl-1-butene	563-46-2	10,000
Methyl ether [Methane, oxybis-]	115-10-6	10,000

**SECTION 112(g)-RISK
 MANAGEMENT PLAN (RMP)
 FLAMMABLE SUBSTANCES
 (CONT.)**

RMP FLAMMABLE SUBSTANCES AND THRESHOLD QUANTITIES

Chemical Name	CAS No.	EPA RMP TQ
Methyl formate (Formic acid, methyl ester]	107-31-3	10,000
2-Methylpropene [1-Propene, 2-methyl-]	115-11-7	10,000
1,3-Pentadiene	504-60-9	10,000
Pentane	109-66-0	10,000
1-Pentene	109-67-1	10,000
2-Pentene, (E)-	646-04-8	10,000
2-Pentene, (Z)-	627-20-3	10,000
Propadiene [1,2-Propadiene]	463-49-0	10,000
Propane	74-98-6	10,000
Propylene [1-Propene]	115-07-1	10,000
Propyne [1-Propyne]	74-99-7	10,000
Silane	7803-62-5	10,000
Tetrafluoroethylene [Ethene, tetrafluoro-]	116-14-3	10,000

**SECTION 112(g)-RISK
MANAGEMENT PLAN (RMP)
FLAMMABLE SUBSTANCES
(CONT.)**

RMP FLAMMABLE SUBSTANCES AND THRESHOLD QUANTITIES

Chemical Name	CAS No.	EPA RMP TQ
Tetramethylsilane [Silane, tetramethyl-]	75-76-3	10,000
Trichlorosilane [Silane, trichloro-]	10025-78-2	10,000
Trifluorochloroethylene [Ethene, chlorotrifluoro-]	79-38-9	10,000
Trimethylamine [Methanamine, N,N-dimethyl-]	75-50-3	10,000
Vinyl acetylene [1-Buten-3-yne]	689-97-4	10,000
Vinyl chloride [Ethene, chloro-]	75-01-4	10,000
Vinyl ethyl ether [Ethene, ethoxy-]	109-92-2	10,000
Vinyl fluoride [Ethene, fluoro-]	75-02-5	10,000
Vinylidene chloride [Ethene, 1,1-dichloro-]	75-35-4	10,000
Vinylidene fluoride [Ethene, 1,1-difluoro-]	75-38-7	10,000
Vinyl methyl ether [Ethene, methoxy-]	107-25-5	10,000