

MEMORANDUM

SUBJECT: Definition of Regulated Air Pollutant for Purposes of Title V

FROM: Lydia N. Wegman, Deputy Director  
Office of Air Quality Planning and Standards (MD-10)

TO: Air Division Director, Regions I-X

In response to requests for guidance on the definition of "regulated air pollutant," this memorandum clarifies the approach set forth by the definition in the 40 CFR part 70 regulations and indicates the ways in which the class of regulated air pollutants can change. The attachment provides a compilation of the lists of pollutants which are considered "regulated air pollutants" for purposes of the operating permits programs under title V of the Clean Air Act (Act). This memorandum also provides guidance on the Environmental Protection Agency's (EPA) definition of "air pollutant," as that term is used in determining major source status pursuant to section 302 of the Act. Finally, this memorandum emphasizes the ability of permitting authorities to designate certain quantities of emissions of regulated air pollutants as "insignificant" with respect to the obligation to report emissions of those pollutants in permit applications. The policies set out in this memorandum and attachment are intended solely as guidance, not final agency action, and cannot be relied upon to create any rights enforceable by any party.

I. Regulated Air Pollutant

The definition of regulated air pollutant, found at 40 CFR 70.2 is important because it determines which pollutants and emissions units must be addressed in a source's title V permit application. In addition, this definition can affect whether a State's fee revenue is presumed adequate to fund its title V program and in some cases, the amount of permit fees a source must pay. Each of these roles is discussed below.

Once a source is subject to a title V permitting program, its emissions of all regulated air pollutants (except those which

meet the permitting authority's criteria for "insignificant" emissions) must be described in the permit application along with all emissions of pollutants for which the source is considered major. Similarly, applications must describe all emissions units which emit regulated air pollutants (except those deemed insignificant).

In addition, the concept of regulated air pollutant plays an important role in the area of permit fees. First, regulated air pollutants are the starting point for determining which pollutants must be included when relying on the \$25 ton per year (as adjusted by the consumer price index) presumptive minimum program cost as a basis for demonstrating the adequacy of a State's projected fee revenue. As part of this demonstration, the State projects its revenue using a subset of regulated air pollutants [i.e., regulated pollutant (for presumptive fee calculation)]. Second, many States are developing fee schedules which impose fees based on emissions of regulated air pollutants."

The population of regulated air pollutants is composed of the following categories of pollutants:

- (1) Nitrogen oxides (NO<sub>x</sub>) and volatile organic compounds (VOC's). The definition of regulated air pollutant specifically includes these two significant precursors to ozone formation. This approach is consistent with the Act's treatment of VOC's and NO<sub>x</sub> pursuant to part D of title I of the Act. (These ozone precursors are combined with the criteria pollutants for purposes of the attached list of regulated pollutants);
- (2) Any pollutant for which a national ambient air quality standard has been promulgated [i.e., particulate matter (measured as PM-10: particles with an aerodynamic diameter less than or equal to a nominal 10 micrometers), sulfur dioxide, ozone, nitrogen dioxide, carbon monoxide, and lead];
- (3) Any pollutant that is subject to a new source performance standard promulgated under section 111 of the Act [including section 111(d)], which require new and modified sources to satisfy emissions standards, work practice standards, and other requirements;
- (4) Any of the ozone depleting substances specified as a Class I (primarily chlorofluorocarbons) or Class II substance (hydrochlorofluorocarbons) under title VI of the Act [all of which became regulated pollutants when they became subject to standards and requirements for (1) servicing of motor vehicle air conditioners and (2) restrictions on the sale of ozone-depleting substances promulgated into 40 CFR part 82 (57 FR 31242, July 14,

1992)]]; and

(5) Any pollutant subject to a standard promulgated under section 112 or other requirements established under section 112 of the Act, including sections 112(g)(2), (j), and (r) of the Act.

It is important to note that, if a pollutant is regulated for one source category by a standard or other requirement, then the pollutant is considered a regulated air pollutant for all source categories. This rule is relevant to all the pollutants listed under items (3), (4), and (5) above with one exception: those which are the subject of case-by-case MACT determinations under section 112(g)(2).

The issue of when a substance regulated under section 112 becomes a regulated air pollutant merits further discussion:

- When a permitting authority makes a case-by-case MACT determination under section 112(g)(2), then the pollutant for which the determination is made is regulated even though EPA has not issued a standard for that pollutant. However, the pollutant is considered regulated only with respect to the individual source for which the MACT determination was made.
- A pollutant will become regulated under section 112(j) of the Act (the "MACT hammer") if the Administrator fails to promulgate a standard by the date established pursuant to section 112(e) of the Act. Pursuant to section 112(j), permitting authorities will be required to make case-by-case MACT equivalent determinations. The pollutants become regulated nationwide upon the date this provision takes effect for the pollutant (i.e., 18 months after the missed deadline for the standard but not prior to 42 months after the enactment of the Act Amendments of 1990). Pollutants so regulated are considered regulated air pollutants for all sources that emit the pollutant because the hammer provision is a broadly applicable surrogate for the promulgation of a MACT standard. This is in contrast to the section 112(g)(2) determinations which are triggered only for the single source subject to the requirement, rather than nationwide.
- The EPA's proposed rule required by section 112(r)(3), lists substances which could cause or may reasonably be anticipated to cause death, injury, or serious adverse effects to human health or the environment if accidentally released, was published in the Federal Register on January 19, 1993 (58 FR 5102). All of the listed pollutants will become regulated air pollutants upon promulgation of the

list.

The attachment to this memorandum contains a list of pollutants which are regulated as well as a list of pollutants which are subject to regulation under section 112 in the future, as discussed above. It is also important to note that the attached lists are dynamic and subject to change. For example, the EPA is required to review periodically the statutory list of pollutants in section 112(b) and is authorized to delete and add substances if the scientific data demonstrate that such a change is appropriate.

We have attempted to note the likely near-term changes in the regulations that determine which pollutants are "regulated air pollutants," and we will provide updates to this guidance periodically.

The definition of regulated air pollutants does not limit the air pollutants which a State may choose to regulate nor does it limit the information (such as for permit applications) which a State may require of a source. States are free to adopt more expansive approaches to the regulation of toxic air pollutants than is required by part 70.

## II. Definition of "Air Pollutant" Pursuant to Section 302

Considerable interest has been expressed in a related, but distinct, area: the definition of "air pollutant" contained in section 302(g) of the Act. This definition governs which pollutants are to be considered in determining whether a source is "major" pursuant to section 302(j) of the Act. This is important to the operating permit program because all major sources must obtain a title V permit. Although section 302(g) can be read quite broadly, so as to encompass virtually any substance emitted into the atmosphere, EPA believes that it is more consistent with the intent of Congress to interpret this provision more narrowly. Were this not done, a variety of sources that have no known prospect for future regulation under the Act would nonetheless be classified as major sources and be required to apply for title V permits. Of particular concern would be sources of carbon dioxide or methane.

As a result, EPA is interpreting "air pollutant" for section 302(g) purposes as limited to all pollutants subject to regulation under the Act. This would include, of course, all regulated air pollutants plus others specified by the Act or by EPA rulemaking. This approach results in the inclusion of the pollutants on the list of hazardous air pollutants in section

112(b) that are not otherwise regulated. It should be noted that the 1990 Amendments to the Act did include provisions with respect to carbon dioxide (section 821) and methane (section 603), but these requirements involve actions such as reporting and study, not actual control of emissions. Therefore, these provisions do not preempt EPA's discretion to exclude these pollutants in determining whether a source is major. If the results of the studies required by the 1990 Amendments to the Act suggest the need for regulation, these pollutants could be reconsidered at that time for classification as pollutants subject to regulation under the Act.

This approach to interpreting section 302(g) is similar to the traditional practice of the prevention of significant deterioration (PSD) program under part C of title I of the Act [see, e.g., Implementation of North County Resource Recovery PSD Remand, Gerald Emison, Director, OAQPS, dated September 22, 1987].

### III. De Minimis Thresholds

With the 1990 Amendments, the Act expressly addresses a significantly broader range of pollutants. The EPA believes that this will confer real benefits to air quality management and that the title V permit program offers the flexibility for efficient implementation of these requirements. This function includes providing information about emissions of these pollutants, through the permit application process, even if the particular pollutant is not currently required to be controlled at the individual source. The EPA also realizes, though, that in many cases these pollutants are emitted in amounts of no significance to air quality management. It would be unduly burdensome to require permit applicants to quantify all emissions of these pollutants, especially given their considerable number and, in some cases, difficulty in quantification.

The part 70 promulgation recognized this fact but gave only very general guidance as to the approvable options for States in developing their part 70 programs. Section 70.5(c) provides that "[T]he Administrator may approve as part of a State program a list of insignificant activities and emissions levels which need not be included in permit applications." The regulation further provides that "[T]he permitting authority shall require additional information related to the emissions of air pollutants sufficient to verify which requirements are applicable to the source, and other information needed to collect any permit fees owed under the fee schedule approved pursuant to §70.9(b) of this part." §70.5(c)(3)(i).

The EPA understands the need for States to establish de minimis thresholds for emissions reporting purposes in permit applications and recognizes that the particular thresholds selected by individual States can vary based on their air quality management needs and professional judgement. The EPA will work with States to develop part 70 programs that will best meet their program needs.

For further information, call Kirt Cox at (919) 541-5399 or Candace Carraway at (919) 541-3189.

Attachment

cc: Air Branch Chiefs, Regions I - X  
Regional Office Permit Program Contacts  
OAQPS Division Directors

LIST OF REGULATED AIR POLLUTANTS  
(As of April 1993)

I. Pollutants for Which an NAAQS Has Been Established

lead  
sulfur dioxide  
nitrogen dioxide  
carbon monoxide  
particulate matter (PM10)  
ozone, including precursors:  
    nitrogen oxides (NO, NO<sub>2</sub>, NO<sub>3</sub>, N<sub>2</sub>O, N<sub>2</sub>O<sub>3</sub>, N<sub>2</sub>O<sub>4</sub>, N<sub>2</sub>O<sub>5</sub>)  
    volatile organic compounds (VOC's)

As defined in 40 CFR 51.100(s), the term VOC includes any compound of carbon (excluding carbon monoxide, carbon dioxide, carbonic acid, metallic carbides or carbonates, and ammonium carbonate) which participates in atmospheric photochemical reactions. The EPA has developed a list of substances (which is subject to change) which are excluded from the VOC definition because of their negligible reactivity. The EPA's proposal to exclude perchloroethylene from the definition was published in 57 FR 48490 (October 26, 1992).

The following organic compounds are excluded from the definition of VOC because of they have been determined to have negligible photochemical reactivity:

methane

ethane  
 methylene chloride (dichloromethane)  
 1,1,1-trichloroethane (methyl chloroform)  
 1,1,1-trichloro-2,2,2-trifluoroethane (CFC-113)  
 trichlorofluoromethane (CFC-11)  
 dichlorodifluoromethane (CFC-12)  
 chlorodifluoromethane (CFC-22)  
 trifluoromethane (FC-23)  
 1,2-dichloro 1,1,2,2-tetrafluoroethane (CFC-114)  
 chloropentafluoroethane (CFC-115)  
 1,1,1-trifluoro 2,2-dichloroethane (HCFC-123)  
 1,1,1,2-tetrafluoroethane (HFC-134a)  
 1,1-dichloro 1-fluoroethane (HCFC-141b)  
 1-chloro 1,1-difluoroethane (HCFC-142b)  
 2-chloro-1,1,1,2-tetrafluoroethane (HCFC-124)  
 pentafluoroethane (HFC-125)  
 1,1,2,2-tetrafluoroethane (HFC-134)  
 1,1,1-trifluoroethane (HFC-143a)  
 1,1-difluoroethane (HFC-152a)

perfluorocarbon compounds which fall into these classes:

- (i) Cyclic, branched, or linear, completely fluorinated alkanes;
- (ii) Cyclic, branched, or linear, completely fluorinated ethers with no saturations;
- (iii) Cyclic, branched, or linear, completely fluorinated tertiary amines with no saturations;  
and
- (iv) Sulfur containing perfluorocarbons with no saturations and with sulfur bonds only to carbon and fluorine.

## II. Pollutants Regulated Under New Source Performance Standards

Criteria pollutants (including VOC's and NO<sub>x</sub>) plus:

dioxin/furan (defined in 40 CFR 60.53a to mean total tetra through octachlorinated dibenzo-p-dioxins and dibenzofurans)\*  
 fluorides  
 hydrogen chloride\*  
 hydrogen sulfide (H<sub>2</sub>S)  
 sulfuric acid mist

total reduced sulfur  
 reduced sulfur compounds  
 total suspended particulate

\* The new source performance standard (NSPS) for municipal waste combustors (MWC) controls emissions of dioxin/furans and hydrogen chloride gas (40 CFR 60.53a and 60.54a) as surrogates for controlling emissions of organic compounds and acid gases which are emitted in the exhaust gases from MWC units. Thus, the indicated dioxin/furan compounds and hydrogen chloride are regulated pollutants.

Note that the EPA has drafted a proposed revision to the NSPS for MWC's which will regulate substances like cadmium which are not currently regulated air pollutants. As this revised NSPS and other standards are developed, there may be additions to the list of regulated pollutants.

### III. Class I and Class II Substances Under Title VI

#### Class I Substances

carbon tetrachloride  
 chlorofluorocarbon-11 (CFC-11)  
 chlorofluorocarbon-12 (CFC-12)  
 chlorofluorocarbon-13 (CFC-13)  
 chlorofluorocarbon-111 (CFC-111)  
 chlorofluorocarbon-112 (CFC-112)  
 chlorofluorocarbon-113 (CFC-113)  
 chlorofluorocarbon-114 (CFC-114)  
 chlorofluorocarbon-115 (CFC-115)  
 chlorofluorocarbon-211 (CFC-211)  
 chlorofluorocarbon-212 (CFC-212)  
 chlorofluorocarbon-213 (CFC-213)  
 chlorofluorocarbon-214 (CFC-214)  
 chlorofluorocarbon-215 (CFC-215)  
 chlorofluorocarbon-216 (CFC-216)  
 chlorofluorocarbon-217 (CFC-217)  
 halon-1211  
 halon-1301  
 halon-2402  
 methyl chloroform



## Class II Substances

hydrochlorofluorocarbon-21 (HCFC-21)  
hydrochlorofluorocarbon-22 (HCFC-22)  
hydrochlorofluorocarbon-31 (HCFC-31)  
hydrochlorofluorocarbon-121 (HCFC-121)  
hydrochlorofluorocarbon-122 (HCFC-122)  
hydrochlorofluorocarbon-123 (HCFC-123)  
hydrochlorofluorocarbon-124 (HCFC-124)  
hydrochlorofluorocarbon-131 (HCFC-131)  
hydrochlorofluorocarbon-132 (HCFC-132)  
hydrochlorofluorocarbon-133 (HCFC-133)  
hydrochlorofluorocarbon-141 (HCFC-141)  
hydrochlorofluorocarbon-142 (HCFC-142)  
hydrochlorofluorocarbon-221 (HCFC-221)  
hydrochlorofluorocarbon-222 (HCFC-222)  
hydrochlorofluorocarbon-223 (HCFC-223)  
hydrochlorofluorocarbon-224 (HCFC-224)  
hydrochlorofluorocarbon-225 (HCFC-225)  
hydrochlorofluorocarbon-226 (HCFC-226)  
hydrochlorofluorocarbon-231 (HCFC-231)  
hydrochlorofluorocarbon-232 (HCFC-232)  
hydrochlorofluorocarbon-233 (HCFC-233)  
hydrochlorofluorocarbon-234 (HCFC-234)  
hydrochlorofluorocarbon-235 (HCFC-235)  
hydrochlorofluorocarbon-241 (HCFC-241)  
hydrochlorofluorocarbon-242 (HCFC-242)  
hydrochlorofluorocarbon-243 (HCFC-243)  
hydrochlorofluorocarbon-244 (HCFC-244)  
hydrochlorofluorocarbon-251 (HCFC-251)  
hydrochlorofluorocarbon-252 (HCFC-252)  
hydrochlorofluorocarbon-253 (HCFC-253)  
hydrochlorofluorocarbon-261 (HCFC-261)  
hydrochlorofluorocarbon-262 (HCFC-262)  
hydrochlorofluorocarbon-271 (HCFC-271)

IV. Pollutants Regulated Under Section 112

pollutants for which national emission standards for hazardous air pollutants (NESHAP's) have been established:

arsenic  
asbestos  
beryllium  
benzene  
mercury  
radionuclides

vinyl chloride

## POLLUTANTS SUBJECT TO REGULATION UNDER SECTION 112

I. Pollutants listed in Section 112(b):

The 189 pollutants listed in section 112(b) are not considered regulated air pollutants until addressed in a requirement that it be controlled by a source. None of the listed pollutants meets the definition except: asbestos, benzene, and vinyl chloride (for which NESHAP's have been established); and hydrogen chloride (gas), dibenzofurans, and 2,3,7,8-Tetrachlorodibenzo-p-dioxin (regulated under the municipal waste combustor NSPS). Most of the listed pollutants will become regulated when EPA promulgates the Hazardous Organic NESHAP (HON) which is discussed below. The remaining pollutants will become regulated: (1) when EPA promulgates a Maximum Achievable Control Technology (MACT) standard for the pollutant under section 112(d), (2) for a particular source, when case-by-case MACT determinations are made under section 112(g) for the source, or (3) the later of June 15, 1994 or 18 months after EPA fails to issue emissions standards for categories of sources in compliance with the timetable promulgated pursuant to section 112(e) as mandated by Section 112(j).

The section 112(b) list contains some technical errors which will be corrected in subsequent rulemaking. The majority of the technical corrections likely to be made are noted below. Also, the pollutants from the 112(b) list which are addressed in the proposed HON are followed by an asterisk.

CAS number	Chemical name
75070	Acetaldehyde*
60355	Acetamide*
75058	Acetonitrile*
98862	Acetophenone*
53963	2-Acetylaminofluorene*
107028	Acrolein*
79061	Acrylamide*
79107	Acrylic acid*
107131	Acrylonitrile*
107051	Allyl chloride*
92671	4-Aminobiphenyl*
62533	Aniline*
90040	o-Anisidine*
1332214	Asbestos

71432	Benzene (including benzene from gasoline)*	
92875	Benzidine*	
98077	Benzotrichloride*	
100447	Benzyl chloride*	
92524	Biphenyl*	
117817	Bis(2-ethylhexyl)phthalate (DEHP)*	
542881	Bis(chloromethyl)ether*	
75252	Bromoform*	
106990	1,3-Butadiene*	
156627	Calcium cyanamide	
105602	Caprolactam*	
133062	Captan	
63252	Carbaryl	
75150	Carbon disulfide*	
56235	Carbon tetrachloride*	
463581	Carbonyl sulfide*	
120809	Catechol*	
133904	Chloramben	
57749	Chlordane	
7782505	Chlorine	
79118	Chloroacetic acid*	
532274	2-Chloroacetophenone*	
108907	Chlorobenzene*	
510156	Chlorobenzilate	
67663	Chloroform*	
107302	Chloromethyl methyl ether*	
126998	Chloroprene*	
1319773	Cresols/Cresylic acid (isomers and mixture)*	
95487	o-Cresol*	
108394	m-Cresol*	
106445	p-Cresol*	
98828	Cumene*	
94757	2,4-D (2,4-Dichlorophenoxyacetic acid, including salts and esters)*	
	DDE* [recommended technical correction: CAS number 72559] (1,1-dichloro-2,2-bis(p-chlorophenyl)ethylene)	
334883	Diazomethane*	
132649	Dibenzofurans* [recommended technical correction: Dibenzofuran]	
	96128	1,2-Dibromo-3-chloropropane*
	84742	Dibutylphthalate*
	106467	1,4-Dichlorobenzene(p)*
[recommended technical		correction: 1,4-
Dichlorobenzene]	91941	
3,3-Dichlorobenzidine* [recommended technical		
correction: 3,3'-Dichlorobenzidine]		111444
Dichloroethyl ether (Bis(2-chloroethyl)ether)*		542756
1,3-Dichloropropene*		62737

Dichlorvos		111422
Diethanolamine*		121697
N,N-Diethyl aniline (N,N-Dimethylaniline)*		
[recommended technical correction:		
N,N-Dimethylaniline]		
64675	Diethyl sulfate*	
119904	3,3-Dimethoxybenzidine* [recommended technical	
	correction: 3,3'-Dimethoxybenzidine]	
60117	Dimethyl aminoazobenzene*	
119937	3,3',-Dimethyl benzidine* [recommended	
technical	correction: 3,3',-Dimethylbenzidine]	
79447	Dimethyl carbamoyl chloride*	
[recommended	technical correction:	
Dimethylcarbamoyl chloride]	68122	Dimethyl formamide*
[recommended technical		correction: N,N-
Dimethylformamide]	57147	1,1-Dimethyl
hydrazine* [recommended technical		correction: 1,1-
Dimethylhydrazine]	131113	Dimethyl
phthalate*	77781	
Dimethyl sulfate*		
4,6-Dinitro-o-cresol, and salts* [recommended		
technical correction to remove CAS number]		
51285	2,4-Dinitrophenol*	
121142	2,4-Dinitrotoluene*	
123911	1,4-Dioxane (1,4-Diethyleneoxide)*	
122667	1,2-Diphenylhydrazine*	
106898	Epichlorohydrin (1-Chloro-2,3-epoxypropane)*	
106887	1,2-Epoxybutane*	
140885	Ethyl acrylate*	
100414	Ethyl benzene* [recommended technical correction:	
	Ethylbenzene]	
	51796	Ethyl carbamate (Urethane)*
	75003	Ethyl chloride (Chloroethane)*
	106934	Ethylene dibromide
(Dibromoethane)*	107062	Ethylene
dichloride (1,2-Dichloroethane)*	107211	
Ethylene glycol*		151564
Ethylene imine (Aziridine) [recommended technical		
correction: Ethyleneimine (Aziridine)]		75218
Ethylene oxide*		96457
Ethylene thiourea*		75343
Ethylidene dichloride (1,1-Dichloroethane)*		50000
Formaldehyde*		76448
Heptachlor		118741
Hexachlorobenzene*		87683
Hexachlorobutadiene*		77474
Hexachlorocyclopentadiene		67721
Hexachloroethane*		822060
Hexamethylene-1,6-diisocyanate*		680319

Hexamethylphosphoramide*	110543
Hexane*	302012
Hydrazine*	7647010
Hydrochloric acid [recommended technical correction: Hydrochloric acid (hydrogen chloride)(gas only)]	7664393
Hydrogen fluoride (Hydrofluoric acid)	123319
Hydroquinone*	78591
Isophorone*	
Lindane (all isomers) [Recommended technical correction: 1,2,3,4,5,6-Hexachlorocyclohexane (all stereo isomers, including lindane)]	108316
Maleic anhydride*	67561
Methanol*	72435
Methoxychlor	74839
Methyl bromide (Bromomethane)*	74873
Methyl chloride (Chloromethane)*	71556
Methyl chloroform (1,1,1-Trichloroethane)*	78933
Methyl ethyl ketone (2-Butanone)*	60344
Methyl hydrazine* [recommended technical correction: Methylhydrazine]	74884
Methyl iodide (Iodomethane)*	108101
Methyl isobutyl ketone (Hexone)*	624839
Methyl isocyanate*	80626
Methyl methacrylate*	1634044
Methyl tert butyl ether* [recommended technical correction: Methyl tert-butyl ether]	101144
4,4-Methylene bis(2-chloroaniline)* [recommended technical correction: 4,4'-Methylenebis(2- chloroaniline]	
75092	Methylene chloride (Dichloromethane)*
101688	Methylene diphenyl diisocyanate (MDI)* [recommended technical correction: 4-4' Methylenediphenyl diisocyanate (MDI)]
101779	4,4,-Methylenedianiline*
91203	Naphthalene*
98953	Nitrobenzene*
92933	4-Nitrobiphenyl*
100027	4-Nitrophenol*
79469	2-Nitropropane*
684935	N-Nitroso-N-methylurea*
62759	N-Nitrosodimethylamine*
59892	N-Nitrosomorpholine*
56382	Parathion
82688	Pentachloronitrobenzene (Quintobenzene)
87865	Pentachlorophenol
108952	Phenol*
106503	p-Phenylenediamine*
75445	Phosgene*

7803512	Phosphine
7723140	Phosphorus
85449	Phthalic anhydride*
1336363	Polychlorinated biphenyls (Aroclors)*
1120714	1,3-Propane sultone*
57578	beta-Propiolactone*
123386	Propionaldehyde*
114261	Propoxur (Baygon)*
78875	Propylene dichloride (1,2-Dichloropropane)*
75569	Propylene oxide*
75558	1,2-Propylenimine (2-Methyl aziridine)*
91225	Quinoline
106514	Quinone*
100425	Styrene*
96093	Styrene oxide*
1746016	2,3,7,8-Tetrachlorodibenzo-p-dioxin*
79345	1,1,2,2-Tetrachloroethane*
127184	Tetrachloroethylene (Perchloroethylene)*
7550450	Titanium tetrachloride
108883	Toluene*
95807	2,4-Toluene diamine* [recommended technical correction: 2,4-Toluenediamine]
584849	2,4-Toluene diisocyanate*
95534	o-Toluidine*
8001352	Toxaphene (chlorinated camphene)
120821	1,2,4-Trichlorobenzene*
79005	1,1,2-Trichloroethane*
79016	Trichloroethylene*
95954	2,4,5-Trichlorophenol*
88062	2,4,6-Trichlorophenol*
121448	Triethylamine*
1582098	Trifluralin*
540841	2,2,4-Trimethylpentane*
108054	Vinyl acetate*
593602	Vinyl bromide*
75014	Vinyl chloride*
75354	Vinylidene chloride (1,1-Dichloroethylene)*
1330207	Xylenes (isomers and mixture)*
95476	o-Xylenes* [recommended technical correction:
	o-Xylene
108383	m-Xylenes* [recommended technical correction: m-Xylene]
106423	p-Xylenes* [recommended technical correction: p-Xylene]
0	Antimony Compounds
0	Arsenic Compounds (inorganic including arsine)
0	Beryllium Compounds
0	Cadmium Compounds

0 Chromium Compounds  
 0 Cobalt Compounds  
 0 Coke Oven Emissions  
 0 Cyanide Compounds [1]  
 0 Glycol ethers\* [2]  
 0 Lead Compounds  
 0 Manganese Compounds  
 0 Mercury Compounds  
 0 Fine mineral fibers [3]  
 0 Nickel Compounds  
 0 Polycyclic Organic Matter [4]\* [recommended  
     technical correction: Polycyclic Organic  
 Matter]  
 0 Radionuclides (including radon) [5]  
 0 Selenium Compounds

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

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

2 Includes mono- and di- ethers of ethylene glycol, diethylene glycol, and triethylene glycol R-(OCH<sub>2</sub>CH<sub>2</sub>)<sub>n</sub>-OR' where

n = 1, 2, or 3

R = alkyl or aryl groups

R' = R, H, or groups which, when removed, yield glycol ethers with the structure: R-(OCH<sub>2</sub>CH)<sub>n</sub>-OH.\* [recommended technical correction: R-(OCH<sub>2</sub>CH<sub>2</sub>)<sub>n</sub>-OH] Polymers are excluded from the glycol category.

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

4 Includes organic compounds with more than one benzene ring, and which have a boiling point greater than or equal to 100°C.\* [recommended technical correction: Limited to, or refers to, products from incomplete combustion of organic compounds (or material) and pyrolysis processes having more than one benzene ring, and which have a boiling point greater than or equal to 100°C.]



5 A type of atom which spontaneously undergoes radioactive decay.

## II. Pollutants subject to the Hazardous Organic NESHAP (HON):

As part of the effort to regulate pollutants listed in section 112(b), the EPA has developed the (HON) which will apply to the synthetic organic chemical manufacturing industry and will control emissions of 149 volatile hazardous air pollutants (HAP's). All of the pollutants listed in the HON are among the 189 HAP's listed in section 112(b) and are identified (with an asterisk) in the preceding section of this document. Pollutants addressed by the HON will become regulated on the effective date specified in the HON.

## III. Pollutants listed under Section 112(r):

Section 112(r)(3) requires that EPA promulgate an initial list of at least 100 substances with threshold quantities which would cause or may reasonably be anticipated to cause death, injury, or serious adverse effects to human health or the environment if accidentally released. The EPA's proposed rule to implement 112(r)(3) was published in the Federal Register on January 19, 1993 (58 FR 5102). The proposed list of substances includes 100 acutely toxic substances, 62 flammable gases and volatile flammable liquids, and commercial explosives (classified by the Department of Transportation in Division 1.1). The listed pollutants will become "regulated" for purposes of title V upon final promulgation of the list.

The toxic and flammable substances listed in the proposed rule are arranged alphabetically and by CAS number on the attached lists.

---

### NOTICE

The policies set out in this guidance document are intended solely as guidance and do not represent final agency action and are not ripe for judicial review. They are not intended, nor can they be relied upon, to create any rights enforceable by any party in litigation with the United States. The EPA officials may decide to follow the guidance provided in this guidance document, or to act at variance

with the guidance, based on an analysis of specific circumstances. The EPA may also change this guidance at any time without public notice.