

APPENDIX A

SUBSTANCES TO BE INVENTORIED

A-I

LIST OF SUBSTANCES FOR WHICH EMISSIONS MUST BE QUANTIFIED

A-II

LIST OF SUBSTANCES FOR WHICH PRODUCTION, USE,
OR OTHER PRESENCE MUST BE REPORTED

SOME COLUMNS HAVE BEEN REORDERED

FOOTNOTES HAVE BEEN MOVED TO THE NEW NOTES SECTION AT THE END OF THE APPENDIX

APPENDIX A-1
Substances For Which Emissions Must Be Quantified

Substance Name (Note [2])	Add Date (Note [3])	Carcinogen (Note [4])	Applicable Degree of Accuracy (Note [5])	Source List(s) (Note [6])	Other Notes(s)
75070 Acetaldehyde		c	100	1 2 3 4	
60355 Acetamide		c	100	1 2 3 4	
67641 Acetone	06/91		100	1 2 3 4	
75058 Acetonitrile	06/91		100	1 2 3 4	
98862 Acetophenone	06/91		100	1 2 3 4	
53963 2-Acetylamino fluorene [PAH-Derivative, POM]		c	100	1 2 3 4 5	
107028 Acrolein			10	1 2 3 4	
79061 Acrylamide		c	100	1 2 3 4	
79107 Acrylic acid	06/91		100	1 2 3 4	
107131 Acrylonitrile		c	100	1 2 3 4 5	
107051 Allyl chloride		c	100	1 2 3 4	
7429905 Aluminum	06/91		100	1 2 3 4	
1344281 Aluminum oxide (fibrous forms)	06/91		100	1 2 3 4	
117793 2-Aminoanthraquinone [PAH-Derivative, POM]		c	100	1 2 3 4 5	
92671 4-Aminobiphenyl [POM]		c	100	1 2 3 4 5	
61825 Anilrole		c	100	1 2 3 4	
7664417 Ammonia			100	1 2	
6484522 Ammonium nitrate	06/91		100	1 2	
7783202 Ammonium sulfate	06/91		100	1 2	
62533 Aniline	09/90	c	100	1 2 3 4 5	
90040 o-Anisidine		c	100	1 2 3 4 5	
7440360 Anthracene [PAH, POM], (see PAH)	06/91		100	1 2	
Antimony compounds #	06/91		100	1 2	
including but not limited to:					
1309644 Antimony trioxide	09/90	c	100	1 2 3 4 5	
7440382 Arsenic		c	1	1 2 3 4 5	
Arsenic compounds (inorganic) #		c	1	1 2 3 4 5	
including but not limited to:					
7784421 Arsenic			10	1 2	
Arsenic compounds (other than inorganic) #	06/91		100	1 2	
Barium	06/91		100	1 2	
Barium compounds #	06/91		100	1 2	
Benz[a]anthracene [PAH, POM], (see PAH)					
Benzene		c	10	1 2 3 4 5	
71432 Benzidine (and its salts) [POM]		c	10	1 2 3 4 5	
92875 Benzidine-based dyes [POM]		c	10	1 2 3 4 5	
# 1020 including but not limited to:					
1937377 Direct Black 38 [PAH-Derivative, POM]		c	10	1 2 3 4 5	
2602462 Direct Blue 6 [PAH-Derivative, POM]		c	10	1 2 3 4 5	
16071866 Direct Brown 95 (technical grade) [POM]	09/89	c	10	1 2 3 4 5	
Benzo[a]pyrene [PAH, POM], (see PAH)		c			
Benzo[b]fluoranthene [PAH, POM], (see PAH)		c			
271896 Benzofuran	06/91	c	100	1 2 3 4 5	
98077 Benzoic trichloride {Benzotrachloride}		c	10	1 2 3 4 5	

Substances For Which Emissions Must Be Quantified (cont.)

PAH MAPP#/ Emission ID (Note [1])	Substance Name (Note [2])	Substance MAPP# YY	Add Date (Note [3])	Carcinogen (Note [4])	Applicable Degree of Accuracy (lbs/yr) (Note [5])	Source List(s) (Note [6])	Other Notes(s)
-	Benzo[j]fluoranthene [PAH, POM]. (see PAH)						
98884	Benzo[k]fluoranthene [PAH, POM]. (see PAH)		06/91		100	1	
94360	Benzoyl chloride		06/91		100	1	
100447	Benzoyl peroxide			c	10	1 2 3 4 5	
7440417	Benzyl chloride			c	1	1 2 3 4 5	
*	Beryllium compounds #			c	1	1 2 3 4 5	
92524	Biphenyl [POM]		09/89		100	1 2 3 4 5	
111444	Bis(2-chloroethyl) ether {DCEE}		06/91		100	1 2 3 4 5	
542881	Bis(chloromethyl) ether		09/89	c	100	1 2 3 4 5	
103231	Bis(2-ethylhexyl) adipate			c	100	1 2 3 4 5	
7726956	Bromine		06/91		100	1	
*	Bromine compounds (inorganic) #				100	1 2	[7]
	Including but not limited to:						
7758012	Potassium bromate				100	1 2	[7]
75252	Bromoform		06/91		100	1 2 3 4 5	
106990	1,3-Butadiene			c	10	1 2 3 4 5	
141322	Butyl acrylate		06/91		100	1 2 3 4 5	
71363	n-Butyl alcohol		06/91		100	1 2 3 4 5	
78922	sec-Butyl alcohol		06/91		100	1 2 3 4 5	
75650	tert-Butyl alcohol		06/91		100	1 2 3 4 5	
85687	Butyl benzyl phthalate		06/91		100	1 2 3 4 5	
7440439	Cadmium			c	1	1 2 3 4 5	
*	Cadmium compounds #			c	1	1 2 3 4 5	
156627	Calcium cyanamide		06/91		100	1 2 3 4 5	
105602	Caprolactam		06/91		100	1 2 3 4 5	
2425061	Captafol		09/89	c	100	1 2 3 4 5	
133062	Captan		09/90	c	100	1 2 3 4 5	
63252	Carbaryl [PAH-Derivative, POM]		06/91	c	100	1 2 3 4 5	
# 1050	Carbon black extracts			c	100	1 2 3 4 5	
75150	Carbon disulfide		09/89	c	100	1 2 3 4 5	
56235	Carbon tetrachloride		09/89	c	100	1 2 3 4 5	
463581	Carbonyl sulfide		06/91	c	100	1 2 3 4 5	
# 1055	Carrageenan (degraded)			c	100	1 2 3 4 5	
120809	Catechol		06/91	c	100	1 2 3 4 5	
133904	Chloramben		06/91	c	100	1 2 3 4 5	
56757	Chloramphenicol		06/91	c	100	1 2 3 4 5	
57749	Chlordane		09/89	c	10	1 2 3 4 5	
108171262	Chlorinated paraffins (average chain length, C12; approximately 60% chlorine by weight)		09/89	c	100	1 2 3 4 5	
7782505	Chlorine				10	1 2	
10049044	Chlorine dioxide		06/91		100	1 2	
79118	Chloroacetic acid		06/91		100	1 2	
532274	2-Chloroacetophenone		06/91		100	1 2	

Substances For Which Emissions Must Be Quantified (cont.)

QAS Method/ Emission ID (Note [1])	Substance Name (Note [2])	SP# MS# YY	Add Date (Note [3])	SP# MS# YY	Carcinogen Accuracy (lbs/yr) (Note [4])	Applicable Degree of Accuracy (lbs/yr) (Note [5])	Source List(s) (Note [6])	Other Notes(s)
# 1058	Chlorobenzenes		06/91			100	1	
	Including but not limited to:							
108907	Chlorobenzene					100	1 2	
25321228	Dichlorobenzenes (mixed isomers)		06/91			100	1	7
	Including:							
95501	1,2-Dichlorobenzene		06/91			100	1	7
541731	1,3-Dichlorobenzene		06/91			100	1	7
106467	p-Dichlorobenzene {1,4-Dichlorobenzene}			c		100	1 2 3 5	
120921	1,2,4-Trichlorobenzene		06/91			100	1 2	
510156	Chlorobenzilate [POM] {Ethyl-4,4'- dichlorobenzilate}		09/90		c	100	1 2 4	
13909096	1-(2-Chloroethyl)-3-(4-methylcyclohexyl)-1- nitrosourea {Methyl CCNU}			c		100	3	
67663	Chloroform					10	1 2 3 4 5	
107302	Chloromethyl methyl ether (technical grade)			c		100	1 2 4 5	
# 1060	Chlorophenols					100	1	
	Including but not limited to:							
120832	2,4-Dichlorophenol		06/91		c	100	1	7
87865	Pentachlorophenol		09/90		c	100	1 2 4	
85954	2,4,5-Trichlorophenol		06/91		c	100	1 2	
88062	2,4,6-Trichlorophenol			c		100	1 2	
95830	4-Chloro-o-phenylenediamine			c		100	3 4 5	
76062	Chloropierin					10	1 2	7
126998	Chloroprene					100	1 2	
95692	p-Chloro-o-toluidine		06/91		c	100	3 4	
7440473	Chromium		06/91			100	1 2 3 4 5	7
18540299	* Chromium compounds (other than hexavalent) # Chromium, hexavalent (and compounds) # Including but not limited to:			c		.1	1 2 3 4 5	7
10294403	Barium chromate		06/91		c	.1	1 2 3 4 5	7
13765190	Calcium chromate		06/91		c	.1	1 2 3 4 5	7
1333820	Chromium trioxide		06/91		c	.1	1 2 3 4 5	7
7758976	Lead chromate		06/91		c	.1	1 2 3 4 5	7
10588019	Sodium dichromate		06/91		c	.1	1 2 3 4 5	7
7789062	Strontium chromate		06/91		c	.1	1 2 3 4 5	7
7440484	Chrysene [PAH, POM], (see PAH)					100		
	Cobalt		06/91			100		
	Cobalt compounds #		06/91		c	100	1 2 3 4 5	7
# 1066	Coke oven emissions					100	1 2	
7440508	Copper					100	1 2	
	Copper compounds #		09/89		c	100	3 4 5	7
# 1070	Creosotes					100	1	
120716	p-Cresidine				c	100	3 4 5	

Substances For Which Emissions Must Be Quantified (cont.)

249 MMSA/ Emitting ID (Note [1])	Substance Name (Note [2])	Substance ID (Note [3])	Add Date (Note [4])	Carcinogen (Note [5])	Applicable Degree of Accuracy (lbs/yr) (Note [6])	Source List(s) (Note [7])	Other Notes(s)
1319773	Cresols (mixtures of) {Cresylic acid} Including:				100	1 2	
108394	m-Cresol		06/91		100	1 2	
95487	o-Cresol		06/91		100	1 2	
106445	p-Cresol		06/91		100	1 2	
98828	Cumene		06/91		100	1 2	
80159	Cumene hydroperoxide		06/91		100	1 2	
135206	Cupferron		06/91	c	100	4 5	
✓ 1073	Cyanide compounds ~~✓~~ Including but not limited to:		06/91		100	1 2	[8]
74908	Hydrocyanic acid				10	2	
110827	Cyclohexane		06/91		100	1	
66819	Cycloheximide		06/91		100	6	
1163195	Decabromodiphenyl oxide [POM]		06/91		100	1 2	
✓ 1075	Dialkylnitrosamines Including but not limited to:				100	1	
924163	N-Nitrosodi-n-butylamine			c	1	1 2	
1116547	N-Nitrosodimethylamine			c	100	1 2	
55185	N-Nitrosodipropylamine			c	1	1 2	
62759	N-Nitrosodimethylamine			c	100	1 2	
1621647	N-Nitrosodi-n-propylamine			c	100	1 2	
10595956	N-Nitrosomethylethylamine			c	100	1 2	
615054	2,4-Diaminobenzene		09/90	c	100	1 2	
✓ 1078	Diaminobenzenes (mixed isomers) Including but not limited to:				100	1 2	
95807	2,4-Diaminotoluene {2,4-Toluenediamine}		06/91	c	100	1 2	
334883	Diazomethane			c	100	1 2	
226368	Dibenz[a,h]acridine [POM]			c	100	1 2	
224420	Dibenz[a,i]acridine [POM]			c	100	1 2	
194592	Dibenz[a,h]anthracene [PAH, POM], (see PAH)			c	100	1 2	
-	7H-Dibenz[a,g]carbazole						
-	Dibenzo[a,e]pyrene [PAH, POM], (see PAH)						
-	Dibenzo[a,h]pyrene [PAH, POM], (see PAH)						
-	Dibenzo[a,i]pyrene [PAH, POM], (see PAH)						
-	Dibenzo[a,j]pyrene [PAH, POM], (see PAH)						
132649	Dibenzofuran [POM]		06/91		100	1 2	
-	Dibenzofurans (chlorinated) (see Polychlorinated dibenzofurans) [POM]						
96128	1,2-Dibromo-3-chloropropane {DBCP}		06/91	c	100	1 2	
84742	Dibutyl phthalate				100	1 2	
-	p-Dichlorobenzene {1,4-Dichlorobenzene} (see Chlorobenzenes)						
91941	3,3'-Dichlorobenzidine [POM]			c	10	1 2	
72559	Dichlorodiphenyldichloroethylene {DDE} [POM]		09/89	c	100	1 2	
75343	1,1-Dichloroethane {Ethylidene dichloride}		09/90	c	100	1 2	

Substances For Which Emissions Must Be Quantified (cont.)

QAS Method Emitting ID (Note [1])	Substance Name (Note [2])	SPM Mg/Yr Add Date (Note [3])	SPM Mg/Yr X Carcinogen (Note [4])	Applicable Degree of Accuracy (lbs/yr) (Note [5])	Source List(s) (Note [6])	Other Notes(s)
94757	Dichlorophenoxyacetic acid, salts and esters {2,4-D}	06/91		100	1 2	
78875	1,2-Dichloropropane {Propylene dichloride}	09/90	c	100	1 2	
542756	1,3-Dichloropropane	09/89	c	10	4 5	
62737	Dichloroethane {DDVP}	06/91	c	100	1 2 3 4	
115322	Dicofol [POM]	09/90	c	100	1 2	
9901	Diesel engine exhaust	09/90	c	100	3 4	[9]
9902	Diesel engine exhaust, particulate matter	09/90	c	100	3 4	[9]
111422	Diesel fuel (marine)	06/91	c	100	3 4	[9]
117817	Dioethanolamine	06/91	c	100	3 4	
64675	Di(2-ethylhexyl) phthalate {DEHP}		c	100	2 3 4 5	
118904	Diethyl sulfate		c	100	2 3 4 5	
60117	3,3'-Dimethoxybenzidine [POM]		c	100	2 3 4 5	
121697	4-Dimethylaminobenzene [POM]		c	100	2 3 4 5	
57976	N,N-Dimethylaniline	06/91	c	100	2 3 4	
119337	7,12-Dimethylbenz[a]anthracene [PAH-Derivative, POM]	09/90	c	1	1 2	
79447	3,3'-Dimethylbenzidine {o-Tolidine} [POM]		c	10	4 5	
68122	Dimethyl carbamoyl chloride		c	100	2 3 4 5	
57147	Dimethyl formamide	09/90	c	100	2 3 4 5	
131113	1,1-Dimethylhydrazine	06/91	c	100	2 3 4 5	
77781	Dimethyl phthalate		c	100	2 3 4 5	
534521	Dimethyl sulfate		c	100	2 3 4 5	
51285	4,6-Dinitro-o-cresol (and salts)	06/91		100	2 3 4 5	
42397648	2,4-Dinitrophenol	06/91		100	2 3 4 5	
42397659	1,6-Dinitropyrene [PAH-Derivative, POM]	06/91	c	100	2 3 4 5	
25321146	1,8-Dinitropyrene [PAH-Derivative, POM]	06/91	c	100	2 3 4 5	
	Dinitrotoluenes (mixed isomers) Including but not limited to:	06/91	c	100	2 3 4 5	
121142	2,4-Dinitrotoluene	09/89	c	100	2 3 4 5	
606202	2,6-Dinitrotoluene	06/91	c	100	2 3 4 5	
123911	1,4-Dioxane		c	100	2 3 4 5	
	Dioxins (Chlorinated dibenzodioxins) (see Polychlorinated dibenzo-p-dioxins) [POM]					
630933	Diphenylhydantoin [POM]		c	100	2 3 4 5	
122667	1,2-Diphenylhydrazine {Hydrazobenzene} [POM]		c	100	2 3 4 5	
106898	Environmental Tobacco Smoke		c	100	2 3 4 5	
106887	Epichlorohydrin	06/91	c	100	2 3 4 5	
1091	1,2-Epoxybutane	09/89	c	100	2 3 4 5	
140885	Epoxy resins		c	100	2 3 4 5	
100414	Ethyl acrylate	06/91	c	100	2 3 4 5	
75063	Ethyl benzene			100	2 3 4 5	
	Ethyl chloride {Chloroethane}			100	2 3 4 5	
74851	Ethyl-4,4'-dichlorobenzilate (see Chlorobenzilate)	06/91		100	2 3 4 5	

Substances For Which Emissions Must Be Quantified (cont.)

Substance Name (Note [2])	Add Date (Note [3])	Carcinogen (Note [4])	Applicable Degree of Accuracy (lbs/yr) (Note [5])	Source List(s) (Note [6])	Other Notes(s)
106934 Ethylene dibromide {1,2-Dibromoethane}		C	1	1 3 4 5 6	
107062 Ethylene dichloride {1,2-Dichloroethane}		C	10	1 2 3 4 5	
107211 Ethylene glycol	06/91		100	1 2 3 4 5	
151564 Ethylenimine {Aziridine}	06/91		100	1 2 3 4 5 6	
75218 Ethylene oxide		C	10	1 2 3 4 5	
96457 Ethylene thiourea		C	100	1 2 3 4 5	
1101 Fluorides and compounds including but not limited to:	09/89		100	1 2 3 4 5	
7664393 Hydrogen fluoride			10	1 2 3 4 5 6	
1103 Fluorocarbons (brominated)			100	1 2 3 4 5 6	
1104 Fluorocarbons (chlorinated)			100	1 2 3 4 5 6	
Including but not limited to:					
76131 Chlorinated fluorocarbon {CFC-113}			100	1 2 3 4 5 6	
50000 Formaldehyde	09/90	C	100	1 2 3 4 5 6	
Gasoline engine exhaust		C	100	1 2 3 4 5 6	
Including but not limited to:					
Gasoline engine exhaust (condensates & extracts)	06/91	C	100	1 2 3 4 5 6	
Gasoline engine exhaust, particulate matter	09/90	C	100	1 2 3 4 5 6	
Gasoline engine exhaust, total organic gas	09/90	C	100	1 2 3 4 5 6	
Gasoline vapors		C	100	1 2 3 4 5 6	
Glutaraldehyde			100	1 2 3 4 5 6	
Glycol ethers and their acetates including but not limited to:					
111468 Diethylene glycol	09/90		100	1 2 3 4 5 6	
111966 Diethylene glycol dimethyl ether	09/90		100	1 2 3 4 5 6	
112345 Diethylene glycol monobutyl ether	09/90		100	1 2 3 4 5 6	
111900 Diethylene glycol monoethyl ether	09/90		100	1 2 3 4 5 6	
111773 Diethylene glycol monomethyl ether	09/90		100	1 2 3 4 5 6	
25265718 Dipropylene glycol	09/90		100	1 2 3 4 5 6	
34590948 Dipropylene glycol monomethyl ether	09/90		100	1 2 3 4 5 6	
629141 Ethylene glycol diethyl ether	09/90		100	1 2 3 4 5 6	
110714 Ethylene glycol dimethyl ether	09/90		100	1 2 3 4 5 6	
111762 Ethylene glycol monobutyl ether	09/90		100	1 2 3 4 5 6	
110805 Ethylene glycol monoethyl ether	09/89		100	1 2 3 4 5 6	
111159 Ethylene glycol monoethyl ether acetate	09/89		100	1 2 3 4 5 6	
109884 Ethylene glycol monomethyl ether	09/89		100	1 2 3 4 5 6	
110496 Ethylene glycol monomethyl ether acetate	09/90		100	1 2 3 4 5 6	
2807399 Ethylene glycol monopropyl ether	09/90		100	1 2 3 4 5 6	
107982 Propylene glycol monomethyl ether	09/90		100	1 2 3 4 5 6	
108656 Propylene glycol monomethyl ether acetate	09/90		100	1 2 3 4 5 6	
112492 Triethylene glycol dimethyl ether	09/90		100	1 2 3 4 5 6	
126078 Griseofulvin		C	100	1 2 3 4 5 6	
76448 Heptachlor	09/89	C	100	1 2 3 4 5 6	
118741 Hexachlorobenzene		C	1	1 2 3 4 5	
87683 Hexachlorobutadiene	06/91		100	1 2 3 4 5	

Emittent ID
915 NY6667

Substance Name (Note [2])	Add Date (Note [3])	Carcinogen (Note [4])	Degree of Accuracy (Note [5])	Source List(s) (Note [6])	Other Notes(s)
Hexachlorocyclohexanes		C	1	1 3 4 5	
Including but not limited to:					
Lindane	09/90	C	1	1 2 4	
Hexachlorocyclopentadiene			100	1 2 4	
Hexachloroethane	09/90	C	100	1 2 3 4 5	
Hexamethylphosphoramide			100	1 2 3 4 5	
Hexane	08/91	C	100	1 2 3 4 5	
Hydrazine			100	1 2	
Hydrochloric acid			100	1 2	
Hydrocyanic acid (see Cyanide compounds #)			100	1 2	
Hydrogen sulfide	08/91		100	1 2	
Hydroquinone			100		
Indeno[1,2,3-cd]pyrene [PAH, POM], (see PAH)			100		
Isocyanates			100		6
Including but not limited to:					
Hexamethylene-1,6-diisocyanate	08/91		100	1 2	
Methylene diphenyl diisocyanate {MDI} [POM]	08/91		100	1 2	
Methyl isocyanate			100	1 2	
Toluene-2,4-diisocyanate (see Toluene diisocyanates)					
Toluene-2,6-diisocyanate (see Toluene diisocyanates)					
Isophorone	08/91		100	1 2	
Isopropyl alcohol	06/91		100	1 2	
4,4'-Isopropylidenediphenol [POM]	06/91		100	1 2	
Lead		C	10	1 3 4 5 6	[7]
Lead compounds (inorganic) #		C	10		
Including but not limited to:					
Lead acetate			10	1 2 4 5	[7] [12]
Lead chromate (see Chromium, hexavalent)			10	1 2 4 5	[7] [12]
Lead phosphate			10	1 2 4 5	[7] [12]
Lead subacetate	09/90	C	10	1 2 4	[7] [12]
Lead compounds (other than inorganic) #	06/91	C	10	1 2	[7] [12]
~~Lead compounds (other than inorganic) #~~					
~~Lead compounds (other than inorganic) #~~					
~~Lead compounds (other than inorganic) #~~					
~~Lead compounds (other than inorganic) #~~					
~~Lead compounds (other than inorganic) #~~					
Maleic anhydride	09/90	#	10	1 2	
Manganese			100	1 2	
Manganese compounds #	09/89		100	1 2	
Mercury			100	1 2	
Manganese compounds #	09/89		10	4 4	[7]
Mercury compounds #			10	4 4	[7]
Including but not limited to:					
Mercuric chloride			10	2 2	[7]
Methyl mercury {Dimethylmercury}			10	2 2	[7]
Methanol			100	1 2	[7]

Substances For Which Emissions Must Be Quantified (cont.)

Substance Name (Note [2])	Add Date (Note [3])	Carcinogen (Note [4])	Applicable Degree of Accuracy (lbs/yr) (Note [5])	Source List(s) (Note [6])	Other Notes(s)
Methoxychlor [POM]	06/91		100	1 2	
2-Methylaziridine {1,2-Propyleneimine}			100	1 2	
Methyl bromide {Bromomethane}		c	100	1 2	
Methyl chloride {Chloromethane}	06/91		100	1 2	6
Methyl chloroform {1,1,1-Trichloroethane}			100	1 2	
3-Methylcholanthrene [PAH-Derivative, POM]	09/90	c	1	1 2	6
5-Methylchrysene [PAH-Derivative, POM]		c	100	1 2	
4,4'-Methylene bis(2-chloroaniline) {MOCA} [POM]		c	100	1 2	
Methylene chloride {Dichloromethane}		c	100	1 2	
4,4'-Methylenedianiline (and its dichloride) [POM]		c	100	1 2	
Methyl ethyl ketone {2-Butanone}	06/91		100	1 2	
Methyl hydrazine	06/91		100	1 2	
Methyl iodide {Iodomethane}		c	100	1 2	
Methyl isobutyl ketone {Hexone}	06/91		100	1 2	
Methyl methacrylate			100	1 2	
Methyl tert-butyl ether	06/91		100	1 2	
Metronidazole		c	100	1 2	
Michler's ketone [POM]		c	100	1 2	
Mineral fibers (fine, manmade)	06/91	c	100	1 2	7
(fine mineral fibers which are manmade and are airborne particles of a respirable size greater than 5 microns in length, less than or equal to 3.5 microns in diameter, with a length to diameter ratio of 3:1)					
Including but not limited to:					
Ceramic fibers	09/89	c	100	1 2	
Glasswool fibers	09/89	c	100	1 2	
Rockwool fibers	09/89	c	100	1 2	
Slagwool fibers	09/89	c	100	1 2	
Mineral fibers (other than manmade)					7
Including but not limited to:					
Asbestos					
Erlonite					
Talc containing asbestiform fibers					
Molybdenum trioxide					
Naphthalene [PAH, POM], (see PAH)	06/91	c	100	1 2	
Nickel		c	1	1 2	
Nickel compounds		c	1	1 2	
Including but not limited to:					
Nickel acetate	06/91	c	1	1 2	
Nickel carbonate	06/91	c	1	1 2	
Nickel carbonyl	06/91	c	1	1 2	
Nickel hydroxide	06/91	c	1	1 2	
Nickelocene	06/91	c	1	1 2	

QAS N44667
Emittent ID
(Note 11)

Substance Name	Note [2]	Add Date (Note [3])	Carcinogen (Note [4])	Degree of Accuracy (Note [5])	Source List(s) (Note [6])	Other Notes(s)
Nickel oxide		06/91	c	1	1 2 5	[7]
Nickel subsulfide		06/91	c	1	1 2 5	[7]
Nickel refinery dust from the pyrometallurgical process		09/89	c	1	1 2 5	[7]
Nitridazole			c	100	3 4	
Nitric acid		06/91	c	100	4 5	
Nitrioltriacetic acid			c	100	4 5	
Nitrobenzene			c	100	4 5	
4-Nitrobiphenyl [POM]		09/89	c	100	4 5	
6-Nitrochrysene [PAH-Derivative, POM]		06/91	c	100	4 5	
2-Nitrofluorene [PAH-Derivative, POM]		06/91	c	100	4 5	
Nitrogen mustard N-oxide		06/91	c	100	4 5	
4-Nitrophenol		06/91	c	100	4 5	
2-Nitropropane		06/91	c	100	4 5	
1-Nitropyrene [PAH-Derivative, POM]		06/91	c	100	4 5	
p-Nitrosodiphenylamine [POM]			c	100	4 5	
N-Nitroso-N-methylurea			c	100	4 5	
N-Nitrosomorpholine			c	100	4 5	
N-Nitrosopiperidine			c	100	4 5	
N-Nitrosopyrrolidine			c	100	4 5	
#PAHs (Polycyclic aromatic hydrocarbons) [POM] including but not limited to:				100	4 5	[13]
PAHs, total, w/o individ. components reported				100	4 5	
PAHs, total, with individ. components also reported				100	4 5	
Anthracene		06/91		100	4 5	
Benz[a]anthracene			c	100	4 5	
Benzo[a]pyrene			c	100	4 5	
Benzo[b]fluoranthene			c	100	4 5	
Benzo[k]fluoranthene			c	100	4 5	
Chrysene		09/89	c	100	4 5	
Dibenz[a,h]anthracene			c	100	4 5	
Dibenzo[a,e]pyrene			c	100	4 5	
Dibenzo[a,h]pyrene			c	100	4 5	
Dibenzo[a,i]pyrene			c	100	4 5	
Dibenzo[a,l]pyrene			c	100	4 5	
Indeno[1,2,3-cd]pyrene			c	100	4 5	
Naphthalene			c	100	4 5	
#PAH-Derivatives (Polycyclic aromatic hydrocarbon derivatives) [POM] (including but not limited to those substances listed in Appendix A with the bracketed designation [PAH-Derivative, POM])		06/91		100	4 5	[14]
Parathion		06/91	c	100	4 5	
PCBs (Polychlorinated biphenyls) [POM]				1	4 5	

Substances For Which Emissions Must Be Quantified (cont.)

PLS Mpl/yr/ Emitting ID (Note [1])	Substance Name (Note [2])	ADD Mpl/yr Add Date (Note [3])	Carcinogen Mpl/yr (Note [4])	Applicable Degree of Accuracy (lbs/yr) (Note [5])	Source List(s) (Note [6])	Other Notes(s)
82688	Pentachloronitrobenzene {Quintobenzene}	06/91		100	1 2	
79210	Peracetic acid	06/91		100	1	
127184	Perchloroethylene {Tetrachloroethane}		c	100	1 2 3 4 5 6	
50066	Phenobarbital		c	100	1 2 3 4	
108952	Phenol			100	1 2	
106583	p-Phenylenediamine	06/91		100	1 2 3 4	
90437	2-Phenylphenol [POM]	06/91		100	1 2 3 4	
75445	Phosgene			100	1 2 3 4	
7723140	Phosphorus			100	1 2 3 4	
7803512	Phosphorus compounds:	09/89		100	1 2 3 4	
7684382	Phosphine			10	1 2 3 4	
10025873	Phosphoric acid	09/89		100	1 2 3 4	
10026138	Phosphorus oxychloride	09/89		100	1 2 3 4	
1314583	Phosphorus pentachloride	09/89		100	1 2 3 4	
7719122	Phosphorus pentoxide	09/89		100	1 2 3 4	
126738	Phosphorus trichloride	09/89		100	1 2 3 4	
78400	Tributyl phosphate	09/89		100	1 2 3 4	
512561	Triethyl phosphate	09/89		100	1 2 3 4	
78308	Triethoxyethyl phosphate [POM]	09/89		100	1 2 3 4	
115866	Triphenyl phosphate [POM]	09/89		100	1 2 3 4	
101020	Triphenyl phosphite [POM]	09/89		100	1 2 3 4	
85449	Phthalic anhydride	09/89		100	1 2 3 4	
1086	Polychlorinated dibenzo-p-dioxins {PCDDs or Dioxins} [POM]		c	100	1 2 3 4	
1085	Dioxins, total, w/o individ. isomers reported including but not limited to: Dioxins, total, with individ. isomers also reported {PCDDs}		c	100	1 2 3 4	
1748016	2,3,7,8-Tetrachlorodibenzo-p-dioxin {TCDD} [POM]		c	100	1 2 3 4	
40321764	1,2,3,7,8-Pentachlorodibenzo-p-dioxin [POM]		c	100	1 2 3 4	
39227286	1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin [POM]		c	100	1 2 3 4	
57653857	1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin [POM]		c	100	1 2 3 4	
19408743	1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin [POM]		c	100	1 2 3 4	
35822469	1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin [POM]		c	100	1 2 3 4	
1080	Polychlorinated dibenzofurans {PCDFs or Dibenzofurans} [POM]		c	100	1 2 3 4	
51207319	Dibenzofurans (Polychlorinated dibenzofurans) including but not limited to: PCDFs [POM]		c	100	1 2 3 4	
57117416	2,3,7,8-Tetrachlorodibenzofuran [POM]		c	100	1 2 3 4	
57117314	1,2,3,7,8-Pentachlorodibenzofuran [POM]		c	100	1 2 3 4	
70648269	2,3,4,7,8-Pentachlorodibenzofuran [POM]		c	100	1 2 3 4	
57117449	1,2,3,4,7,8-Hexachlorodibenzofuran [POM]		c	100	1 2 3 4	

Substances For Which Emissions Must Be Quantified (cont.)

QAS Method/ Emission ID (Note 1)	Substance Name (Note 2)	Add Date (Note 3)	Carcinogen (Note 4)	Applicable Degree of Accuracy (lbs/yr) (Note 5)	Source List(s) (Note 6)	Other Notes(s)
72918219	1,2,3,7,8,9-Hexachlorodibenzofuran [POM]		c	.1	1 2	
60851345	2,3,4,6,7,8-Hexachlorodibenzofuran [POM]		c	.1	1 2	
67562394	1,2,3,4,6,7,8-Heptachlorodibenzofuran [POM]		c	.1	1 2	
55673897	1,2,3,4,7,8,9-Heptachlorodibenzofuran [POM]		c	.1	1 2	
# #	#POM (Polycyclic organic matter) (Including but not limited to those substances listed in Appendix A with the bracketed designation of [POM], [PAH, POM], or [PAH-Derivative, POM])	09/89		100	1 2	[15]
57830	Progesterone		c	100	3 4 5	
1120714	1,3-Propane sultone		c	100	3 4 5	
57578	beta-Propiolactone		c	10	3 4 5	
123386	Propionaldehyde			100	3 4 5	
114261	Propoxur [Baygon]	06/91		100	1 2	
115071	Propylene	06/91		100	1 2	
75569	Propylene oxide		c	100	1 2	
-	1,2-Propylenimine (see 2-Methylaziridine)			100	3 4 5	
110861	Pyridine	06/91		100	1 2	
91225	Quinoline	06/91		100	1 2	
106514	Quinone	06/91	c	100	1 2	[16]
# 1165	Radionuclides including but not limited to:				4	
24267569	Iodine-131					
# 1168	Radon and its decay products	09/89	c	100	1 2	
50555	Reserpine [POM]	09/89	c	100	1 2	
# #	Residual (heavy) fuel oils	06/91	c	100	1 2	
7782492	Selenium			100	3 4	
*	Selenium compounds # including but not limited to:				1 2	[7]
7446346	Selenium sulfide	09/90	c	100	2 4 5	[7]
# 1175	Silica, crystalline	06/91	c	100	3 4	
7440224	Silver	06/91		100	3 4	[7]
*	Silver compounds #					
1310732	Sodium hydroxide	06/91	c	100	2 4	[7]
100425	Styrene			100	3 4	
96093	Styrene oxide	06/91	c	100	3 4	
7664939	Sulfuric acid	06/91	c	100	3 4	
100210	Terephthalic acid	09/90		100	3 4	
79345	1,1,2,2-Tetrachloroethane	06/91	c	10	4	
7440280	Thallium	06/91		100	1 2	
*	Thallium compounds #					
62555	Thioacetamide	06/91	c	100	3 4 5	[7]
62566	Thiourea			100	3 4 5	
7550450	Titanium tetrachloride	06/91	c	100	1 2	
108883	Toluene			100	1 2	
-	2,4-Toluenediamine (see 2,4-Diaminotoluene)				4 6	

Substances For Which Emissions Must Be Quantified (cont.)

2/13 Emitting ID [Note 11]	Substance Name [Note 21]	3/13 Add Date [Note 31]	3/13 Carcinogen [Note 41]	Applicable Degree of Accuracy (lbs/yr) [Note 51]	Source List(s) [Note 61]	Other Notes(s)
1204	Toluene diisocyanates including but not limited to:	06/91	c	10	1 3	
584849	Toluene-2,4-diisocyanate		c	10	1 2 3	
91087	Toluene-2,6-diisocyanate		c	10	1 2 3	
95534	o-Toluidine		c	10	1 2 3	
8001352	Toxaphene {Polychlorinated camphenes}		c	100	1 2 3	
79005	1,1,2-Trichloroethane {Vinyl trichloride}	06/91	c	100	1 2 3	
79016	1,1,1-Trichloroethane (see Methyl chloroform)					
121448	Trichloroethylene		c	100	1 2 4	
1582098	2,4,6-Trichlorophenol (see Chlorophenols)					
95636	Triethylamine	06/91		100	1 2	
540841	1,2,4-Trimethylbenzene	06/91		100	1 2	
51796	2,2,4-Trimethylpentane	06/91		100	1 2	
7440622	Urethane {Ethyl carbamate}		c	100	1 2 3 4 5	
108054	Vanadium (fume or dust)	06/91		100	1 2	7 [17]
593602	Vinyl acetate	06/91		100	1 2	
75014	Vinyl bromide		c	10	1 2 3 4	
75354	Vinyl chloride		c	100	1 2 3 4 5	
1206	Vinylidene chloride			100	1 2	
1210	Wood preservatives (containing arsenic and chromate)	09/89		100	6	
108383	Xylenes (mixed xylenes)			100	1 2	
95476	including:					
106423	m-Xylene	06/91		100	1 2	
7440666	o-Xylene	06/91		100	1 2	
*	p-Xylene	06/91		100	1 2	
1314132	Zinc			100	1 2	
	Zinc compounds	09/89		100	1 2	[7]
	including but not limited to:					
	Zinc oxide			100	2	[7]

APPENDIX A-II

A - 13

Substances For Which Production, Use, Or Other Presence Must Be Reported (cont.)

Substance Name (Note [2])	Add Date (Note [3])	Carcinogen (Note [4])	Source List(s) (Note [6])	Other Notes(s)
N-N-Bis(2-chloroethyl)-2-naphthylamine {Chloronaphazine} [PAH-Derivative, POM]		c	1 2 3 4 5	
Bis(2-chloroethyl nitrosourea	06/91	c	3 4	7
Bitumens, extracts of steam-refined and air- refined bitumens		c	3 4	
Bleomycine	09/90	c	3	
Bromodichloromethane	06/91	c	3 4	
Bromoxynil		c	3 4 5	
1,4-Butanediol dimethanesulfonate {Busulfen/ Myleran}		c	3 4	
Butylated hydroxyanisole {BHA}	06/91	c	3 4	7
Butyraldehyde		c	3 4	
beta-Butyrolactone	09/89	c	3 4	
Carbon monoxide	09/90	c	3 4	
Carboplatin	09/90	c	3 4	
Chenodiol		c	3 4 5	
Chlorambucil		c	1 2 3 4 5	
Chlorocyclizine hydrochloride [POM]	09/89	c	3 4	
Chlordecone {Kepone}	09/89	c	3 4 5	
Chloroform	09/90	c	3 4	
Chloroendic acid		c	3 4 5	
Chlorodibromomethane		c	3 4 5	
1-(2-Chloroethyl)-3-cyclohexyl-1-nitrosourea {CCNU}	09/89	c	3 4 5	
3-Chloro-2-methylpropene		c	3 4	
Chlorophenoxy herbicides	09/89	c	3 4	
Chlorothalonil	06/91	c	3	
p-Chloro-o-toluidine (strong acid salts)	06/91	c	1 2 3 4 5	7
C. I. Acid Green 3 [POM]	06/91	c	1 2 3 4 5	7
C. I. Basic Green 4 [POM]	06/91	c	1 2 3 4 5	7
C. I. Basic Red 1 [POM]	06/91	c	1 2 3 4 5	7
C. I. Basic Red 9 monohydrochloride [POM]	06/91	c	1 2 3 4 5	7
C. I. Disperse Yellow 3 [POM]	06/91	c	1 2 3 4 5	7
(NOTE: "C. I." means "color index")				
Cinnamyl anthranilate [POM]	09/89	c	1 2 3 4 5	
Cisplatin		c	1 2 3 4 5	
Citrus Red No. 2 [POM]	09/90	c	1 2 3 4 5	
Clomiphene citrate [POM]	09/89	c	1 2 3 4 5	
Coal tars	09/90	c	3 4 5	
Cyanazine		c	3 4 5	
Cycasin		c	3 4 5	
Cyclophosphamide		c	3 4 5	
Cyhexatin	09/89	c	3 4 5	
Cytarabine	09/89	c	3 4 5	

Substances For Which Production, Use, Or Other Presence Must Be Reported (cont.)

PAH Mixture/ Emitting ID (Note [1])	Substance Name (Note [2])	Add Date (Note [3])	Carcinogen (Note [4])	Source List(s) (Note [6])	Other Notes(s)
3468631	D and C Orange No. 17 [PAH-Derivative, POM]	09/90	c	1 2 4	
81889	D and C Red No. 19 [POM]	09/90	c	1 2 4	
2092560	D and C Red No. 8 [PAH-Derivative, POM]	06/91	c	1 2 4	
5160021	D and C Red No. 9 [PAH-Derivative, POM]	09/90	c	1 2 4	
4342834	Dacarbazine	09/90	c	3 4 5	
1596845	Daminozide	09/90	c	3 4 5	
17230885	Danazol	09/90	c	1 4	
20830813	Daunomycin [PAH-Derivative, POM]	09/90	c	1 2 3 4	
23541506	Daunorubicin hydrochloride [PAH-Derivative, POM]	09/90	c	1 2 3 4	
50293	DDT {1,1,1-Trichloro-2,2-bis(p-chlorophenyl)ethane} [POM]	09/90	c	1 2 3 4 5	
613354	N,N'-Diacetylbenzidine [POM]	06/91	c	1 2 3 4	
2303164	Diallate	06/91	c	1 2 3 4	
39156417	2,4-Diaminoanisole sulfate	09/90	c	1 2 3 4 5	
101804	4,4'-Diaminodiphenyl ether [POM]	09/90	c	1 2 3 4 5	
764410	1,4-Dichloro-2-butene	09/89	c	1 2 3 4	
28434868	3,3'-Dichloro-4,4'-diaminodiphenyl ether [POM]	09/89	c	1 2 3 4	
72548	Dichlorodiphenyldichloroethane {DDO} [POM]	06/91	c	1 2 4	
540590	1,2-Dichloroethylene	09/89	c	1 2	
78886	2,3-Dichloropropene	09/89	c	1 2	
60571	Dieldrin	09/90	c	1 2 4 5	
84173	Dienestrol [POM]	06/91	c	1 2 3 4	
1464535	Diepoxybutane	06/91	c	1 2 3 4	
1615801	1,2-Diethylhydrazine	06/91	c	1 2 3 4	
84662	Diethyl phthalate	06/91	c	1 2 3 4	
101906	Diglycidyl resorcinol ether {DGRE}	06/91	c	1 2 3 4	
94586	Dihydroazafrole	06/91	c	1 2 3 4	
20325400	3,3'-Dimethoxybenzidine dihydrochloride [POM]	06/91	c	1 2 3 4	
55738540	trans-2-[(Dimethylamino)methyl]imino]-5-[2-(5-nitro-2-furyl)vinyl]-1,3,4-oxadiazol	06/91	c	1 2 3 4	
540738	1,2-Dimethylhydrazine	06/91	c	1 2 3 4	
105679	2,4-Dimethylphenol {2,4-Xylenol}	09/89	c	1 2 3 4	
513371	Dimethylvinylchloride {DMVC}	09/90	c	1 2 3 4	
25154545	Dinitrobenzenes (mixtures of) including:	09/90	c	1 2 3 4	
99650	m-Dinitrobenzene	06/91	c	1 2 3 4	
528290	o-Dinitrobenzene	06/91	c	1 2 3 4	
100254	p-Dinitrobenzene	09/90	c	1 2 3 4	
39300453	Dinocap	09/89	c	1 2 3 4	
88857	Dinoseb	06/91	c	1 2 3 4	
117840	n-Dioctyl phthalate	06/91	c	1 2 3 4	
2475458	Disperse Blue 1 [PAH-Derivative, POM]	09/90	c	1 2 3 4	
564250	Doxycycline	09/90	c	1 2 3 4	
379793	Ergotamine tartrate [POM]	09/90	c	1 2 3 4	

Substances For Which Production, Use, Or Other Presence Must Be Reported (cont.)

Substance Name (Note [2])	Add Date (Note [3])	Carcinogen (Note [4])	Source List(s) (Note [6])	Other Notes(s)
Estrogens, non-steroidal Including but not limited to: Diethylstilbestrol [POM]		c	3 5	
Estrogens, steroidal Including but not limited to: Estradiol 17 beta	09/90	c	1 2 3 4 5	
Estrone		c	4 5	
Ethinyl estradiol		c	4 5	
Mestranol		c	4 5	
Ethyl chloroformate	08/91	c	3 4	7
Ethyl methanesulfonate		c	2	
Etoposide [POM]	09/90	c	4	7
Etretnate	08/91	c	4	
Fluometuron	09/89	c	4	
Fluorouracil	09/90	c	4	
Fluoxymesterone	09/89	c	4	
Flutamide	09/90	c	4	
Folpet	09/90	c	4	
2-(2-Formylhydrazino)-4-(5-nitro-2-furyl)thiazole	09/90	c	3 4	
Furazolidone	09/90	c	4	
Furazolidone	09/90	c	4	
Glu-P-1 [12-Amino-6-methylidipyrdo[1,2-a:3',2'-d]imidazole]	09/90	c	3 4	
Glu-P-2 [12-Aminodipyrdo[1,2-a:3',2'-d]imidazole]	09/90	c	3 4	
Glycidaldehyde	09/89	c	4	
Glycidol	09/89	c	4	
Gyromitrin {Acetaldehyde methylformylhydrazone}	09/89	c	4	
HC Blue 1	09/89	c	1 2	
Halazepam [POM]	09/89	c	1 2	
Heptachlor epoxide	09/89	c	4 5	
Hexachloronaphthalene [PAH-Derivative, POM]	09/89	c	4	
Hydrazine sulfate	09/90	c	4 5	
Ifosfamide	09/90	c	4	
IQ [2-Amino-3-methylimidazo[4,5-f]quinoline]	09/90	c	3 4	
Iron dextran complex	09/90	c	4	
Isobutyraldehyde	09/90	c	4	
Isosafrole	09/89	c	4	
Isotretinoin	09/89	c	4	
Lactofen [POM]	09/89	c	1 2	
Lactocarpine	09/91	c	3 4	
Lithium carbonate	09/91	c	4	
Lithium citrate	09/90	c	4	
Lorazepam [POM]	09/90	c	1 2	

Substances For Which Production, Use, Or Other Presence Must Be Reported (cont.)

QAS MAPP# Emission ID (Note [1])	Substance Name (Note [2])	Add Date (Note [3])	Carcinogen (Note [4])	Source List(s) (Note [6])	Other Notes(s)
# 1131	Lubricant base oils and derived products, specifically vacuum distillates, acid treated oils, aromatic oils, mildly solvent-refined oils, mildly hydrotreated-oils and used engine oils.	09/89	c	3 4 5	
8018017	Mancozeb	09/90	c	4	
12427382	Maneb	09/90	c	4	
595335	Megestrol acetate	06/91	c	4	
148823	Melphalan		c	3 4 5	
9002680	Menotropins	09/90		4	
6112761	Mercaptopurine	09/90		4	
531768	Merphalan	09/89	c	4	
3963959	Methacycline hydrochloride	06/91		4	
68568	Methimazole	09/90		4	
59052	Methotrexate	09/89		4	
15475566	Methotrexate sodium	09/90		4	
484208	5-Methoxy-psoralen		c	3	7
96333	Methyl acrylate	06/91			
590965	Methylazoxymethanol	09/90	c	4	
592621	Methylazoxymethanol acetate	09/89	c	3 4	
101611	4,4'-Methylene bis (N,N-dimethyl) benzenamine [POM]	09/89	c	1 2 4 5	
838880	4,4'-Methylene bis(2-methylaniline) [POM]	09/89	c	1 2 3 4	
74953	Methylene bromide	06/91			7
66273	Methyl methanesulfonate		c	3 4	
129157	2-Methyl-1-nitroanthraquinone (uncertain purity) [PAH-Derivative, POM]	09/89	c	1 2 3 4	
# 1140	N-Methyl-N-nitrosourethane [see N-Nitroso-N-methylurethane]	09/89	c	3 4	
70257	N-Methyl-N'-nitro-N-nitrosoguanidine		c	3 4	
924425	N-Methylacrylamide	09/90	c	3 4	
56042	Methylthiouracil		c	3 4	
9006422	Metiram	09/90		4	
59467968	Midazolam hydrochloride [POM]	09/90	c	1 2 4 5	
# 1140	Mineral oils (untreated and mildly treated oils; and those used in occupations such as mulespinning, metal machining, and jute processing).		c	3 4 5	
2385855	Mirex		c	3 4 5	
82015398	Misoprostol	09/90	c	3 4	
50077	Mitomycin C		c	3 4	
70476823	Mitoxantrone hydrochloride [PAH-Derivative, POM]	09/90	c	1 2 3 4	
315220	Monocrotaline		c	1 2 3 4	
139913	5-(Morpholinomethyl)-3-[(5- nitrofurfurylidene)amino]-2-oxazolidinone		c	3 4 5	
505602	Mustard gas [Sulfur mustard]	09/90	c	3 4 5	
86220420	Nafarelin acetate [PAH-Derivative, POM]		c	1 2 3 4	
3771195	Nafepopin [POM]		c	1 2 3 4	

Substances For Which Production, Use, Or Other Presence Must Be Reported (cont.)

Emittent ID (Note 1)	Substance Name (Note 2)	Add Date (Note 3)	Carcinogen (Note 4)	Source List(s) (Note 6)	Other Notes(s)
134327	1-Naphthylamine [PAH-Derivative, POM]	09/90	c	1 2 4	
91598	2-Naphthylamine [PAH-Derivative, POM]	09/90	c	1 2 3 4 5	
1405103	Neomycin sulfate	09/90		1 2 3 4	
56391572	Netilmicin sulfate	09/90		4	
54115	Nicotine	09/90		4	
1148	Nitriolotric acid (salts) including but not limited to:	06/91	c	3	
18662538	Nitriolotric acid, trisodium salt monohydrate	06/91	c	4	
602879	5-Nitroacenaphthene [PAH-Derivative, POM]		c	1 2 3 4 5	
99592	5-Nitro-6-anilidine		c	3 4 5	
1836755	Nitrofen (technical grade)		c	3 4 5	
67209	Nitrofurantoin	06/91	c	4	
59870	Nitrofurazone	09/90	c	4	
555840	1-[(5-Nitrofurfurylidene)amino]-2-imidazolidinone		c	3 4 4 4 4 4 5	
531828	N-[4-(5-Nitro-2-furyl)-2-thiazolyl]acetamide		c	3 4 4 4 4 4 5	
51752	Nitrogen mustard [Mechlorethamine]		c	3 4 4 4 4 4 5	
55867	Nitrogen mustard hydrochloride	09/89	c	3 4 4 4 4 4 5	
55630	Nitroglycerin	06/91	c	4	
88755	2-Nitrophenol	06/91		1 2 3 4	
57835924	4-Nitropyrene [PAH-Derivative, POM]	06/91	c	1 2 3 4	
86306	N-Nitrosodiphenylamine [POM]	09/89	c	1 2 3 4 5	
759739	N-Nitroso-N-ethylurea		c	3 4 4 4 4 4 5	
60153493	3-(N-Nitrosomethylamino)propionitrile	09/89	c	3 4 4 4 4 4 5	
64091914	4-(N-Nitrosomethylamino)-1-(3-pyridyl)-1-butanone [NNK]	09/89	c	3 4 4 4 4 4 5	
615532	N-Nitroso-N-methylurethane {N-Methyl-N-nitrosourethane}		c	3 4	
4549400	N-Nitrosomethylvinylamine		c	3 4 5	
16543558	N-Nitrosomethylamine		c	3 4 5	
13256229	N-Nitrosomethylamine		c	3 4 5	
6533002	Norgestrel	09/90	c	1 2 3 4 4 4 5	
303479	Ochratoxin A [POM]	09/90	c	1 2 3 4 4 4 5	
2234131	Octachloronaphthalene [PAH-Derivative, POM]	06/91	c	1 2 3 4 4 4 5	
2646175	Oil Orange SS [PAH-Derivative, POM]	06/91	c	1 2 3 4 4 4 5	
20818120	Osmium tetroxide	06/91	c	1 2 3 4 4 4 5	
79572	Oxytetracycline	06/91	c	1 2 3 4 4 4 5	
794934	Paufuran S [Dihydroxymethylfuratriline]		c	3 4 4 4 4 4 5	
115673	Paramethadione	09/90		3 4 4 4 4 4 5	
52675	Penicillamine	06/91		4 4 4 4 4 4 5	
57330	Pentobarbital sodium	09/90		4 4 4 4 4 4 5	
63989	Phenacetin	09/90		4 4 4 4 4 4 5	
62442	Phenacetin		c	3 4 4 4 4 4 5	
94780	Phenazopyridine hydrochloride	09/89	c	3 4 4 4 4 4 5	
3546109	Phenesterin	09/89	c	3 4 4 4 4 4 5	
59961	Phenoxybenzamine [POM]		c	1 2 3 4 4 4 5	

Substances For Which Production, Use, Or Other Presence Must Be Reported (cont.)

Substance Name (Note [2])	Add Date (Note [3])	Carcinogen (Note [4])	Source List(s) (Note [6])	Other Notes(s)
Phenoxybenzamine hydrochloride [POM]	09/90	c	1 2 3 4 5	
Phenyl glycidyl ether	09/90	c	1 2 3 4 5	
Phenytoln [POM]	06/91	c	1 2 3 4 5	7
Picric acid	09/90			
Pipobroman	09/90			
Plicamycin [PAH-Derivative, POM]	09/89	c	1 2 3 4 5	
Polybrominated biphenyls [PBBs] [POM]		c	1 2 3 4 5	
Polygeenan		c	1 2 3 4 5	
Ponceau MX [PAH-Derivative, POM]		c	1 2 3 4 5	
Ponceau 3R [PAH-Derivative, POM]		c	1 2 3 4 5	
Procabazine hydrochloride		c	1 2 3 4 5	
Progesterone		c	1 2 3 4 5	
including but not limited to:				
Medroxyprogesterone acetate		c	3 4 5	
Norethisterone		c	3 4 5	
Propylthiouracil		c	3 4 5	
all-trans-Retinoic acid	09/89	c	3 4 5	
Retinol/retinyl ~~esters~~	09/89	c	3 4 5	
Ribavirin	09/90	c	3 4 5	
Saccharin		c	3 4 5	
Safrole		c	3 4 5	
Shale oils		c	3 4 5	
Sodium o-phenylphenate [POM]		c	3 4 5	
Sodium saccharin	09/89	c	3 4 5	
Soots		c	3 4 5	
Sterigmatocystin [POM]	08/91	c	3 4 5	
Streptomycin sulfate		c	3 4 5	
Streptozotocin		c	3 4 5	
Sulfalate		c	3 4 5	
Tamoxifen citrate [POM]	09/90	c	3 4 5	
Temazepam [POM]	09/90	c	3 4 5	
p-alpha,alpha,alpha-Tetrachlorotoluene	09/90	c	3 4 5	
Tetrachlorvinphos	06/91	c	3 4 5	
Tetracycline hydrochloride	06/91	c	3 4 5	
Tetranitromethane	09/90	c	3 4 5	
Thalidomide		c	3 4 5	
4,4'-Thiodianiline [POM]	09/90	c	3 4 5	
Thorium dioxide		c	3 4 5	
Tobacco products, smokeless	09/90	c	3 4 5	
Tobramycin sulfate		c	3 4 5	
alpha-chlorinated Toluenes		c	3 4 5	
o-Toluidine hydrochloride	09/90	c	3 4 5	
p-Toluidine		c	3 4 5	
Treosulfan		c	3 4 5	

Substances For Which Production, Use, Or Other Presence Must Be Reported (cont.)

2/15 MMS/	Substance Name (Note [2])	Add Date (Note [3])	Carcinogen (Note [4])	Source List(s) (Note [6])	Other Notes(s)
Emittent ID (Note [1])					
28911015	Triazolam [POM]	09/90		1 2 4	
52686	Trichlorfon	06/91			7
13647353	Trilostane	09/90		4 4 4	
127480	Trimethadione	06/91		4 4 4	
68768	Tris(aziridinyl)-p-benzoquinone {Triaziquone}	09/90	c	3 4 5	
52244	Tris(1-aziridinyl) phosphine sulfide {Thiotepal}	09/89	c	4 4	
126727	Tris(2,3-dibromopropyl)phosphate		c	3 4	
62450060	Trp-P-1 {3-Amino-1,4-dimethyl-5H-pyrido[4,3-b]indole}		c	3 4	
62450071	Trp-P-2 {3-Amino-1-methyl-5H-pyrido[4,3-b]indole}		c	3 4	
72571	Trypan blue [PAH-Derivative, POM]		c	1 2 3 4	
66751	Uracil mustard		c	3 4	
26995915	Urofollitropin	09/90		1 2 3 4	
99661	Valproate			4 4	
143679	Vinblastine sulfate [POM]	09/90		1 2	
2068782	Vincristine sulfate [POM]	09/90		1 2	
108876	4-Vinyl-1-cyclohexene diepoxide {Vinyl cyclohexene dioxide}	09/90	c	4 4	
81812	Warfarin [POM]			1 2	
87627	2,6-Xylidene	06/91		4 4	
12122677	Zincb	09/80	c	4 4	

NOTES TO APPENDIX A:

Note Text of Note

[1] Emittent ID (the emittent identification number) is the Chemical Abstract Service (CAS) number where available, or an ARB-assigned 4-digit emittent ID code.

A dash ("-") is shown for the Emittent ID for substances which are alphabetized under a group header or synonym elsewhere on the list. Refer to the cross reference indicated in parenthesis, "()".

A double dash ("- -") is shown for the Emittent ID to indicate that the entry is a non-reportable group header for the substances immediately following it.

An asterisk ("*") is shown for the Emittent ID to indicate that the emissions of unspecified metal compounds shall be reported as the metal atom equivalent. See Note [7].

A pound sign ("£") is shown for the Emittent ID to indicate that the individual, component listed substances must be reported for this mixture or group.

[2] Individual substances listed under a group heading must be reported individually. Other, unspecified substances in the group must be summed and reported using the emittent ID of the group heading.

The square bracket designation, "[]", indicates that the substance is a component of the chemical group heading(s) within the brackets.

The braces designation, "{ }", indicates a synonym for the substance listed.

4434 111
[3]

The date the Board approved addition of the substance to the original list. The original list was approved by the Board in July 1988.

4434 111
[4]

The letter "c" indicates that for purposes of this section the substance shall be treated as a human carcinogen or potential human carcinogen.

[5] Applicable degree of accuracy (in lbs/year except where noted). Radionuclides must be reported in Curie units, and the accuracy must be considered accordingly. Refer to Section 93334.

[6] Substances are required to be included on the AB 2588 list based on the following lists cited in Health & Safety Code Section 44321:

- | | |
|--|--|
| 1-California Air Resources Board; | 2-Environmental Protection Agency; |
| 3-International Agency for Research on Cancer; | 4-Governor's List of Carcinogens and Reproductive Toxicants (HSC Section 25249.8); |
| 5-National Toxicology Program; | 6-Hazard Evaluation System and Information Service; |
| 7-Added pursuant to HSC Section 44321 (f). | |

Substances from lists 1, 2, 6, or 7 may not be removed from the AB 2588 list. Refer to HSC Section 44321.

- Note** **Text of Note**
- [7] Emissions of unspecified metal compounds shall be reported as the amount of the metal atom equivalent, using the metal emittent identification number for the metal itself (or the emittent identification number indicated on the table, such as for reporting inorganic versus other-than-inorganic arsenic compounds).
- For unspecified metal compounds which contain two or more listed metals (e.g., zinc chromate), each component metal shall be reported as the amount of the appropriate metal atom equivalent (i.e., the zinc portion of the weight as zinc equivalent and the chromate portion as hexavalent chromium equivalent).
- For specific, individually listed metal compounds (e.g., Lead chromate), emissions shall be reported for the compound (as pounds of whole compound), using the emittent identification number for that compound.
- [8] Compounds of the form "X-CN", where formal dissociation can occur. Report as the amount of Cyanide equivalent in the compound using an emittent identification code of 1073.
- [9] Emissions of these mixtures shall be reported as emissions of total particulate matter and total organic gas, using the following emittent identification numbers:
- | | |
|---|---|
| 9901 Diesel exhaust, particulate matter | 9910 Gasoline exhaust, particulate matter |
| 9902 Diesel exhaust, total organic gas | 9911 Gasoline exhaust, total organic gas |
- Individually listed substances from diesel and gasoline exhaust must also be reported.
- [10] The emittent identification number 1105 has been discontinued for all facilities reporting for the first time and for all biennial updates. Use the listed replacement emittent identification codes 1103 and 1104.
- [11] Emissions of the individual, component listed substances must be reported in addition to the total gasoline vapors emissions.
- [12] These lead compounds are listed here so that the inorganic lead fraction will be quantified and reported if these individual compounds cannot be quantified.
- [13] PAH: (Polycyclic Aromatic Hydrocarbon) - An organic compound consisting of a fused ring structure containing at least two (2) benzene rings, and which may also contain additional fused rings not restricted exclusively to hexagonal rings. The structure does not include any heteroatoms or substituent groups. The structure includes only carbon and hydrogen. PAHs are a subgroup of POM and have a boiling point of greater than or equal to 100°C.
- [14] PAH-DERIVATIVE: (Polycyclic Aromatic Hydrocarbon Derivative) - An organic compound consisting of a fused ring structure containing at least two (2) benzene rings, and which may also contain additional fused rings not restricted exclusively to hexagonal rings. The fused ring structure does not contain heteroatoms. The structure does contain one or more substituent groups. PAH-Derivatives are a subgroup of POM and have a boiling point of greater than or equal to 100°C.
- [15] POM: (Polycyclic Organic Matter) - Includes organic compounds with more than one benzene ring, and which have a boiling point of greater than or equal to 100°C.

<u>Note</u>	<u>Text of Note</u>

[16] Radionuclides and other radioactive substances shall be reported in units of Curies per year (for annual average emissions) and in units of millicuries per hour (for maximum hourly emissions).

[17] Emissions of Vanadium (fume or dust) shall be reported as the amount of the vanadium atom equivalent, using the identification number 7440622.

[18] The emittent identification number 1001 has been replaced with the CAS number 26148685.

[illegible]

የአዋጅ አቅጣጫ ሥልጣን የሚከፈልበት ሲሆን

[illegible][illegible]

Appendix B
Instructions for Completing Reporting Forms

The following instructions are for completing core reporting forms, ~~and the S-UP form, and the Update Summary Form~~ supplemental process parameter forms as explained in Article 4:

The operator of each facility subject to the regulation shall complete one Facility Description Form (FAC Form), an entry on a Stack Data Form (STK Form) for each stack or vent from which a listed substance may be released, an entry on a Device Description and Device-Stack Relations Form (DEV Form) for each device associated with a release of a listed substance, and a Process and Emittents Data Form (PRO Form) for each emitting process within each device. A Process and Emittents Data Form and an entry on a Device Description and Device-Stack Relations Form shall be completed for each general location of fugitive emissions.

~~The operator shall also complete any supplemental process parameter form(s) required in Article 4.~~ Form S-UP shall be completed and submitted with the inventory report for all substances set forth in Appendix A-II which are 1) manufactured or produced as the result of any activity or process at the facility; 2) used as ingredients in any activity or process at the facility; or 3) otherwise associated with an activity or process, including but not limited to presence in a formulation operation or presence as a by-product or a reaction intermediate which appears temporarily during processing.

Form S-UP shall also be completed for all substances set forth in Appendix A-I which are used, manufactured, formulated, or released but for which emissions are below the applicable limit for degree of accuracy required by Section 93334, unless a numeric estimate of such emissions is reported on a Process and Emittents Data Form for the appropriate emitting process. See the instructions for the Process and Emittents Data Form (Item (30)) for information on using the degree of accuracy values for reporting purposes.

Form S-UP shall also be completed for all substances set forth in Appendix A-I and Appendix A-II which are used, manufactured, formulated, or released from any facility subject to the requirements set forth in Section 93308(c).

The facility operator shall also complete and submit to the district an Update Summary Form (US Form) as required to comply with the applicable update requirements specified in Sections 93348-93355.

The district may, but need not, provide to the facility operator, forms which are partially filled out. The district may, but need not, provide to the facility operator, the stack and device information that presently exists for the criteria pollutant inventory. If not known or provided, consult the district. If any of the provided information needs to

be updated or corrected, the facility operator shall delete, add, or change the data according to the instructions provided for each form.

The following are specific instructions for completing each required core reporting form:

Grey shading and "Office Use Only" Removed

INVENTORY
YEAR

19__

AIR TOXICS EMISSION DATA SYSTEM REVIEW & UPDATE REPORT
FACILITY DESCRIPTION

FORM
FAC

Changes shown in circles.

FACILITY DATA

COMPANY NAME

ADDRESS

CITY

ZIP CODE

COUNTY

ID:

FACILITY ID:

ACTION CODE:

DISTRICT:

AIR BASIN CODE:

CITY CODE
(OPTIONAL)

AQCR
(OPTIONAL)

SUBCOUNTY ID (OPT.)

MAILING ADDRESS DATA

COMPANY NAME

ADDRESS

CITY

STATE

ZIP CODE

ATTENTION

FACD1 (OPTIONAL)

FACD2 (OPTIONAL)

UTM ZONE

UTM EAST

UTM NORTH

NAME: _____

DATE: _____

FACILITY DATA

COMPANY NAME

ADDRESS

CITY

ZIP CODE

CONTACT PERSON

TELEPHONE

FACILITY SIC

NUMBER OF EMPLOYEES

MAILING ADDRESS DATA

COMPANY NAME

ADDRESS

CITY

STATE

ZIP CODE

ATTENTION

FOR OFFICE USE ONLY

COUNTY ID

FACILITY ID

ACTION CODE

DISTRICT

AIR BASIN CODE

CITY CODE (OPTIONAL)

AQCR (OPTIONAL)

SUBCOUNTY ID

FACD1 (OPTIONAL)

FACD2 (OPTIONAL)

UTM ZONE

UTM EAST

UTM NORTH

Facility Description Form (FAC Form)

DO NOT MARK IN THE SHADED AREAS, WHICH ARE FOR OFFICE USE ONLY!

Fill in the inventory year for which you are reporting in the space provided at the top of the form.

(1) County ID, District, and Air Basin Codes: Using values provided in Table B-I, enter the appropriate County, District, and Air Basin codes that correspond to the facility location.

(2) Facility ID: Enter the district-assigned facility identification code. If the Facility ID is unknown, contract the district.

(3) Action Code: Enter the appropriate Action Code: A, C, or D.

'A' indicates Add--This is a new facility that has not previously reported. Add the facility to the database.

'C' indicates Change--Previously reported data on the form have been changed.

'D' indicates Delete--The form is to be deleted. CAUTION!! Deletion of a FAC form will cause ALL data for the facility to be deleted. This should only be used if the facility is no longer subject to reporting requirements.

(14) Company Name: The company name and the plant, station, or subsidiary company or division name, if necessary to clearly identify the establishment.

(25) Address (location): Street address where facility is located.

(36) City: City or nearby city or town where facility is located.

(47) ZIP: ZIP code for the facility location.

(58) Contact Person: The person responsible for the information on these forms.

(69) Telephone: Area code and telephone number for the contact person.

(710) Facility SIC: The Standard Industrial Classification (SIC) number best describing the entire plant or facility. The SIC should be a full four-digit code. Do not use abbreviated two or three digit codes with trailing zeroes, such as "2600" or "2620". If not known, consult the air pollution control district.

(811) Number of Employees: Total number of employees working at the facility, including part-time and intermittent.

(912) Mailing Address: Name, address, city, state, zip code, and contact person (Attention) where correspondence regarding the facility should be mailed. If this information is the same as the facility address, write "same as above" diagonally across this section.

- (13) UTM Zone, UTM East, UTM North: These codes are used to describe the facility location in Universal Transverse Mercator (UTM) coordinates. Enter the coordinates which most closely correspond to the facility location. For large facilities or if facility coordinates are unknown, contact the district, who will provide guidance on assigning facility coordinates.
- (14) Optional Fields: The fields CITY CODE, AOCR, SUBCOUNTY ID, FACD1 and FACD2 are optional fields for district use and do not need to be filled in by the facility.

INVENTORY
YEAR
19

FORM
STK

COUNTY ID:

FACILITY ID:

REQUIRED INFORMATION

STACK ID & CODE ONLY
STACK ID, CODE, & STACK HEIGHT
STACK ID, CODE & STACK HEIGHT
STACK ID, CODE & STACK HEIGHT

5 RP W/IN (2.5 X HB) ABOVE GROUND AND
W/IN (5 X HB) SIDEWAYS TO NEAREST BLDG
6 OTHER STACK/VENT (OTHER T,V)

ALL STACK INFORMATION
ALL STACK INFORMATION

AND HVAC = HEATING, VENTILATING AND AIR CONDITIONING

Changes shown in circles

DATE _____

EMISSION YEAR 19	AIR TOXICS EMISSION DATA SYSTEM REVIEW & UPDATE REPORT STACK DATA	FORM STK
-------------------------------	--	--------------------

FOR OFFICE USE ONLY	COUNTY ID.	FACILITY ID.
----------------------------	--	---

DO NOT DELETE STACK IF IT SERVES OTHER DEVICES. SEE INSTRUCTIONS

DESC CODE	STACK/VENT CATEGORY	REQUIRED INFORMATION
	<u>AMBIENT TEMP & LOW-VELOCITY EXHAUST (T W/IN 25 F OF AMBIENT & V LT 750 FPM)</u>	
1	RELEASE POINT (RP) AT GROUND LEVEL	STACK ID & CODE ONLY
2	RELEASE FROM BLDG HVAC ONLY	STACK ID, CODE & STACK HEIGHT
3	RP W/IN (2.5 X HB) ABOVE GROUND AND W/IN (5 X HB) SIDEWAYS TO NEAREST BLDG	STACK ID, CODE & STACK HEIGHT
4	OTHER STACK/VENT (LOW T,V)	STACK ID, CODE & STACK HEIGHT
	<u>OTHER TEMP & FLOW CONDITIONS</u>	
5	RP W/IN (2.5 X HB) ABOVE GROUND AND W/IN (5 X HB) SIDEWAYS TO NEAREST BLDG	ALL STACK INFORMATION
6	OTHER STACK/VENT (OTHER T,V)	ALL STACK INFORMATION

WHERE HB = HEIGHT OF NEAREST BUILDING

AND HVAC = HEATING, VENTILATING AND AIR CONDITIONING

OFC USE ACTION CODE	STACK ID	DESC HEIGHT ABOVE CODE GROUND (FEET)	DIAMETER (FEET)	GAS TEMP (F)	GAS FLOW RATE (CFM)	GAS VELOCITY (FPM)	UTM EAST (KILOMETER)	UTM NORTH (KILOMETER)
☐								
☐								
☐								
☐								

NAME _____

DATE _____

B - 2(del)

ARB/STK/890323

Stack Data Form (STK Form)

This form can be copied as many times as needed. *If more space is needed, copy the blank form before completing the original.*

Do not mark in the shaded areas, which are for office use only.

Fill in the inventory year for which you are reporting in the space provided at the top of the form.

The district may, but need not, provide information on the facility's Stack ID's and corresponding parameters that exist in the criteria pollutant inventory. If not known or provided, consult the district. *If you are adding stack data to the information provided, or if no information exists on your form, write YaddY above the new stack ID and fill out all corresponding information. If you are deleting stack data from the information provided to you, write YdeleleY (along with a brief explanation of the reason for deleting the stack data) over the stack ID you want to eliminate, and cross out all corresponding data for the stack. If you are deleting a stack because a device it serves is no longer in use, make sure the stack does not serve other devices. If you wish to change the stack data for a specific stack ID, write YchangeY over the stack ID, cross out the incorrect data and write in the correct data.*

Report on the Stack Data Form, with a unique Stack ID number, every stack, vent, ducted building exhaust site, and other site of exhaust release of a listed substance. "Exhaust" shall refer to a release where the listed substance is entrained in air and where the direction of the release is determined or influenced by a duct, louver, or similar construction. Do not report on the Stack Data Form a non-ducted, non-directional release. Instead, specify "fugitive", if applicable, in the process description field on the Process and Emittents Data Form.

- (1) Air Basin and County ID: Using values provided in Table B-I, enter the Air Basin and County ID codes that correspond to the facility location.
- (2) Facility ID: Enter the district-assigned facility identification code. If the Facility ID is unknown, contact the district.
- (3) Action Code: Enter the appropriate Action Code: A, C, or D.
 - 'A' indicates Add--A new stack ID and the corresponding stack parameters have been added.
 - 'C' indicates Change--Previously reported data for the stack have been changed.
 - 'D' indicates Delete--The stack and its associated data are to be deleted. If deleting a stack, provided a brief explanation for the deletion. If a stack is being deleted because a device it serves is no longer in use, ensure the stack does not serve other devices.

(14) Stack ID: The Stack ID is a key numbering field used to link the information from these forms among stacks and to data in existing inventories. If a facility is adding a stack, a new stack ID needs to be created by the operator consistent with the existing number convention.

(25) Description of Stack or Vent (Desc. Code): Select the listed code number of the category which best describes the nature of the release point. To determine if codes 3 or 5 are appropriate, first determine the quantity HB, which is the height of the building closest to the release point. If there is no building within 500 horizontal feet of the release point, codes 3 and 5 do not apply. If there is a building within 500 horizontal feet of the release point, determine whether the actual point of release is BOTH less than a vertical distance from the ~~nearest building~~ ground of two-and-one-half times the value of HB AND less than a horizontal distance from the nearest building of five times the value of HB.

For stacks or vents in category 1, only the stack ID number and stack description code number are required. Other stack data are optional. For stacks or vents in categories 2, 3 or 4 described on the form, the stack height is also required. See item (6) below. For stacks or vents in categories 5 or 6 described on the form, all stack parameters are required. See items (6) through (10) below.

(16) Stack Height Above Ground: The vertical distance in feet, from ground to the point of emission.

(47) Inside Diameter: Inside diameter of the stack in feet. If the stack is not round, list the equivalent diameter (diameter of a circle of the same cross-sectional area as the stack).

(58) Exhaust Gas Temperature: Temperature, estimated to the nearest 50 degrees Fahrenheit, of the gas coming out of the stack under normal operating conditions.

(69) Exhaust Gas Flow Rate: The actual flow rate, measured in cubic feet per minute, of the gas exiting the stack at the reported gas temperature and atmospheric pressure. Ideally, the flow rate represents a measured value. If no measured data are available, a design rate may be used. Design rate or other available data may be expressed in standard cubic feet per minute (scfm) or any other reference cubic feet per minute (rcfm). The rate should be converted to actual cubic feet per minute (acfm) as follows:

$$\text{flow rate (acfm)} = \text{flow rate (rcfm)} \times \frac{Ta + 460}{Tr + 460}$$

where: Ta = actual exhaust gas temperature in degrees F, and
Tr = temperature at reference conditions (for standard conditions these would be one atmosphere pressure and 70 degree F)

(710) Exhaust Gas velocity: Exhaust velocity in feet per minute corresponding to exhaust flow rate. This field is optional if Exhaust Gas Flow Rate has been completed.

(811) Initial and date the form in the space provided at the bottom.

(12) UTM East, UTM North: These codes are used to describe the stack location in UTM (Universal Transverse Mercator) coordinates. Enter the coordinates which most closely correspond to the stack location. If the coordinates are not known, contact the district, who will provide guidance on assigning stack coordinates.

Grey shading and "Office Use Only" Removed

INVENTORY
YEAR
19__

AIR TOXICS EMISSION DATA SYSTEM REVIEW & UPDATE REPORT
DEVICE DESCRIPTION AND DEVICE-STACK RELATIONS

FORM
DEV

AIR BASIN:

| |
| |

COUNTY ID:

| |
| |

FACILITY ID

| | | | | | | | | |

*** ITEMS BELOW ARE OPTIONAL ***

ACTION
CODE

| |
| |

DEVICE
ID

| | | |
| | | |

DEVICE NAME

| |

NBR OF DEV.

| |
| |

STACK ID

| | | |
| | | |

PERMIT ID (IF AVAILABLE)

| |

DEVD1

| |

DEVICE
GROUP

| | | |
| | | |

ACTION
CODE

| |
| |

DEVICE
ID

| | | |
| | | |

DEVICE NAME

| |

NBR OF DEV.

| |
| |

STACK ID

| | | |
| | | |

PERMIT ID (IF AVAILABLE)

| |

DEVD2

| |

DEVICE
GROUP

| | | |
| | | |

ACTION
CODE

| |
| |

DEVICE
ID

| | | |
| | | |

DEVICE NAME

| |

NBR OF DEV.

| |
| |

STACK ID

| | | |
| | | |

PERMIT ID (IF AVAILABLE)

| |

DEVD1

| |

DEVICE
GROUP

| | | |
| | | |

ACTION
CODE

| |
| |

DEVICE
ID

| | | |
| | | |

DEVICE NAME

| |

NBR OF DEV.

| |
| |

STACK ID

| | | |
| | | |

PERMIT ID (IF AVAILABLE)

| |

DEVD2

| |

DEVICE
GROUP

| | | |
| | | |

ACTION
CODE

| |
| |

DEVICE
ID

| | | |
| | | |

DEVICE NAME

| |

NBR OF DEV.

| |
| |

STACK ID

| | | |
| | | |

PERMIT ID (IF AVAILABLE)

| |

DEVD1

| |

DEVICE
GROUP

| | | |
| | | |

ACTION
CODE

| |
| |

DEVICE
ID

| | | |
| | | |

DEVICE NAME

| |

NBR OF DEV.

| |
| |

STACK ID

| | | |
| | | |

PERMIT ID (IF AVAILABLE)

| |

DEVD2

| |

DEVICE
GROUP

| | | |
| | | |

DEVD1

| |

DEVICE
GROUP

| | | |
| | | |

DEVD2

| |

DEVICE
GROUP

| | | |
| | | |

DEVD1

| |

DEVICE
GROUP

| | | |
| | | |

DEVD2

| |

NAME

DATE

ARB/DEV/930401

Changes shown in circles.

EMISSION
YEAR
19__

AIR TOXICS EMISSION DATA SYSTEM REVIEW & UPDATE REPORT
DEVICE DESCRIPTION AND DEVICE-STACK RELATIONS

FORM
DEV

FOR OFFICE USE ONLY

COUNTY ID

FACILITY ID

OFFICE USE

ACTION
CODE

DEVICE
ID

DEVICE NAME

NBR OF DEV

STACK ID

PERMIT ID (IF AVAILABLE)

ACTION
CODE

DEVICE
ID

DEVICE NAME

NBR OF DEV.

STACK ID

PERMIT ID (IF AVAILABLE)

ACTION
CODE

DEVICE
ID

DEVICE NAME

NBR OF DEV.

STACK ID

PERMIT ID (IF AVAILABLE)

ACTION
CODE

DEVICE
ID

DEVICE NAME

NBR OF DEV

STACK ID

PERMIT ID (IF AVAILABLE)

ACTION
CODE

DEVICE
ID

DEVICE NAME

NBR OF DEV.

STACK ID

PERMIT ID (IF AVAILABLE)

ACTION
CODE

DEVICE
ID

DEVICE NAME

NBR OF DEV.

STACK ID

PERMIT ID (IF AVAILABLE)

***** OFFICE USE ONLY *****
***** EACH ITEM IS OPTIONAL *****

DEVD1

DEVICE
GROUP

DEVD2

DEVD1

DEVICE
GROUP

DEVD1

DEVD1

DEVICE
GROUP

DEVD2

DEVD1

DEVICE
GROUP

DEVD2

DEVD1

DEVICE
GROUP

DEVD2

DEVD1

DEVICE
GROUP

DEVD2

NAME

DATE

B - 3(de1)

AAB/DEV/240389

Device Description and Device-Stack Relations Form (DEV Form)

This form can be copied as many times as needed. If you need more space, copy the blank form before completing the original.

Do not mark in the shaded areas, which are for office use only.

Fill in the inventory year for which you are reporting in the space provided at the top of the form.

The district may, but need not, provide information on the facility's device ID's and corresponding parameters that exists in the criteria pollutant inventory. If not known or provided, consult the district. If you are adding device data to the information provided or if no information exists on this form, write 'add' above the new device ID and fill in all corresponding data. To delete a device and the corresponding parameter data from the information provided to you, write 'delete' (along with a brief explanation of the reason for deleting the device data) above the device number you want to eliminate, and cross out all corresponding data. To change the device data for a specific device ID, write 'change' above the device ID, cross out the incorrect data and write in the correct data.

- (1) Air Basin and County ID: Using values provided in Table B-I, enter the Air Basin and County ID codes that correspond to the facility location.
- (2) Facility ID: Enter the district assigned facility identification code. If the Facility ID is unknown, contact the district.
- (3) Action Code: Enter the appropriate Action Code: A, C, or D.
 - 'A' indicates Add--A new device has been added to the facility. Include corresponding device parameters.
 - 'C' indicates Change--Previously reported data for an existing device have been changed.
 - 'D' indicates Delete--The device and its associated data are to be deleted. CAUTION!! Deletion of a device will cause deletion of ALL process and emissions data (PRO Form data) associated with the device.
- (14) Device ID: The Device ID is a key numbering field used to link the information from these forms among devices and to data in existing inventories. To add a device, create a new device ID consistent with the existing numbering convention.
- (25) Device Name: A common name used to identify the equipment or device.
- (36) Number of Devices: This is the number of similar small devices that are aggregated together and considered for reporting purposes as one device. If this field is left blank it is assumed that there is only one device represented by the device ID.

- (47) Stack ID: The number of the stack associated with the device. If you are deleting a device and a stack which serves that device only, then it is appropriate to delete the stack ID from the stack data form, but DO NOT DELETE THE STACK if it serves any other reported device at the facility. Also, if a single device is served by more than one stack, enter the individual stack ID numbers on the appropriate PRO forms, rather than on the DEV form (see the PRO form stack ID instructions for more information).
- (58) Permit ID: The district permit number for the device.
- (69) Initial and date the form in the space provided at the bottom.

Grey shading and "Office Use Only" Removed

INVENTORY
YEAR

79

AIR TOXICS EMISSION DATA SYSTEM REVIEW & UPDATE REPORT
PROCESS AND EMITTENTS DATA

FORM
PRO
SIDE A

PROCESS DESCRIPTION

SCC NO

COUNTY
ID:

AIR
BASIN

ACTION
CODE

PROD1 (OPTIONAL)

PROD2 (OPTIONAL)

FACILITY ID:

STOP • FILL OUT ANY SUPPLEMENTAL PROCESS FORM(S) FOR THIS PROCESS FIRST. THEN FILL OUT THIS PAGE, SUBMITTING ONE FOR EACH EMITTING PROCESS IN YOUR FACILITY.

SECTION 1

PROCESS DATA

DEVICE
I.D.

SIC

CONFIDENTIAL (Y/N)
IF Y CHECK SMALL BOXES
AS APPROPRIATE

PROCESS EQUIPMENT DESCRIPTION

FUEL TYPE /OTHER PROCESS INFO

YR. OF EST./PRO

NOTE USE 1 SPACE FOR EACH DECIMAL POINT

STACK ID

TOTAL YEARLY
PROCESS RATE (UNITS/YR)

MAXIMUM HOURLY
PROCESS RATE (UNITS/HR)

PROCESS UNITS

HRS/
DAY

DAYS/
WEEK

WKS/
YEAR

RELATIVE MONTHLY ACTIVITY (%)

JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC

SECTION 2

EMITTENT DATA

EMISSIONS

ACTION
CODE

YR. OF
EST./EMS

SUBSTANCE NAME:

EMITTENT ID

EST
METH

ACTUAL EMISSIONS
FACTOR(LBS/UNIT)

ANNUAL AVERAGE
EMISSIONS (LBS/YR)

ALLOWABLE EMIS
LBS/YR(OPTIONAL)

CONTROL EQPT CODES
PRIMARY SECONDARY

OVERALL
CONTROL EFF(%)

FULL/
PART

HOURLY MAX EMISSIONS
(LBS/HOUR)

ACTION
CODE

YR. OF
EST./EMS

SUBSTANCE NAME:

EMITTENT ID

EST
METH

ACTUAL EMISSIONS
FACTOR(LBS/UNIT)

ANNUAL AVERAGE
EMISSIONS (LBS/YR)

ALLOWABLE EMIS
LBS/YR(OPTIONAL)

CONTROL EQPT CODES
PRIMARY SECONDARY

OVERALL
CONTROL EFF(%)

FULL/
PART

HOURLY MAX EMISSIONS
(LBS/HOUR)

NAME

DATE

B - 13

ARB/PROA:930312

Changes shown in circles.

Grey shading and "Office Use Only" Removed

INVENTORY
YEAR

19__

AIR TOXICS EMISSION DATA SYSTEM REVIEW & UPDATE REPORT
PROCESS AND EMITTENTS DATA
(ADDITIONAL EMITTENTS)

FORM

PRO
SIDE B

page

CO: _____

FACID: _____

DEVICE: _____

SCC: _____

EMITTENT DATA

EMISSIONS

ACTION
CODE

YR. OF
EST./EMS

SUBSTANCE NAME: _____

EMITTENT ID

EST
METH

ACTUAL EMISSIONS
FACTOR (LBS/UNIT)

ANNUAL AVERAGE
EMISSIONS (LBS/YR)

ALLOWABLE EMIS
LBS/YR (OPTIONAL)

CONTROL EQPT CODES
PRIMARY SECONDARY

OVERALL
CONTROL EFF(%)

FULL/
PART

HOURLY MAX EMISSIONS
(LBS/HOUR)

ACTION
CODE

YR. OF
EST./EMS

SUBSTANCE NAME: _____

EMITTENT ID

EST
METH

ACTUAL EMISSIONS
FACTOR (LBS/UNIT)

ANNUAL AVERAGE
EMISSIONS (LBS/YR)

ALLOWABLE EMIS
LBS/YR (OPTIONAL)

CONTROL EQPT CODES
PRIMARY SECONDARY

OVERALL
CONTROL EFF(%)

FULL/
PART

HOURLY MAX EMISSIONS
(LBS/HOUR)

ACTION
CODE

YR. OF
EST./EMS

SUBSTANCE NAME: _____

EMITTENT ID

EST
METH

ACTUAL EMISSIONS
FACTOR (LBS/UNIT)

ANNUAL AVERAGE
EMISSIONS (LBS/YR)

ALLOWABLE EMIS
LBS/YR (OPTIONAL)

CONTROL EQPT CODES
PRIMARY SECONDARY

OVERALL
CONTROL EFF(%)

FULL/
PART

HOURLY MAX EMISSIONS
(LBS/HOUR)

ACTION
CODE

YR. OF
EST./EMS

SUBSTANCE NAME: _____

EMITTENT ID

EST
METH

ACTUAL EMISSIONS
FACTOR (LBS/UNIT)

ANNUAL AVERAGE
EMISSIONS (LBS/YR)

ALLOWABLE EMIS
LBS/YR (OPTIONAL)

CONTROL EQPT CODES
PRIMARY SECONDARY

OVERALL
CONTROL EFF(%)

FULL/
PART

HOURLY MAX EMISSIONS
(LBS/HOUR)

ACTION
CODE

YR. OF
EST./EMS

SUBSTANCE NAME: _____

EMITTENT ID

EST
METH

ACTUAL EMISSIONS
FACTOR (LBS/UNIT)

ANNUAL AVERAGE
EMISSIONS (LBS/YR)

ALLOWABLE EMIS
LBS/YR (OPTIONAL)

CONTROL EQPT CODES
PRIMARY SECONDARY

OVERALL
CONTROL EFF(%)

FULL/
PART

HOURLY MAX EMISSIONS
(LBS/HOUR)

Changes shown in circles.

NAME _____

DATE _____

B - 14

ARB/PROB/930312

EMISSION
YEAR
19__

AIR TOXICS EMISSION DATA SYSTEM REVIEW AND UPDATE REPORT
PROCESS AND EMITTENTS DATA

FORM
PRO
SIDE A

FOR OFFICE USE ONLY

PROCESS DESCRIPTION

SCC NO

COUNTY ID

AIR BASIN

ACTION
CODE

PROD1 (OPTIONAL)

PROD2 (OPTIONAL)

FACILITY ID

STOP

FILL OUT ANY SUPPLEMENTAL PROCESS FORM(S) FOR THIS PROCESS FIRST. THEN FILL OUT THIS PAGE. SUBMITTING ONE FOR EACH EMITTING PROCESS IN YOUR FACILITY.

SECTION 1

PROCESS DATA

DEVICE
I.D.

SIC

CONFIDENTIAL (Y/N)
IF Y CHECK SMALL BOXES
AS APPROPRIATE

PROCESS EQUIPMENT DESCRIPTION

FUEL TYPE /OTHER PROCESS INFO

NOTE

USE 1 SPACE FOR EACH DECIMAL POINT

TOTAL YEARLY
PROCESS RATE (UNITS/YR)

MAXIMUM HOURLY
PROCESS RATE (UNITS/HR)

PROCESS UNITS

HRS/
DAY

DAYS/
WEEK

WKS/
YEAR

RELATIVE MONTHLY ACTIVITY (%)

JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC

OFFICE USE ONLY

SECTION 2

EMITTENT DATA

EMISSIONS

ACTION
CODE

EMITTENT ID

EST
METH

ACTUAL EMISSIONS
FACTOR (LBS/UNIT)

ANNUAL AVERAGE
EMISSIONS (LBS/YR)

ALLOWABLE EMIS
LBS/YR (OPTIONAL)

CONTROL EQPT CODES
PRIMARY SECONDARY

OVERALL
CONTROL EFF (%)

FULL/
PART

HOURLY MAX EMISSIONS
(LBS/HOUR)

ACTION
CODE

EMITTENT ID

EST
METH

ACTUAL EMISSIONS
FACTOR (LBS/UNIT)

ANNUAL AVERAGE
EMISSIONS (LBS/YR)

ALLOWABLE EMIS
LBS/YR (OPTIONAL)

CONTROL EQPT CODES
PRIMARY SECONDARY

OVERALL
CONTROL EFF (%)

FULL/
PART

HOURLY MAX EMISSIONS
(LBS/HOUR)

NAME

DATE

B - 4 (del)

ARB-PRO-890327

~~FORM
PRO
SIDE B~~

[illegible]

ANA PROC. 8905176

Process and Emittents Data Form (PRO Form)

Before completing this form, fill out any supplemental process form(s) for the emitting process first! Then fill out the Process and Emittents Data Form, submitting one for each emitting process in your facility. If more space is needed to report emittent data for additional substances from the process, use Side B of the form. Fill out Side A of the PRO Form only once per process. Copy the blank original as needed.

Do not mark in the shaded areas, which are for office use only!

Fill in the inventory year for which you are reporting in the space provided at the top of the form.

Process Data

The district may, but need not, provide information on the facility's process and corresponding emittent data that exists in the criteria pollutant inventory. If not known or provided, consult the district. If a process no longer exists at your facility, write delete at the top of the form (under the shaded area) and cross out all invalid process and emittent data. To delete specific items, write delete (along with a brief explanation of the reason for deleting the information) over the field you wish to eliminate, and cross it out. If you are deleting an emittent ID, be sure to cross out all corresponding parameter data. To change any of the information provided, write change over the incorrect data and write in the correct data. To add a pollutant to a process, write add above the new emittent ID, and fill in the corresponding parameter data.

- (1) Process Description: Enter a short description of the process.
- (2) SCC Number: Enter the SCC (Source Classification Code) which most closely corresponds to the process. Contact the district if assistance is needed in assigning codes.
- (3) County ID and Air Basin Codes: Using values provided in Table B-I, enter the appropriate County and Air Basin codes that correspond to the facility location.
- (4) Facility ID: Enter the district assigned facility identification code. If the Facility ID is unknown, contact the district.
- (5) Action Code/PRO: Enter the appropriate Action Code: A, C, or D. The Process Action Code should only be used for information reported on the top section of the PRO Form.
 - 'A' indicates Add--A new process has been added to the facility. Include all corresponding data on a PRO form.
 - 'C' indicates Change--Previously reported process data have been changed.

'D' indicates Delete--The process and its associated data are to be deleted. CAUTION!! Deletion of a process will cause deletion of ALL process and emissions data (PRO Form data) associated with the process.

- (16) Device ID: The number of the device associated with the process. This device ID should be included on the Device Description and Device-Stack Relations Form.
- (27) SIC: The Standard Industrial Classification number best describing the industrial activity associated with the process. If unknown, consult the district. The SIC data field has been added to the process data to describe activity at a portion of the facility when it is not the same as that of the overall facility activity. The SIC that is reported should be a full four-digit code. Do not use abbreviated two or three digit codes with trailing zeros such as "2600" or "2620".
- (38) Trade secret data: Indicate if any of the data items required on the facility diagram and designated on the facility diagram as instructed under Article 4 are trade secrets by placing a "Y" in the confidential box and a check mark in the smaller box labelled with a "C" to the right of each data item or group of items on the reporting form.

If there has been a request for the release of information to the public which has been designated as trade secret by the facility operator, additional codes are used to designate trade secret data. The following codes should be inserted as appropriate into the small boxes labelled with a "C" to the right of each data item or group of items on the reporting form.

1 - Confidentiality not claimed

2 - Confidentiality claimed--Denied: Following a public request for data, the facility operator did not obtain an action in an appropriate court for a declaratory judgement that the information is subject to protection

3 - Confidentiality claimed

4 - Confidentiality claimed--Granted: Following a public request for data, the facility operator obtained an action in an appropriate court for a declaratory judgement that the information is subject to protection.

Refer to Section 44346 of the Health and Safety Code for additional information about trade secret data.

- (49) Process Equipment Description: A common name to describe the equipment used in the process. If any of the following are represented, the description field shall so indicate: boiler, internal combustion engine, kiln, flare, incinerator, oven, furnace, dryer, or heater. Include the rated capacity of any boiler or other combustion device in either the process equipment description field or the fuel type/other process information field described in item (5) below.

(510) Fuel Type/Other Process Information: Describe the type of fuel used in the process or any other information needed to describe the process.

(11) Stack ID: Enter the number of the stack associated with the process. The stack ID entered should correspond to a stack entered on the STK Form. By entering the stack ID on the PRO form, it is possible to assign more than one stack to a single device. For example, a boiler may burn two fuels, natural gas and fuel oil, which are reported on separate PRO forms with distinct SCC numbers (to indicate two processes). If different control devices are used based upon the fuel usage, stack parameters may be different between the processes. Therefore, in this case, although the same device is performing the combustion, it is appropriate to assign the emissions to different stacks on the individual PRO forms.

(12) Year of Estimate/PRO: Enter the year that the data in Section 1 (Process Data) of the PRO Form corresponds to. For example, if the original submittal was for the 1989 inventory year, but in 1991, the value for the Total Yearly Process Rate was updated, the Year of Estimate/PRO field should be set to 1991.

(613) Total Yearly Process Rate: The actual annual process rate during the reporting year.

(714) Maximum Hourly Process Rate: The greatest operating rate that would be expected for the source in a one hour period.

(815) Process Units: The units for the total yearly and maximum hourly process rate. Refer to Table B-I to determine the correct code. When assigning Process Units, ensure that they are identical to the units of the associated SCC number.

(916) Hours/Day: The number of hours per day the process is in operation during the reporting year.

(1017) Days/Week: The number of days per week the process is in operation during the reporting year.

(1118) Weeks/Year: The number of weeks per year the process is in operation during the reporting year.

(1219) Relative Monthly Activity: The relative percentage of annual activity for the process that occurred during the month, reported to no more than three significant figures. For example, 12.3 in January would mean 12.3% of the yearly activity occurred in January.

Emittent Data and Emissions

- (20) Action Code/EMS: Enter the appropriate Action Code: A, C, or D. The Emissions Action Code should be used for each substance reported on Section 2 of the PRO Form.
- 'A' indicates Add--A substance not previously reported is being emitted by the process. Include all corresponding emissions data.
- 'C' indicates Change--Previously reported emissions related data for the process data have been changed.
- 'D' indicates Delete--The substance identified is no longer emitted from the process.
- (21) Year of Estimate/EMS: Enter the year that the reported data in Section 2 (Emittent Data) for each reported substance corresponds to. For example, if the original submittal was for the 1989 inventory year, but in 1991, emissions of some substances were updated based upon new source test results, the Year of Estimate/EMS field should be set to 1991 for the substances updated.
- (22) Substance Name: Write the name of the substance emitted. Use the substance names as shown in Appendix A. Because of space limitations, it is acceptable to abbreviate or truncate the substance names entered into this field.
- (1323) Emittent ID: Enter The Chemical Abstracts Service Registry number (CAS number) or Emittent ID code created by the ARB for substances in Appendix A-I or A-II, where indicated for the substance in Appendix A/I or A/II, or the applicable Emittent ID code provided in Table B/II for substances for which no CAS number exists.

As specified in Section 93335, gasoline vapors and coke oven emissions shall be reported as the aggregate substance using the corresponding Emittent ID code and CAS number, respectively. To avoid double counting of emissions in other cases listed in Section 93335, for which the list of substances includes individual substances and an aggregate substance that may contain one or more such individual substances, the following instructions apply.

Mixtures: In accordance with Section 93335, emissions of any individually listed substances shall be reported individually (except as specified in parts (a), (b), (c), and (d) below) even if the substances in Appendix A-I are included as part of a mixture or they are included in a group heading for a class of substances. Any unspecified (not individually listed) substances that are included in a mixture or group shall be summed and reported under the emittent identification number for the mixture or group heading. If there is not an emittent ID number in Appendix A-I for a mixture or group heading for a class of substances, only those component substances which are individually listed shall be reported.

- (a) Emissions of unspecified metal compounds shall be reported as the amount of the metal atom equivalent, using the metal emittent identification number for the metal itself (or the emittent identification number indicated in Appendix A, such as for reporting inorganic versus other-than-inorganic arsenic compounds).

For unspecified metal compounds which contain two or more listed metals (e.g., zinc chromate), each component metal shall be reported as the amount of the appropriate metal atom equivalent (i.e., the zinc portion of the weight as zinc equivalent and the chromate portion as hexavalent chromium equivalent).

For specific, individually listed metal compounds (e.g. lead chromate), emissions shall be reported for the compound (as pounds of the compound), using the emittent identification number for that compound.

- (b) Emissions of diesel exhaust and gasoline exhaust shall be reported as emissions of total particulate matter and total organic gas using the emittent identification numbers specified in Appendix A. Individually listed substances from diesel and gasoline combustion must also be reported using the applicable emittent identification numbers.

- (c) For gasoline vapors, total gasoline vapor emissions shall be reported using the applicable emittent identification number. Emissions of individual components of gasoline vapors which are listed substances shall also be reported.

- (dd) To avoid double counting of emissions in the cases listed in Sections 93335(f) and (g), pertaining to PAHs and dioxins, respectively, the following instructions apply:

(1) Where the emissions of the individual substances are required to be quantified by source testing or other methods, these emissions shall be reported for each individual substance using the corresponding CAS number or Emittent ID code. Also, Emissions of all substances source tested (even if not individually listed) for the substance group (PAHs or dioxins) shall be summed and the aggregate substance shall be reported using the Emittent ID code indicating "Total, with individual substances also reported."

(2) Where the emissions of the individual substances are not required to be quantified by source testing or other methods, and information is not available to estimate these emissions of individually listed substances, only the aggregate substance shall be reported, using the Emittent ID code indicating "Total, with individual substances not reported."

(1424) Estimation Method: Enter a code from Table B-III that describes the method used to collect or calculate the emissions of this substance.

(1525) Actual Emission Factor: The average rate at which the pollutant is actually being emitted to the atmosphere in lbs per process unit. The emission factor should include the effect of any pollution control equipment which reduces emissions of the listed emittent.

(1626) Control Equipment Codes (Primary and Secondary), Overall Control Efficiency, and Control Schedule Code: Primary control equipment is any installed equipment whose main purpose is to reduce emissions of the emittent listed. When more than one piece of control equipment is used, the equipment that is most effective in reducing the emissions of the listed emittent is the primary equipment; other equipment may be listed as secondary for that emittent. Control equipment which is primarily designed to remove another emittent and is not typically considered effective in controlling the listed emittent, but is demonstrated to affect the removal of the listed emittent, is considered secondary. Thus, secondary control equipment may be the only equipment controlling the listed emittent or may be used in conjunction with the primary control equipment which has a greater effect in reducing the listed emittent.

Enter the 3 digit code number from Table B-IV that best describes the control equipment used for a listed emittent, if applicable.

Table B-IV also shows the various emittents (PM, TOG, and SO₂) that are affected by each control equipment listed. An "x" in an emittent's column means the control equipment is known to reduce the particular emittent. Report the control efficiency approved by the district in the inventory plan for each affected substance.

Enter an F or P, respectively, in the Control Schedule Code field if control equipment was fully or only partially operational during the reporting period. If control equipment did not operate for part of the time that the source being controlled was in operation, adjust the control efficiency to account for downtime of the control equipment, and provide an explanation with the inventory report.

On the far right-hand side of the Table B-IV are listed substances that may be reduced by the specific control equipment. The column is not exhaustive but provides guidance in determining for what substances emissions may be reduced by different control devices.

For consistency with state and federal emission inventory practices, do not report a device as a control equipment that is used as a normal part of a process. For example, the recovery system for by-product gases from a coke oven should not be reported as VOC control equipment; a baghouse used to separate carbon particles from the main process vent gas stream at carbon black plants should not be reported as a particulate control. The effect of these devices on resultant

emissions should be accounted for within the basic emission calculation.

There are several gaseous control methods which are unique in that they function both as control devices while also producing emissions separate from the process(es) they are controlling. Examples are afterburners, CO-boilers, and flares. For consistency with state and federal emission inventory practices, the emissions produced by these control devices should be reported as a separate device.

(1727) Annual Average Emissions: The actual annual emissions of the emittent under typical (average) operating conditions, expressed in pounds per year, except for radionuclides and other radioactive substances, which shall be expressed in Curies per year. For instructions on how to use degree of accuracy values (Section 93334) in reporting facility emissions, refer to item (30). For reporting emissions derived from below Limit of Detection (LOD) source test data, refer to the Below Limit of Detection Emissions instructions in item (31).

(1828) Hourly Maximum Emission: The maximum hourly emissions of the emittent, expressed in pounds per hour, except for radionuclides and other radioactive substances, which shall be expressed in milliCuries per hour.

(1829) Initial and date the form in the space provided at the bottom.

Using Degree of Accuracy Values in Reporting Facility Emissions

(30) Degree of Accuracy. The general use of the degree of accuracy values is described in Section 93334 of the regulation. The actual degree of accuracy values for each substance are listed in Appendix A. This item specifically describes how to apply the degree of accuracy values when reporting facility emissions.

Note that degree of accuracy values are to be applied on a facilitywide basis, and not at the process level. For reporting, the total facility emissions of substances should be rounded to the nearest unit of the applicable degree of accuracy to determine if they must be reported on PRO forms. In other words, if facility emissions of a substance exceed one-half of the applicable degree of accuracy for the substance, then the substance emissions shall be reported on PRO forms. For example, assume that the total emissions of benzene from a facility are 7 lbs/year. The degree of accuracy value for benzene is 10 lbs/yr. Because the facility emissions exceed one-half of the benzene degree of accuracy, the emissions must be reported for any devices emitting benzene. If the total facility benzene emissions were 4 lbs/yr, the emissions (to the nearest ten) would round down to zero and would not need to be reported on any PRO Form. However, the presence of benzene would be required to be reported on the S-UP form.

The foregoing degree of accuracy discussion pertains only to reporting emissions that are calculated from estimation methods (such as mass balance or emission factors). Emissions from processes for which source testing is required must be reported to within the detection limit of the applicable source test method (see item (31) below).

Reporting Emissions Derived from
Below the Limit of Detection Source Test Results

- (31) Below Limit of Detection Emissions. This section provides instructions for reporting required "Hot Spots" source test data where some or all of the individual source test runs for a substance produce values which are below the limit of detection ("below LOD"). These instructions are intended to provide a uniform convention which ensures that the manner of reporting the data on the "Hot Spots" reporting forms conveys the available information most completely and consistently.

The below LOD instructions can be applied to the handling of "non-detected" test data from all types of source testing and measurement methods conducted under the "Hot Spots" program. These methods may include stack testing, fuel analysis, laboratory analysis of materials, and other monitoring and measurement methods.

In the following instructions, two cases are discussed separately:
(a) a case for which some (but not all) runs are below the LOD, and
(b) a case for which all runs are below the LOD.

(a) Some (But Not All) Test Runs Below LOD:

In situations where several test runs are performed for a given substance from a specific source, and one or more of the runs produced values below the LOD, while at least one run produced a value above the LOD, assign one-half of the corresponding LOD for each run which is below the LOD. Average the one-half LOD values together with the other runs that were above detectable limits for use in emissions computations.

The resultant Annual Average Emissions (in pounds per year) and the Hourly Maximum Emissions (in pounds per hour) shall be reported on the "Process and Emittents Data Form" (the PRO Form). In addition, a value of "98" must be recorded in the "Estimation Method Code" ("EST METH") field on the PRO Form to identify that the emissions have been computed from some detection-limited data. The "98" code indicates that a source test was conducted, but that some runs were above and some below the LOD. If all runs had been above the detection limits, the "normal" estimation method code for the applicable type of source test would have been used; for example, an EST METH code of "1" for stack testing, "2" for fuel analysis, etc.

(b) All Runs Below LOD:

In situations where several test runs are performed for a given substance from a particular source, and all of these runs resulted in values below the detection limits ("below the LOD"), facility operators shall report Annual Average Emissions and the Hourly Maximum Emissions on the "Process and Emittents Data Form" (the PRO Form) as "ND" (for non-detect). In addition, a value of "99" must be recorded in the "Estimation Method Code" ("EST METH") field on the PRO Form. The code of "99" indicates that a source test was conducted, but that all runs were below detectable limits.

When "ND" values are reported, the actual analytical limit of detection for all runs and the number of sample runs shall be reported in the source test report with other required source test results. Also, all tests shall be performed using appropriate sampling times, methods, and protocols as specified in the district approved source test protocol, and there must be no site specific data which could indicate the presence of the tested substance.

INVENTORY
YEAR
19

AIR TOXICS EMISSION DATA SYSTEM REVIEW AND UPDATE REPORT
UPDATE SUMMARY FORM

FORM
US
Page 1

Part A

To be completed by all facility operators subject to CCR Sections 93348(c-e).

COMPANY NAME

FACILITY ID

ADDRESS

COUNTY ID

CITY

ZIP CODE

AIR BASIN

TELEPHONE

CONTACT PERSON

SIGNATURE _____ DATE _____

Failure to submit required information or knowingly supplying false information is punishable to the extent defined in Health and Safety Code Sections 44381(a) and 44381(b), which includes minimum fines of not less than five hundred dollars.

Part B

To be completed by facility operators subject to CCR Sections 93348(c-d).

- (1) Is any new or updated source testing required because previous source test data were determined to be invalid by the district or the Executive Officer of the ARB?

Answer: Yes ☐ No ☐

Specify: _____

- (2) Have any new permits been issued or existing permits been modified since the last update year which allow the facility to change the nature or quantity of air emissions of any substances listed in Appendix A-I or A-II?

Answer: Yes ☐ No ☐

Specify: _____

- (3) Have processes or equipment been added or modified at the facility since the last update year which change the nature or quantity of facility emissions of any listed substances?

Answer: Yes ☐ No ☐

Specify: _____

- (4) Are there any substances listed in Appendix A-I or A-II that are now being emitted by the facility that were not reported during the last inventory period? (Consider changes due to new processes, fuel usage, fuel type, material usage at the facility, and new substances added to the list of substances.)

Answer: Yes ☐ No ☐

Specify: _____

Part B
(continued)

To be completed by facility operators subject to CCR Sections 93348(c-d).

- (5) Has the distance to the nearest receptor (as defined by the district prioritization and risk assessment procedures) decreased since the previous update year?

Answer: Yes ☐ No ☐ If Yes, provide the following:

Previous Value _____ meters

Current Value _____ meters

- (6) Using sound engineering judgment, estimate increases in overall facility activity since the last inventory year (consider cumulative changes in throughput, process rates, known emissions increases, or other activity indicators).

Overall Activity Increase (check one)

<10%

☐

10-50%

☐

51-100%

☐

>100%

☐**Part C**

To be completed by facility operators subject to CCR Sections 93348(c).

- (7) Has there been a net increase of 10% or more in the activity (e.g. throughput, fuel usage or type, process rates, feed rates, or emissions) of any facility device during the current update year in comparison to the last inventory period? [Facility operators may choose to identify devices that contribute to facility risk in accordance with CCR Section 93348(c).]

Answer: Yes ☐ No ☐ If yes, update all required information via an update plan and report.

Specify:

Update Summary Form (US Form)

Note: All information provided on the Update Summary Form is subject to verification by the district staff.

For the purposes of completing the Update Summary Form (the form), "update year" is defined as the calendar year prior to the year the form is due. The "last inventory period" is defined as the most recent reporting year for which an approved facility emission inventory report was submitted.

Fill in the update year in the space provided at the top of the form for the inventory year.

PART A

Fill in the Company Name. Enter the Address, City, and Zip Code for the facility location. Enter the name of a contact person for the facility and the phone number. Enter the district assigned facility identification code. If the Facility ID is unknown, contact the district. Using Table B-I locate the appropriate County and Air Basin codes which correspond to the facility location.

PART B

Part B of the form is to be filled out by all facility operators subject to Sections 93348(c-d). The information provided in this section will be reviewed by the district to determine if there have been significant changes at the facility which could increase the facility risk.

- (1) Updated Source Tests. If any new or updated source testing is required, check "Yes". Also, if conditions specified in Section 93351(c) are met (regarding when previous source test data cannot be used), check "Yes", and specify the affected sources and the condition(s) met. Answering yes to this question does not necessarily require re-source testing. It is provided to assist the districts in determining if the changes and substances affected are substantial enough to warrant retesting.
- (2) New or Modified Permits. Check "Yes" for this question if ANY new permits or modifications to existing permits have been issued to the facility which affect the nature or quantity of emissions of substances listed in Appendix A-I or A-II. Specify the new permits. For example: "Permit #394-453 issued on 8-28-90 to add XXX BTU Natural Gas Fired Boiler". Also, answer yes and specify any changes to existing permits which increase, or have the potential to increase emissions. Modifications to permits may include but are not limited to changes in fuel types, feed rates, production rates, or other parameters. For example: "Permit #887-124 modified to allow use of fuel oil in boiler".

- (3) New Processes or Equipment. If any new processes or equipment have been added or modified at the facility since the last update year which affects the nature or quantity of the emissions of any listed substance, check "Yes" and describe the changes. This question should address new sources of emissions which result from new processes or equipment, or are due to changes in solvent types, fuel types, control equipment, or other process modifications.
- (4) New Substances. If there are any substances listed in Appendix A-I or A-II that were not reported during the last inventory period, answer yes to the question and write the substance name. Consider substances resulting from new processes or material usage, and any new substances added to the list of substances that were not previously addressed.
- (5) Receptor Proximity Changes. If, since the last update year, the distance to the nearest receptor has decreased as defined by the district's prioritization and risk assessment procedures, answer yes and enter the previous and current values in meters. In answering the question consider changes at the facility which may have moved emission sources closer to property boundaries, changes which may have placed receptors closer to facility property boundaries, and changes in proximity to residential and nonresidential receptors. Distance estimates should be accurate to within 50 meters.
- (6) Increases in Facility Activity. Check the box which most accurately describes the changes in facility activity since the last update year. For this question estimate overall facility activity increases using fuel usage, process rates, throughput, economic, or other applicable indicators of facilitywide activity.

PART C

Part C shall be completed by facility operators subject to 93348(c).

- (7) Increases in Device Activity. If the activity for any identified device at the facility has increased by 10 percent or more since the last inventory period, answer "Yes" to question (7). Facility operators shall identify devices as specified in Section 93348(c). Device activity increases can be measured as increases in either the throughput, fuel usage, process rates, emissions of any listed substances, or other activity indicators.

For facility operators subject to Section 93348(c) which answer "Yes" to question (7), updated process and emissions data for the identified devices with increases shall be reported via an update plan and report as specified in Sections 93350-93353.

For those facilities with no device activity increases (question (7) is "No"), the Update Summary Form shall meet their update requirements unless, based upon data reported on the Update Summary Form or other information required by the district, the district requires an update plan and report.

For the purposes of answering question (7) devices may be consolidated. Consolidated devices must be within the same Source Classification Code (SCC). When the sum of the changes in activity for all consolidated devices within an SCC exceeds a 10 percent increase, an updated Process and Emittents (PRO) Form must be submitted by the facility operator for any individual device or groups of devices (reported on the same PRO Form) whose activity increases by 10 percent or more.

Revised form.

INVENTORY YEAR 19 _____	AIR TOXICS EMISSION DATA SYSTEM REVIEW AND UPDATE REPORT SUPPLEMENTAL PROCESS PARAMETER FORM SUBSTANCES USED, PRODUCED, OR OTHERWISE PRESENT	FORM S-UP
COUNTY ID: _____	AIR BASIN: _____	FACILITY ID: _____
ACTION CODE USED PRODUCED OTHERWISE PRESENT (SPECIFY) SUBSTANCE NAME _____		
ACTION CODE USED PRODUCED OTHERWISE PRESENT (SPECIFY) SUBSTANCE NAME _____		
ACTION CODE USED PRODUCED OTHERWISE PRESENT (SPECIFY) SUBSTANCE NAME _____		
ACTION CODE USED PRODUCED OTHERWISE PRESENT (SPECIFY) SUBSTANCE NAME _____		
ACTION CODE USED PRODUCED OTHERWISE PRESENT (SPECIFY) SUBSTANCE NAME _____		
ACTION CODE USED PRODUCED OTHERWISE PRESENT (SPECIFY) SUBSTANCE NAME _____		

New Fields shown in circles.

Supplemental Process Parameter Form
Substances Used, Produced, or Otherwise Present (S-UP Form)

Copy the form as many times as necessary for your facility.

The Supplemental Process Parameter Form (S-UP Form) is used to satisfy three separate reporting requirements.

- (a) Any substances listed in Appendix A-I (list of substances to be inventoried) which are emitted in quantities below the applicable degree of accuracy for the facility are to be reported on the S-UP form unless the emissions are based on source test results or reported on PRO forms. The quantities used, produced, or present (and their units) are not required to be reported.
 - (b) Substances listed in Appendix A-II (list of substances to be inventoried) that are used, produced, or otherwise present at the facility are to be reported on the S-UP form. The quantities used, produced, or present (and their units) not required to be reported.
 - (c) Facilities subject to Section 93308(d) shall use the S-UP form to report substances in Appendix A-I and A-II which are used, produced, or otherwise present. Quantities of substances used, produced, or present, and their units, must be reported.
- (1) Fill in the inventory year for which you are reporting in the space provided at the top of the form.
 - (2) County ID and Air Basin Codes: Using values provided in Table B-I, enter the appropriate County and Air Basin codes that correspond to the facility location.
 - (3) Facility ID: Enter the district assigned facility identification code. If the Facility ID is unknown, contact the district.
 - (4) Action Code: Enter the appropriate Action Code; A, C, or D.
 - 'A' indicates Add--A new substances is being reported for the facility on the S-UP Form.
 - 'C' indicates Change--Previously reported data for a substance has been changed.
 - 'D' indicates Delete--The substance is no longer used, produced, or otherwise present at the facility.
 - (5) Emittent ID: Enter the Chemical Abstracts Service Registry number (CAS number) or Emittent ID code where indicated for the substance in Appendix A-I or A-II. Refer to the PRO Form Emittent ID instructions for instructions on reporting listed substances which are mixtures or classes of substances.

- (6) Substance Name: Write the name of the substance emitted. Use the substance names as shown in Appendix A. Because of space limitations, it is acceptable to abbreviate or truncate the substance names entered into this field.
- (7) Substance Used Fields - "Used" refers to substances which are ingredients in any activity or process at the facility.
-Used: Enter an "X" in the space provided if the reported substance is used at the facility.
-Quantity: If required, approximate the quantity of the substance used and write in the value. Also provide the units corresponding to the quantity used (such as gallons, tons, etc.).
- (8) Substance Produced Fields - "Produced" refers to substances which are the result of any activity or process taking place at the facility.
-Produced: Enter an "X" in the space provided if the reported substance is produced at the facility.
-Quantity: If required, approximate the quantity of the substance produced and write in the value. Also provide the units corresponding to the quantity produced (such as barrels, pounds, etc.).
- (9) Substance Present Fields - "Otherwise Present" refers to substances present in any other way in an activity or process, such as by-products or reaction intermediates which appear temporarily during processing. Please specify the nature of the presence of the substance.
-Otherwise Present: Enter an "X" in the space provided if the reported substance is present at the facility.
-Quantity: If appropriate, write in the approximate quantity of the substance present at the facility and the units (such as gallons, pounds, etc.). Provide a brief description of how the substance is present.

TABLE B-I

COUNTY, AIR BASIN, AND DISTRICT CODES

<u>CO</u> <u>#</u>	<u>County Name</u>	<u>AB</u>	<u>Air Basin Name</u>	<u>DIS</u>	<u>District Name</u>
1	ALAMEDA	SF	SAN FRANCISCO BAY AREA	BA	BAY AREA AQMD
2	ALPINE	GBV	GREAT BASIN VALLEYS	GBU	GREAT BASIN UNIFIED APCD
3	AMADOR	MC	MOUNTAIN COUNTIES	AMA	AMADOR COUNTY APCD
4	BUTTE	SV	SACRAMENTO VALLEY	BUT	BUTTE COUNTY APCD
5	CALAVERAS	MC	MOUNTAIN COUNTIES	CAL	CALAVERAS COUNTY APCD
6	COLUSA	SV	SACRAMENTO VALLEY	COL	COLUSA COUNTY APCD
7	CONTRA COSTA	SF	SAN FRANCISCO BAY AREA	BA	BAY AREA AQMD
8	DEL NORTE	NC	NORTH COAST	NCU	NORTH COAST UNIFIED AQMD
9	EL DORADO	MC	MOUNTAIN COUNTIES	ED	EL DORADO COUNTY APCD
9	EL DORADO	LT	LAKE TAHOE	ED	EL DORADO COUNTY APCD
10	FRESNO	SJV	SAN JOAQUIN VALLEY	SJU	SAN JOAQUIN VALLEY UNIFIED APCD
11	GLENN	SV	SACRAMENTO VALLEY	GLE	GLENN COUNTY APCD
12	HUMBOLDT	NC	NORTH COAST	NCU	NORTH COAST UNIFIED AQMD
13	IMPERIAL	SED	SOUTHEAST DESERT	IMP	IMPERIAL COUNTY APCD
14	INYO	GBV	GREAT BASIN VALLEYS	GBU	GREAT BASIN UNIFIED APCD
15	KERN	SED	SOUTHEAST DESERT	KER	KERN COUNTY APCD
15	KERN	SJV	SAN JOAQUIN VALLEY	SJU	SAN JOAQUIN VALLEY UNIFIED APCD
16	KINGS	SJV	SAN JOAQUIN VALLEY	SJU	SAN JOAQUIN VALLEY UNIFIED APCD
17	LAKE	LC	LAKE COUNTY	LAK	LAKE COUNTY APCD
18	LASSEN	NEP	NORTHEAST PLATEAU	LAS	LASSEN COUNTY APCD
19	LOS ANGELES	SC	SOUTH COAST	SC	SOUTH COAST AQMD
19	LOS ANGELES	SED	SOUTHEAST DESERT	SC	SOUTH COAST AQMD
20	MADERA	SJV	SAN JOAQUIN VALLEY	SJU	SAN JOAQUIN VALLEY UNIFIED APCD
21	MARIN	SF	SAN FRANCISCO BAY AREA	BA	BAY AREA AQMD
22	MARIPOSA	MC	MOUNTAIN COUNTIES	MPA	MARIPOSA COUNTY APCD
23	MENDOCINO	NC	NORTH COAST	MEN	MENDOCINO COUNTY APCD
24	MERCED	SJV	SAN JOAQUIN VALLEY	SJU	SAN JOAQUIN VALLEY UNIFIED APCD
25	MODOC	NEP	NORTHEAST PLATEAU	MOD	MODOC COUNTY APCD
26	MONO	GBV	GREAT BASIN VALLEYS	GBU	GREAT BASIN UNIFIED APCD
27	MONTEREY	NCC	NORTH CENTRAL COAST	MBU	MONTEREY BAY UNIFIED APCD
28	NAPA	SF	SAN FRANCISCO BAY AREA	BA	BAY AREA AQMD
29	NEVADA	MC	MOUNTAIN COUNTIES	NSI	NORTHERN SIERRA AQMD
30	ORANGE	SC	SOUTH COAST	SC	SOUTH COAST AQMD
31	PLACER	MC	MOUNTAIN COUNTIES	PLA	PLACER COUNTY APCD
31	PLACER	LT	LAKE TAHOE	PLA	PLACER COUNTY APCD
31	PLACER	SV	SACRAMENTO VALLEY	PLA	PLACER COUNTY APCD
32	PLUMAS	MC	MOUNTAIN COUNTIES	NSI	NORTHERN SIERRA AQMD
33	RIVERSIDE	SC	SOUTH COAST	SC	SOUTH COAST AQMD
33	RIVERSIDE	SED	SOUTHEAST DESERT	SC	SOUTH COAST AQMD

TABLE B-I (continued)

COUNTY, AIR BASIN, AND DISTRICT CODES

<u>CO</u>	<u>#</u>	<u>County Name</u>	<u>AB</u>	<u>Air Basin Name</u>	<u>DIS</u>	<u>District Name</u>
	34	SACRAMENTO	SV	SACRAMENTO VALLEY	SAC	SACRAMENTO METROPOLITAN AQMD
	35	SAN BENITO	NCC	NORTH CENTRAL COAST	MBU	MONTEREY BAY UNIFIED APCD
	36	SAN BERNARDINO	SC	SOUTH COAST	SC	SOUTH COAST AQMD
	36	SAN BERNARDINO	SED	SOUTHEAST DESERT	SBD	SAN BERNARDINO COUNTY APCD
	37	SAN DIEGO	SD	SAN DIEGO	SD	SAN DIEGO COUNTY APCD
	38	SAN FRANCISCO	SF	SAN FRANCISCO BAY AREA	BA	BAY AREA AQMD
	39	SAN JOAQUIN	SJV	SAN JOAQUIN VALLEY	SJU	SAN JOAQUIN VALLEY UNIFIED APCD
	40	SAN LUIS OBISPO	SCC	SOUTH CENTRAL COAST	SLO	SAN LUIS OBISPO COUNTY APCD
	41	SAN MATEO	SF	SAN FRANCISCO BAY AREA	BA	BAY AREA AQMD
	42	SANTA BARBARA	OCS	OUTER CONTINENTAL SHELF	SB	SANTA BARBARA COUNTY APCD
	42	SANTA BARBARA	SCC	SOUTH CENTRAL COAST	SB	SANTA BARBARA COUNTY APCD
	43	SANTA CLARA	SF	SAN FRANCISCO BAY AREA	BA	BAY AREA AQMD
	44	SANTA CRUZ	NCC	NORTH CENTRAL COAST	MBU	MONTEREY BAY UNIFIED APCD
	45	SHASTA	SV	SACRAMENTO VALLEY	SHA	SHASTA COUNTY APCD
	46	SIERRA	MC	MOUNTAIN COUNTIES	NSI	NORTHERN SIERRA AQMD
	47	SISKIYOU	NEP	NORTHEAST PLATEAU	SIS	SISKIYOU COUNTY APCD
	48	SOLANO	SF	SAN FRANCISCO BAY AREA	BA	BAY AREA AQMD
	48	SOLANO	SV	SACRAMENTO VALLEY	YS	YOLO SOLANO APCD
	49	SONOMA	NC	NORTH COAST	NS	NORTH SONOMA APCD
	49	SONOMA	SF	SAN FRANCISCO BAY AREA	BA	BAY AREA AQMD
	50	STANISLAUS	SJV	SAN JOAQUIN VALLEY	SJU	SAN JOAQUIN VALLEY UNIFIED APCD
	51	SUTTER	SV	SACRAMENTO VALLEY	FR	FEATHER RIVER AQMD
	52	TEHAMA	SV	SACRAMENTO VALLEY	TEH	TEHAMA COUNTY APCD
	53	TRINITY	NC	NORTH COAST	NCU	NORTH COAST UNIFIED AQMD
	54	TULARE	SJV	SAN JOAQUIN VALLEY	SJU	SAN JOAQUIN VALLEY UNIFIED APCD
	55	TUOLUMNE	MC	MOUNTAIN COUNTIES	TUO	TUOLUMNE COUNTY APCD
	56	VENTURA	SCC	SOUTH CENTRAL COAST	VEN	VENTURA COUNTY APCD
	57	YOLO	SV	SACRAMENTO VALLEY	YS	YOLO SOLANO APCD
	58	YUBA	SV	SACRAMENTO VALLEY	FR	FEATHER RIVER AQMD

TABLE B-II

PROCESS (PT) UNIT CODES AND DESCRIPTIONS

CODE	DESCRIPTION	CODE	DESCRIPTION
PT001	# HOLES DRILLED	PT046	BALES PROCESSED
PT002	# ITEMS CAPACITY	PT047	BALES PRODUCED
PT003	# ITEMS IN OPERATION	PT048	BARREL YEAR
PT004	# ITEMS MANUFACTURED	PT049	BARRELS
PT005	# ITEMS PROCESSED	PT050	BARRELS OF OIL SEEPING
PT006	# ITEMS PRODUCED	PT051	BARRELS PROCESSED
PT007	# ITEMS THROUGHPUT	PT052	BBL-YEAR OF STORED ITEM
PT008	# ITEMS USED	PT053	BOARD FEET
PT009	# OF AVG. SIZE GAS LEAKS	PT054	COATING LINE
PT010	# OF ITEMS BURNED	PT055	CUBIC YARDS PILE
PT011	# OF TIMES USED	PT056	CUBIC YARDS PRODUCED
PT012	100 TONS LIQUIFIED	PT057	CYCLES
PT013	100 TONS MINED	PT058	EACH
PT014	100 TONS PRODUCED	PT059	FEET DRILLED
PT015	1000 BARRELS	PT060	GALLONS
PT016	1000 BARRELS BURNED	PT061	GALLONS BURNED
PT017	1000 BARRELS OF WASTEWATER	PT062	GALLONS CONSUMED
PT018	1000 BARRELS PROCESSED	PT063	GALLONS HEATED
PT019	1000 BARRELS PRODUCED	PT064	GALLONS OF COATING
PT020	1000 BBLs	PT065	GALLONS PROCESSED
PT021	1000 BOARD FEET	PT066	GALLONS PRODUCED
PT022	1000 CUBIC FEET BURNED	PT067	GALLONS STORED
PT023	1000 GALLONS	PT068	GALLONS USED
PT024	1000 GALLONS BURNED	PT069	HOT OIL TEST STATIONS
PT025	1000 GALLONS CAPACITY	PT070	HOURS OF OPERATION
PT026	1000 GALLONS PROCESSED	PT071	MEGAWATT-HOURS
PT027	1000 GALLONS PRODUCED	PT072	MILLION BTU HEAT INPUT
PT028	1000 GALLONS PUMPED	PT073	MILLION CUBIC FEET
PT029	1000 GALLONS STORAGE CAPACITY	PT074	MILLION CUBIC FEET BURNED
PT030	1000 GALLONS STORED	PT075	MILLION CUBIC FT PROCESSED
PT031	1000 GALLONS THROUGHPUT	PT076	MILLION GALLONS THROUGHPUT
PT032	1000 GALLONS TRANSFERRED	PT077	MILLION GALLS OF WASTEWATER
PT033	1000 GALLONS TRANSPORTED	PT078	PERSONS
PT034	1000 GALLONS WASTEWATER	PT079	POUNDS
PT035	1000 HORSEPOWER-HOUR	PT080	POUNDS STORED
PT036	1000 HOURS OF OPERATION	PT081	PRINTING LINE
PT037	1000 POUNDS	PT082	SCFM AVERAGE AIR FLOW
PT038	1000 POUNDS PRODUCED	PT083	SQ FT AREA
PT039	1000 SQ FT BOARD SAWED	PT084	TONS
PT040	1000 SQ FT PRODUCT SURFACE	PT085	TONS BURNED
PT041	1000 TONS SHIPPED	PT086	TONS CAPACITY
PT042	10000 SQ FT OF 3/8 IN. PLYWOOD	PT087	TONS CAST
PT043	100000 BRAKE HORSEPOWER	PT088	TONS CATALYST REMOVED
PT044	ACRES	PT089	TONS CHARGED
PT045	AMPERE-HOURS	PT090	TONS CLEANED

TABLE B-II (cont.)

PROCESS (PT) UNIT CODES AND DESCRIPTIONS

CODE	DESCRIPTION	CODE	DESCRIPTION
PT091	TONS COATED	PT116	TONS OVERBURDEN
PT092	TONS CONSUMED	PT117	TONS PROCESSED
PT093	TONS DRIED	PT118	TONS PRODUCED
PT094	TONS HANDLED	PT119	TONS RECEIVED
PT095	TONS IN OPERATION	PT120	TONS REMOVED
PT096	TONS IN PILE	PT121	TONS SHIPPED
PT097	TONS INOCULATED	PT122	TONS SHREDDED
PT098	TONS MELTED	PT123	TONS SPRAYED
PT099	TONS MINED	PT124	TONS STORED
PT100	TONS OF COATING	PT125	TONS THROUGHPUT
PT101	TONS OF COATING APPLIED	PT126	TONS TRANSFERRED
PT102	TONS OF MATERIAL	PT127	TONS TRANSPORTED
PT103	TONS OF MATERIAL LOADED	PT128	TONS TREATED
PT104	TONS OF MATERIAL UNLOADED	PT129	TONS USED
PT105	TONS OF PRODUCT	PT130	WELLS IN OPERATION
PT106	TONS OF RECLAIMED SOLVENT	<u>PT131</u>	<u>100 POUNDS OF PRODUCT</u>
PT107	TONS OF REFUSE IN-PLACE	<u>PT132</u>	<u>100 TONS PROCESSED</u>
PT108	TONS OF SOLVENT ADDED	<u>PT133</u>	<u>VEHICLE MILES</u>
PT109	TONS OF SOLVENT CONSUMED	<u>PT134</u>	<u>1000 PIECES PROCESSED</u>
PT110	TONS OF SOLVENT IN COATING	<u>PT135</u>	<u># OF X-RAYS TAKEN</u>
PT111	TONS OF SOLVENT IN INK	<u>PT136</u>	<u>1000 CONTAINERS STORED</u>
PT112	TONS OF SOLVENT USED	<u>PT137</u>	<u>TONS SOLVENT STRIPPED</u>
PT113	TONS OF STEAM PRODUCED	<u>PT138</u>	<u>TONS OF FUEL</u>
PT114	TONS OF WASTE DISPOSED	<u>PT139</u>	<u>1000 CUBIC FEET</u>
PT115	TONS OF WASTE REMOVED	<u>PT140</u>	<u>POUNDS PROCESSED</u>

TABLE B-II

EMITTING ID CODES FOR LISTED SUBSTANCES LACKING CAS NUMBERS

Emittent ID	Name of Listed Substance
[Refer to Note 1 regarding substance group headings]	
1000	Aflatoxins
1001 [Note 7]	2-Amino-9H-pyrido(2,3-b) indole (A-alpha-C)
1005	Analgesic mixtures containing phenacetin
1010	Androgenic (anabolic) steroids
[Note 2]	Antimony compounds
1016 [Note 2]	Arsenic compounds (inorganic)
1017 [Note 2]	Arsenic compounds (other than inorganic)
[Note 2]	Barium compounds
1020	Benzidine-based dyes
[Note 2]	Beryllium compounds
1025	Betel quid with tobacco
1030	Bitumens, extracts of steam- and air-refined bitumens
1036	Bleomycins
[Note 2]	Bromine compounds (inorganic)
[Note 2]	Cadmium compounds
1050	Carbon black extracts
1055	Carrageenan (degraded)
1056	Ceramic fibers
1058	Chlorobenzenes
1059	p-Chloro-o-toluidine (strong acid salts)
1060	Chlorophenols
1065	Chlorophenoxy herbicides
[Note 2]	Chromium compounds (other than hexavalent)
[Note 2]	Cobalt compounds
1066	Coke oven emissions
1068	Conjugated estrogen
[Note 2]	Copper compounds
1070	Creosotes
1073 [Note 4]	Cyanide compounds
1075	Dialkylnitrosamines
1078	Diaminotoluenes (mixed isomers)
1080	Dibenzofurans (chlorinated)
[Note 3]	Diesel engine exhaust
[Note 5]	Diesel fuel (marine)
1085	Dioxins (chlorinated dibenzodioxins), total, with the individual isomers also reported
1086	Dioxins (chlorinated dibenzodioxins), total, with the individual isomers not reported
1090	Environmental tobacco smoke
1091	Epoxy resins
1095	Estrogens, nonsteroidal
1100	Estrogens, steroidal
1101	Fluorides and compounds
1103	Fluorocarbons (brominated)
1104	Fluorocarbons (chlorinated)
1105 [Note 7]	Fluorocarbons (chlorinated & brominated)

TABLE B-II. (cont.)

EMITTING ID CODES FOR LISTED SUBSTANCES LACKING CAS NUMBERS

Emittent ID	Name of Listed Substance
[Note 3]	Gasoline engine exhaust
[Note 3]	Gasoline engine exhaust (condensates and extracts)
1110	Gasoline vapors
1111	Glasswool
1115	Glycol ethers and their acetates
1120	Hexachlorocyclohexanes
1125	Isocyanates
1128 [Note 2]	Lead compounds (inorganic)
1129 [Note 2]	Lead compounds (other than inorganic)
1131	Lubricant based oils and derived products, etc.
[Note 2]	Manganese compounds
[Note 2]	Mercury compounds
1135	Mineral fibers (other than manmade)
1136	Mineral fibers (fine; manmade)
1140	Mineral oils (untreated and mildly treated oils), etc.
[Note 2]	Nickel compounds
1146	Nickel refinery dust from the pyrometallurgical process
1148	Nitriofluoroacetic acid (salts)
1150	PAHs (Polycyclic aromatic hydrocarbons), total, with individual components also reported
1151	PAHs (Polycyclic aromatic hydrocarbons), total, with individual components not reported
[Note 5]	PAH-Derivatives (Polycyclic aromatic hydrocarbon derivatives)
1155	Polybrominated biphenyls (PBBs)
-	Polychlorinated dibenzo-p-dioxins, see Dioxins
1156 [Note 5]	Polychlorinated dibenzofurans, see Dibenzofurans
1157	POM (Polycyclic organic matter)
1158	Progestins
1159	Radionuclides
1166	Radon and its decay products
1167	Retinol/retinyl ethers
1168	Rockwool
[Note 5]	Residual (heavy) fuel oils
[Note 2]	Selenium compounds
1175	Silica, crystalline
[Note 2]	Silver compounds
1180	Shale oils
1181	Slagwool
1185	Soots
1190	Talc containing asbestiform fibers
[Note 2]	Thallium compounds
1199	Tobacco products, smokeless
1204	Toluene diisocyanates
1205	alpha-chlorinated toluenes
[Note 5]	Vanadium (fume or dust)
1206	Wood preservatives (containing arsenic and chromate)
1210	Xylenes
[Note 2]	Zinc compounds

TABLE B-II. (cont.)

EMITTEMENT ID CODES FOR LISTED SUBSTANCES LACKING CAS NUMBERS

Notes:

[1] - Reporting of a total for a substance which is a substance group heading does not supercede the required reporting of the individual substances which are listed in Appendix A under the group heading.

[2] - Emissions of unspecified metals compounds shall be reported as the amount of the metal atom equivalent, using the metal emittent identification number for the metal itself (or the emittent identification number indicated on the table).

For specific, individually listed metal compounds, emissions shall be reported for each compound using the emittent identification number for that compound.

[3] - Emissions of these mixtures shall be reported as emissions of total particulate matter and total organic gas, using the following emittent ID numbers:

9901	Diesel exhaust, particulate matter
9902	Diesel exhaust, total organic gas
9910	Gasoline exhaust, particulate matter
9911	Gasoline exhaust, total organic gas

Reporting of these mixtures shall not supercede the reporting of individually listed toxic substances from diesel and gasoline combustion.

[4] - Compounds of the form "X-CN". Report as the amount of Cyanide equivalent in the compound using an emittent identification code of 1073.

[5] - Individual, component listed substances must be reported for this mixture or group.

[6] - Emissions of Vanadium (fume or dust) shall be reported as the amount of the vanadium atom equivalent, using the identification number 7440622.

[7] - The emittent identification number has been discontinued for all facilities reporting for the first time and for all biennial updates. Use the listed replacement emittent identification code(s) or the assigned CAS number.

TABLE DELETED
INFORMATION
MOVED TO APPENDIX A

Table B-III

EMISSION ESTIMATION METHOD CODES

0 Not applicable or emissions are known to be zero (e.g., intermittent process).

MEASUREMENT-DERIVED METHODS*

1 Emissions based on source testing (primarily stack testing).

2 Emissions based on fuel analysis.

3 Emissions based on fence-line monitoring.

4 Emission based on laboratory analysis of composition.

ESTIMATION/CALCULATION METHODS*

5 Emissions calculated using ARB emission factors.

6 Emissions calculated using other factors.

7 Emissions based on material balance using engineering expertise and knowledge of process.

8 Emissions based on Material Safety Data Sheets or Technical Data Sheets.

9 Emissions calculated from an emission estimation technique developed by the ARB.

10 Emissions calculated from other emission estimation techniques.

11 Emissions based on other engineering calculations.

12 Best estimate.

OTHER*

13 New construction, not yet in operation.

14 Operation ceased.

LIMITED BY DETECTION LIMIT OF TEST METHOD*

98 Source test or other measurement conducted; however emissions from some (but not all) test runs were below detection limit.

99 Source test or other measurement conducted; however emissions from all test runs were below detection limit.

(* Headings will remain underlined in final text.)

TABLE B-IV

CONTROL EQUIPMENT IDENTIFICATION CODE NUMBERS AND
VARIOUS EMITTENTS AFFECTED

EQUIPMENT CODE	CONTROL DEVICE/METHOD	PM ^a	TOG ^b	SOx ^c	TOXIC SUBSTANCES THAT MAY BE CONTROLLED
000	No equipment				
001	Wet Scrubber	x	x	x	Cadmium, Chlorobenzene, Chromium Nickel, Toluene diisocyanate
002	Impingement Plate Scrubber	x	x	x	
003	Venturi Scrubber	x	x	x	
004	Fluid Bed Dry Scrubber	x	x		
005	Other Scrubbers (includes magnesium oxide, dual alkali, citrate process, ammonia, Wellman-Lord/ sodium sulfite, wet lime slurry, alkaline fly ash, sodium carbonate, sodium-alkali, sulfur oxides, hydrogen chloride, tray scrubber)		x	x	
006	Gravity Collector	x			
007	Centrifugal Collector	x			
008	Electrostatic Precipitator (wet and dry)	x			Arsenic, Beryllium, Cadmium, Chromium, Copper, Manganese, Nickel, Lead, Zinc, and other trace metals
009	Gas Scrubber		x	x	
010	Mist/ Vapor Suppressant in Solution	x		x	

EQUIPMENT CODE	CONTROL DEVICE/METHOD	VARIOUS EMITTENTS AFFECTED			TOXIC SUBSTANCES THAT MAY BE CONTROLLED
		PM	TOG	SOx	
011	Drift Eliminator for Cooling Towers	x			Chromium
012	Fabric Filter (Baghouse)	x			Arsenic, Beryllium, Cadmium, Chromium, Copper, Manganese, Nickel, Lead, Zinc, and other trace metals
013	Catalytic Afterburner	x	x		
014	Direct Flame Afterburner	x	x		
015	Catalytic Incineration		x		Acrylonitrile, Benzene, 1,3 Butadiene, Ethylene dichloride, Ethylene oxide, Phenol
016	Incineration		x		Acrolein, Acrylonitrile, Benzene, Benzyl chloride, 1,3 Butadiene, Epichlorohydrin, Ethylene dichloride, Formaldehyde, Methyl chloroform, Perchloroethylene/ trichloroethylene, Toluene, Toluene diisocyanate, Vinylidene chloride
017	Flaring	x	x		Acetaldehyde, Acrolein Acrylonitrile, Allyl chloride, 1,3 Butadiene, Chloromethanes, Chloroprene, Ethylbenzene/styrene Ethylene oxide, Formaldehyde, Methyl methacrylate, Propylene oxide
018	Foam Blanket on plating solution	x			Chromium
019	Plastic/Styrofoam Balls or Plastic Bead Covering for Plating Solution	x			Chromium
020	Catalytic Oxidation- Flue Gas desulfurization			x	

EQUIPMENT CODE	CONTROL DEVICE/METHOD	VARIOUS EMITTENTS AFFECTED			TOXIC SUBSTANCES THAT MAY BE CONTROLLED
		PM	TOG	SOx	
021	Alkalized Alumina			x	Acrylonitrile, Benzene, Carbon Tetrachloride/Perchloroethylene, Chlorobenzene, Chloroform, Ethylene dichloride, Methyl chloroform, Methyl methacrylate, Methylene chloride, Phenol, Naphthalene, Phosgene, Styrene, Toluene, Toluene diisocyanate, Trichloroethylene, Vinyl chloride, Vinylidene chloride, Xylene
022	Dry Limestone Injection			x	
023	Wet Limestone Injection			x	
024	Sulfuric Acid Plant-Contact Process			x	
025	Sulfuric Acid Plant- Double Contact Process			x	
026	Sulfur plant			x	
027	Vapor Recovery System (Includes condensers, hooding, and other enclosures)		x		
028	Adsorption (Includes use of activated carbon, activated clay, molecular sieve, and resins)		x		
029	Liquid Filtration System	x			Acetaldehyde, Acrylonitrile, Allyl chloride, Benzene, Benzyl chloride, 1,3 Butadiene, Carbon tetrachloride, Chlorobenzene, Chloromethanes, Chloroprene, Epichlorohydrin, Ethylbenzene/ Styrene, Ethylene dichloride, Ethylene oxide, Methyl chloroform, Perchloroethylene/Trichloroethylene, Phenol, Phosgene, Propylene/oxide, Vinylidene chloride, Xylene
030	Absorption Column	x	x	x	
031	Spray Tower	x	x		
032	Dynamic Separator	x			

EQUIPMENT CODE	CONTROL DEVICE/METHOD	VARIOUS EMITTENTS AFFECTED			TOXIC SUBSTANCES THAT MAY BE CONTROLLED
		PM	TOG	SOx	
033	Mat or Panel Filter	x			Acetaldehyde, Acrylonitrile, Allyl chloride, Benzene, Benzyl chloride, Butadiene, Carbon tetrachloride, Chlorobenzene, Chloromethanes ^d , Chloroprene, Ethylbenzene/Styrene, Ethylene dichloride, Ethylene oxide, Formaldehyde, Methyl chloroform Methyl methacrylate, Perchloroethylene/Trichloroethylene Phenol, Toluene, Toluene diisocyanate, Vinylidene chloride, Xylene
034	Metal Fabric Filter	x			
035	Process Gas Recovery		x		
036	Dust Suppression by Water Sprays, Chemical Stabilizers, or Wetting Agents	x			
037	Gravel Bed Filter	x			
038	Annular Ring Filter	x			
039	Condensers		x		
040	Cyclones	x			
041	Chemical Oxidation	x	x		
042	Chemical Reduction		x		
043	Ozonation		x		
044	Chemical Neutralization		x	x	Cadmium, Copper, Nickel
045	Water Curtain	x	x		
046	Nitrogen Blanket		x		
047	Conservation Vent		x		
048	Bottom Filling		x		
049	Submerged Filling		x		

EQUIPMENT CODE	CONTROL DEVICE/METHOD	VARIOUS EMITTENTS AFFECTED			TOXIC SUBSTANCES THAT MAY BE CONTROLLED
		PM	TOG	SOx	
050	Other Fugitive Emissions Controls (includes tank covers, collection hoods, and closed containers)	x	x		Methyl Chloroform, Methylene Chloride, Perchloroethylene, Trichloroethylene, Trichloroethane
051	Miscellaneous Control Devices				
a	Particulate Matter				
b	Total Organic Gases				
c	Sulfuric Oxides				
d	Chloromethanes include Methylene chloride, Chloroform, and Carbon tetrachloride.				

Supplemental Process Parameter Forms

Delete

Delete

FORM
~~S-UP~~

(SPECIFY)

FACID: ☒

DATE:

ARB/S-UP/90086

EMISSION
YEAR
19

AIR TOXICS EMISSION DATA SYSTEM REVIEW & UPDATE REPORT
SUPPLEMENTAL PROCESS PARAMETER FORM
STATIONARY COMBUSTION

FORM
S-CMB

COMPANY NAME

DEVICE ID:

PLEASE COPY THIS FORM AS MANY TIMES AS NECESSARY FOR YOUR FACILITY.
PLEASE READ THE INSTRUCTIONS BEFORE COMPLETING THIS FORM.

FOR OFFICE USE ONLY

CO:

AB:

FACID:

SCC:

FUEL & FEEDSTOCK COMPOSITION

UNCONVENTIONAL FUELS & FEEDSTOCKS:

INDICATE WITH A CHECKMARK ANY UNCONVENTIONAL FUELS OR FEEDSTOCKS USED IN YOUR FACILITY AT THE DEVICE ID INDICATED ABOVE. DESCRIBE BRIEFLY THE NATURE OF SUCH FUEL OR FEEDSTOCK IN THE SPACE PROVIDED. ALSO SUMMARIZE THIS FEEDSTOCK INFORMATION IN THE DATA FIELD, "FUEL TYPE/OTHER PROCESS INFO" ON CORE FORM PRO.

MUNICIPAL WASTE

HOSPITAL WASTE

HAZARDOUS WASTE

WASTE OIL

WASTE SOLVENT

AGRICULTURAL DEBRIS

TIRES

OTHER (PLEASE SPECIFY):

REPORT USE OF AUXILIARY FUEL WITH THESE FEEDSTOCKS IN ACCORDANCE WITH THE STATIONARY COMBUSTION REPORTING INSTRUCTIONS FOR THIS FORM, S-CMB.

FUEL & FEEDSTOCK ANALYSIS

COMPLETE THIS PART FOR EACH FUEL AND FEEDSTOCK USED AT THE DEVICE ID INDICATED ABOVE FOR WHICH A FUEL ANALYSIS WAS PERFORMED.

(IN WEIGHT %):

SULFUR:

(IN PARTS-PER-MILLION BY WEIGHT (PPM) OR MG/KG):

CHROMIUM VI:

PHOSPHORUS:

ARSENIC:

COPPER:

RADIONUCLIDES:

BERYLLIUM:

FLUORINE:

SELENIUM:

BROMINE:

LEAD:

ZINC:

CADMIUM:

MANGANESE:

CHLORINE:

MERCURY:

NICKEL:

REPORT EMISSIONS IN SECTION 2 OF CORE FORM PRO

NAME

DATE

ARB S-CMB/89100

STATIONARY COMBUSTION REPORTING INSTRUCTIONS

S-CMB

Complete one "Stationary Combustion Supplemental Form" (S-CMB) for each fuel or feedstock which has been analyzed, and also for each type of unusual fuel or feedstock used in your facility.

1. Unconventional Fuels & Feedstocks

Provide a brief description of such inputs in the space provided. Include the main components of more complex feedstocks such as municipal waste, hospital waste, or hazardous waste. Report components including plastic, metal, pathological wastes, treated wood, tires, consumer products, and batteries.

2. Fuel Analysis

Report here the results of any required lab analysis of any fuel or feedstock.

3. Completion of form PRO

Report the use of standard fuels as auxiliary fuels to supplement the listed feedstock as an individual emitting process called "Auxiliary Fuel Use" on a separate core form PRO.

If data are available to distinguish emissions resulting from the auxiliary fuel versus those resulting from the feedstock, report separately the emissions from each of these emitting processes (auxiliary fuel use and feedstock combustion) on separate PRO forms. If such data are not available to distinguish these emissions, summarize the combined emissions from the feedstock and fuel together and report them only on the feedstock combustion process core reporting form PRO.

DELETED

EMISSION
YEAR
19

AIR TOXICS EMISSION DATA SYSTEM REVIEW & UPDATE REPORT
SUPPLEMENTAL PROCESS PARAMETER FORM
COOLING TOWER

FORM
S-CT

COMPANY NAME _____

DEVICE ID:

PLEASE COPY THIS FORM AS MANY TIMES AS NECESSARY FOR YOUR FACILITY.
PLEASE READ THE INSTRUCTIONS BEFORE COMPLETING THIS FORM.

FOR OFFICE USE ONLY

CO: AB:
FACID:
SCC:

1. DEVICE INFORMATION

DESIGN DRIFT FRACTION (MFR. SPEC.): GPM DRIFT/GPM THROUGHPUT

TOWER DESIGN: ☐ OPEN CIRCUIT ☐ FORCED DRAFT
☐ CLOSED CIRCUIT ☐ COUNTERFLOW
☐ EVAPORATIVE CONDENSER ☐ CROSSFLOW

2. PROCESS INFORMATION

RATED COOLING CAPACITY (TONS):

AVERAGE: WATER FLOW (GPM): MAXIMUM: WATER FLOW (GPM):

TOWER APPLICATION: ☐ PROCESS COOLING ☐ BUILDING HVAC ☐ REFRIGERATION

3. EMITTENT INFORMATION:

WATER TREATMENT CHEMICAL	CONCENTRATION IN WATER (PPMW)	
	AVERAGE	MAXIMUM
CHROMATE		
CHLORINE		
SODIUM HYDROXIDE		
ZINC		
BROMINE		

REPORT EMISSIONS IN SECTION 2 OF CORE FORM PRO

COOLING TOWER SUPPLEMENTAL FORM INSTRUCTIONS

S-CT

First, make as many copies of this form as you have cooling towers which use listed substances for water treatment. Enter the Device ID for each such cooling tower (refer to the Core Form instructions for information on Device IDs).

1. Device Information

Report each tower's design drift fraction, which should be specified by the manufacturer. If you do not know a tower's drift fraction, use the appropriate default listed below.

No controls

0.02 gpm drift/gpm water circulation

Indicate the basic design of your cooling tower by checking the appropriate space(s).

2. Process Information

Provide the manufacturer's specified cooling tower capacity in tons, and the average and maximum water flow rates. ("Average" here is not intended to include unpredictable process upsets.) Indicate the type of application for this cooling tower by checking the appropriate space.

3. Emittent Information

Report average and maximum concentrations (in parts-per-million-by-weight (ppmw)) for each water treatment which involves a listed substance, including the use of chromate and biocides which contain listed substances.

For each such chemical, please supply the average and the maximum concentrations used, in terms of ppmw. To calculate the concentration of a listed substance which is part of an additive, you can multiply the additive concentration by the ratio of the molecular weight of the listed substance to the molecular weight of the additive.

4. CORE FORM PRO

Inorganic Additives

Average emissions of chromium VI in lbs/yr can be calculated using the following formula, which does not explicitly include the control efficiency:

$$EMS = (DF)(WR)(Co/1E6)(OF)(8.33 \text{ lb/gal})(8760 \text{ hr/yr})(60 \text{ min/hr})(52 \text{ lb Cr}/116 \text{ lb CrO}_4)$$

where DF = Drift Fraction (in gpm/gpm)
 WR = Water Circulation Rate (in gpm)
 Co = Concentration (in ppmw or lb additive per million lbs water)
 OF = Operation Fraction (in yr/yr)(dimensionless fraction of year)
 Cr = Chromium (VI)
 CrO₄ = Chromate
 1E6 = 1,000,000

If any of this information is not available, use the following defaults:

DF = 0.02
 WR = (2.4 gpm/ton of cooling) x (cooling tower capacity in tons)
 Co = 10 ppmw or 10 lb chromate/million lbs water (for chromate ONLY)
 OF = 1 yr/yr (for maximum possible operation)

Report any control devices on Form PRO. Assume no more than 90% control efficiency for a low-efficiency drift eliminator, and no more than 99.6% control efficiency for a high-efficiency drift eliminator, unless documentation is provided to demonstrate a greater value.

Calculate the resultant average annual emissions, using the average values for all the above quantities and reflecting any applicable control. Report these emissions on both Form S-CT and Form PRO.

To calculate the maximum hourly emissions, substitute the maximum values of each of the variables and divide the formula by 8760 hr/yr. Also, substitute the maximum value of the Operation Fraction which is probably 1. The calculation of maximum hourly emissions may require several trial calculations if all maximum conditions never occur simultaneously. For example, the maximum chromate concentration may only occur at the average water circulation rate, and vice versa. Then, both cases would need to be calculated to determine the actual maximum hourly emission rate.

Calculate inorganic emissions other than those of Chromium VI as follows:

If the concentration of a mixture containing a listed substance is used, replace the ratio 52/116 with the weight of the listed substance per unit weight of the mixture. If the concentration of the listed substance itself is used, replace the ratio 52/116 with 1. In these cases, DO NOT USE the default for additive concentration.

Organic Additives:

To report any listed organic substance which is contained in an organic additive to the cooling tower water, assume that what goes in comes out. Calculate emission rates based on the frequency and amount of additions of the additive.

EMISSION
YEAR
19

AIR TOXICS EMISSION DATA SYSTEM REVIEW & UPDATE REPORT
SUPPLEMENTAL PROCESS PARAMETER FORM
METAL PLATING

FORM
S-MP

COMPANY NAME

DEVICE ID:

PLEASE COPY THIS FORM AS MANY TIMES AS NECESSARY FOR YOUR FACILITY.
PLEASE READ THE INSTRUCTIONS BEFORE COMPLETING THIS FORM.

FOR OFFICE USE ONLY

CO:

AB:

FACID:

SCC:

GENERAL INFORMATION:

TYPE OF PLATING: CHROME TYPE OF CHROME PLATING: HARD PLATING
NICKEL ANODIZING
CADMIUM DECORATIVE

TANK INFORMATION:

CURRENT (TYPICAL OPERATING COND.): AMPS (MAX. OPER. COND.): AMPS

OTHER INGREDIENTS: % CYANIDE % HYDROCHLORIC ACID % HYDROFLUORIC ACID

AGITATION: AIR JETS CFM.
IMPELLER
OTHER (SPECIFY)

REPORT EMISSIONS IN SECTION 2 OF CORE FORM PRO

NAME:

B - 30(del)

DATE:

ARB S-MP.89087

METAL PLATING SUPPLEMENTARY FORM INSTRUCTIONS

S-MP

Copy the blank form as many time as you have plating tanks in your facility.

1. General Information

For each tank, check the appropriate space(s) to indicate the type of metal plating performed.

2. Tank Information

Report the amounts of electrical current used under both typical and maximum operating conditions. Report the bath's other ingredients, their concentrations, and the type of agitation, if any.

DELETED

EMISSION
YEAR
19__

AIR TOXICS EMISSION DATA SYSTEM REVIEW & UPDATE REPORT
SUPPLEMENTAL PROCESS PARAMETER FORM
STERILIZATION

FORM
S-ETO

COMPANY NAME _____

PLEASE COPY THIS FORM AS MANY TIMES AS NECESSARY FOR YOUR FACILITY.
PLEASE READ THE INSTRUCTIONS BEFORE COMPLETING THIS FORM.

I. ETHYLENE OXIDE (ETO)

DEVICE ID	STERILIZER VOL.(CU FT)	ETO % OF GAS USED*			LBS OF ETO / CHARGE
		100%	12%	OTHER	
		☐	☐	☐	_____
		☐	☐	☐	_____
		☐	☐	☐	_____
		☐	☐	☐	_____
		☐	☐	☐	_____
		☐	☐	☐	_____
		☐	☐	☐	_____

CALCULATE ETO GAS DENSITY (SEE INSTRUCTIONS)

FOR OFFICE USE ONLY

CO:

AD:

FACID:

SCC:

II. OTHER LISTED GASES (OLG)

DEVICE ID	OTHER LISTED GAS	STERILIZER VOL (CU FT)	OLG % OF GAS USED	OLG DENSITY (LB/CU FT)	LBS OLG/ CHARGE
	CFC-12 **		☐	_____	_____
	FORMALDEHYDE		☐	_____	_____
	PROPYLENE OXIDE		☐	_____	_____
	_____		☐	_____	_____
	_____		☐	_____	_____
	_____		☐	_____	_____

SCC:

* - PLEASE REPORT IN SECTION II OF THIS FORM ANY OTHER STERILIZING GAS USED WHICH IS ALSO A LISTED SUBSTANCE
** - REPORT ANY OTHER CHLORINATED & BROMINATED FLUOROCARBONS IN THE SPACES PROVIDED

REPORT EMISSIONS IN SECTION 2 OF CORE FORM PRO

NAME: _____

B - 32(del)

DATE: _____

ARB/S-ETO/90085

S-ETO

STERILIZER SUPPLEMENTAL FORM INSTRUCTIONS

Copy the blank form as needed to report additional ETO sterilizers or additional listed gases.

1. ETO Sterilization

For each ETO sterilizer, report its device ID, interior volume (in cubic feet) and the percentage of ETO used in the sterilizing atmosphere. If either of the typical fractions of 100% or 12% (weight percent) are used, check the appropriate box; for other percentages, report them in the 5th column, "other."

Calculate the number of pounds of ETO per sterilizing cycle by multiplying the 3 quantities, sterilizer volume, sterilizer gas density (see table below), and ETO fraction (i.e., percentage/100). The table provides values for sterilizer gas density at the most common pressures and temperatures for actual sterilizer operating conditions. For pressures and temperatures other than those listed in the table, the density formula below the table may be applied.

Other Listed Gases

Follow the same procedure as that for ETO. In all cases, report the exact weight percentage and the density of the sterilizing gas in question, at the actual pressure and temperature inside the sterilizer. As with ETO, calculate and report pounds/cycle for each such gas.

TABLE - Densities of Sterilizing Gases (lb/cu ft)

: Typical Gas Mixtures & Pressures			
Temperature: (deg. F)	100% ETO : 13.7 psia	12% ETO/88% CFC-12 : 24.7 psia	10% ETO/90% CO2 : 44 psia
70	: 0.106106	: 0.485073	: 0.340500
100	: 0.100422	: 0.459087	: 0.322259
130	: 0.095316	: 0.435743	: 0.305873
140	: 0.093727	: 0.428481	: 0.300775

Facilities using sterilizing gases containing other listed substances must calculate the appropriate density. The formula below, which was used to calculate the densities in the table, may be used by facilities reporting emissions of sterilizing gases containing other listed substances.

$$\text{Density (of sterilizer gas in lbs/cu ft)} = P(MW)/RT$$

Where P = pressure in lb/sq ft
 MW = molecular weight of sterilizing gas in lb/lb-mol
 R = thermodynamic gas constant, 1545.3 ft-lb/lb-mol deg. R
 T = temperature in deg. Rankine (deg. F + 460)

Core Form PRO

Complete one Core Form PRO for each sterilizer at the facility. The "Actual Emission Factor" for each listed gas used is the number of pounds/cycle for that gas. If there are controls on your sterilizer exhaust which permanently remove the listed gas from the atmosphere, please so indicate by selecting the appropriate controls code(s) from Table B-IV. This code(s), and the overall control efficiency, should be reported in the control equipment data field(s) in section 2 of Core Form PRO. When controls are used, the "Actual Emission Factor" is calculated by multiplying the number of pounds/cycle of each sterilizing gas by the quantity (1 minus the overall fractional control efficiency). Report the "Actual Emission Factor" in section 2 of Core Form PRO.

The appropriate process units are "cycles," PT057.

Using the operating schedule for each sterilizer, determine the annual number of sterilization cycles based on average operation, and the maximum number of cycles/hour.

Report the total yearly process rate in Section 1 of Core Form PRO as the total number of cycles/year. Similarly, report the maximum hourly rate as the maximum number of cycles/hour. To complete the emission information in Section 2 of Core Form PRO, multiply the average annual process rate and the maximum hourly process rate by the Actual Emission Factor to get the annual average emissions and the maximum hourly emissions, respectively, and fill in the appropriate boxes for each sterilizer and each listed gas used therein.

DELETED

APPENDIX C

FACILITY GUIDELINE INDEX
("FACILITY LOOK-UP TABLE")

C-I
RESPONSIBILITIES OF ALL FACILITIES

C-II
FURTHER RESPONSIBILITIES FOR SPECIFIC FACILITY CLASSES

FACILITY GUIDELINE INDEX

APPENDIX C-I RESPONSIBILITIES OF ALL FACILITIES

NOTHING IN THIS APPENDIX SHALL BE CONSTRUED AS REQUIRING THAT SOURCE TESTING BE CONDUCTED FOR SUBSTANCES SET FORTH IN THIS APPENDIX. FURTHER, IN CASES WHERE A SUBSTANCE SET FORTH HEREIN IS NOT PRESENT AT A PARTICULAR FACILITY, THE FACILITY OPERATOR SHALL NOT ATTEMPT TO QUANTIFY THE EMISSIONS OF SUCH SUBSTANCE, BUT SHALL PROVIDE ADEQUATE DOCUMENTATION TO DEMONSTRATE TO THE DISTRICT THAT THE POSSIBLE PRESENCE OF THE SUBSTANCE AT THE FACILITY HAS BEEN ADDRESSED AND THAT THERE ARE NO EMISSIONS OF THE SUBSTANCE FOR SPECIFIED REASONS.

Notes For Appendix C-I

(1) The following substance abbreviations are used throughout the index:

BaP = Benzo[a]pyrene
CFC-113 = Chlorinated fluorocarbon
EDB = Ethylene dibromide
EDC = Ethylene dichloride
ETO = Ethylene oxide
PerC = Perchloroethylene, Tetrachloroethylene
PCBs = Polychlorinated biphenyls
PAHs = Polycyclic aromatic hydrocarbons
POM = Polycyclic organic matter (other than PAHs)
TCA = 1,1,1-Trichloroethane, Methyl chloroform
TCE = Trichloroethylene

(2) The following Supplemental Process Parameter Reporting Form abbreviations are used throughout the index:

S-CMB = Supplemental Combustion Form
S-CT = Supplemental Cooling Tower Form
S-ETO = Supplemental ETO Sterilizers Form
S-MP = Supplemental Metal Plating Form
S-Up = Supplemental Use/Production Form

(3) PAHs are composed of the following substances:

Acenaphthene
Acenaphthylene
Anthracene
Benz[a]anthracene **
Benzo[b]fluoranthene **
Benzo[k]fluoranthene **
Benzo[a]pyrene **
Benzo[g,h,i]perylene
Chrysene
Dibenzo[a,h]anthracene **
Fluoranthene
Fluorene
Indeno[1,2,3,-cd]pyrene **
Naphthalene **
Phenanthrene
Pyrene

** listed substances

(4) Substances emitted by a particular device or process may not be limited to those listed in Facility Guideline Index. ALL FACILITIES ARE RESPONSIBLE FOR IDENTIFYING AND ACCOUNTING FOR ANY LISTED SUBSTANCE USED, MANUFACTURED, FORMULATED, OR RELEASED; THIS APPENDIX IS NOT AN EXHAUSTIVE LIST.

(5) Nitrosamines refer to the following listed substances:

Dialkylnitrosamines
4-(N-nitrosomethylamino)-1-(3-pyridyl)-1-butanone (NNK)
N-Methyl N'-nitro-N-nitrosoguanidine
p-Nitrosodiphenylamine
N-Nitrosodi-n-butylamine
N-Nitrosodietanolamine
N-Nitrosodimethylamine
N-Nitrosodi-n-propylamine
N-Nitroso-N-ethylurea
N-Nitrosomethylethylamine
N-Nitroso-N-methylurethane
N-Nitrosomethylvinylamine
N-Nitroso-N-methylurea
N-Nitrosomornicotine
N-Nitrosopiperidine
N-Nitrosopyrrolidine
N-Nitrososarcosine

(6) This Facility Guideline Index is arranged in alphabetical order. The first part of the index, Appendix C-I, lists devices common to many industries and the second part of the index, Appendix C-II, lists industry types. Extensive cross-referencing has been incorporated into the index, particularly in Appendix C-II, to identify industries and processes known by alternative names. It may be necessary to consult alternate names to locate a given industry type. Furthermore, more than one industry type may apply to a given facility. Column four of the index summarizes the Supplemental Process Parameter reporting forms that are likely to be necessary for reporting emissions from a particular industry type. (If the Device/Process category is extensive some of the forms listed with a main category heading may not be necessary for all processes listed under the main category heading.)

APPENDIX C-1
RESPONSIBILITIES OF ALL FACILITIES

ALL FACILITIES ARE RESPONSIBLE FOR IDENTIFYING AND ACCOUNTING FOR ANY LISTED SUBSTANCE USED, MANUFACTURED, FORMULATED, OR RELEASED; THIS APPENDIX IS NOT AN EXHAUSTIVE LIST.

All Facilities shall account for the following devices and emitting processes and associated emissions, and shall account for ANY OTHER PROCESS EQUIPMENT THAT MAY BE A SOURCE OF RELEASE OF ANY LISTED SUBSTANCE:

Device/Process	Types of Emissions	Specific Substances (see note 4)	Supplemental Process Parameter Reporting Form(s) to Use
FUEL/WASTE COMBUSTION			
Boilers, Heaters, Kilns IC Engines, Furnaces Coal-fired	Particulate metals including but not limited to:	Arsenic, Beryllium, Cadmium, Chromium, Copper, Lead, Manganese, Mercury, Nickel, Radionuclides, Selenium, Zinc And any other listed metals	S-CMB
	Other particulate-phase substances including but not limited to:	BaP & other PAHs*, Dibenzofurans, Dioxins, Phosphorus, POM	
	Gaseous products including but not limited to:	Acetaldehyde, Benzene, Dichlorobenzenes, EDC, EDB, Formaldehyde, Hydrogen chloride, Hydrogen fluoride, Phenols	
	Gaseous and particulate substances including but not limited to:	Arsenic, BaP & other PAHs*, Benzene, Beryllium, Cadmium, Chromium, Copper, Dioxins, Formaldehyde, Lead, Manganese, Mercury, Nickel, POM, Radionuclides, Selenium, Zinc, Any other listed metals	
		Arsenic, Benzene, BaP & other PAHs*, Beryllium, Cadmium, Chloroform, Chromium, Copper, Dibenzofurans, Dioxins, EDB, EDC, Manganese, Mercury, Methylene chloride, Nickel, Perc, PCBs, POM, Toluene, TCA, TCE, Xylenes, Any other listed metals	
Natural gas-fired	Gaseous and particulate substances including but not limited to:	Acetaldehyde, Acrolein, Benzene, Formaldehyde, POM, BaP & other PAHs*, Propylene, Toluene, Xylenes, Any other listed metal (due to contamination or other means)	

* See Note 3 (Notes appear at the beginning of this index.)

FUEL/WASTE COMBUSTION continued

Process gas-fired	Gaseous and particulate substances including but not limited to:	Benzene, Formaldehyde, Phenol, Any other listed metal	
Solid Waste-fired	Gaseous and particulate substances including but not limited to:	Formaldehyde, Manganese, Nickel, Phenol	
Wood-fired	Gaseous and particulate substances including but not limited to:	Acetaldehyde, Arsenic, Benzene, BaP & other PAHs*, Chromium, Copper, Dioxins, PCBs, POM, And any pesticides used on wood	
Other Liquid-fired	From boiler corrosion inhibitor	Nitrosomorpholine, Any other listed metals	S-CMB
Coke Ovens		Benzene, BaP & other PAHs*, Benzyl chloride, Coke oven emissions, Cresols, Dibenzofurans, Dioxins, Nitroamines, POM	
Flares	Particulate metals including but not limited to:	Arsenic, Beryllium, Chromium, Lead, Mercury, Nickel Any other listed metal	S-CMB
	Other particulate-phase substances including but not limited to:	BaP, Dibenzofurans, Dioxins	
	Gaseous products including but not limited to:	Aldehydes, Benzene, Dichlorobenzenes, EDB, EDC	
Landfill Gas Also see Boilers, Heaters, IC Engines, etc. Appendix C-I			
Incinerators - see ALL other combustion releases, but pay particular attention to the following:	Particulate metals including but not limited to:	Arsenic, BaP & other PAHs*, Beryllium, Cadmium, Chromium, Copper, Manganese, Mercury, Nickel, POM, Selenium, Zinc, Any other listed metal	S-CMB
	Other particulate-phase substances including but not limited to:	BaP & other PAHs*, Dibenzofurans, Dioxins, PCBs, POM	
	Gaseous products including but not limited to:	Benzene, Dichlorobenzenes, EDB, EDC, Hydrogen chloride, Hydrogen fluoride, Vinyl chloride	

Supplemental Process Parameter
Reporting Form(s) to Use

Specific Substances
(see Note 4)

Types of Emissions

Device/Process

Incinerators continued

Cotton Gin Waste
Hazardous Waste
Hospital Waste
Municipal Refuse
Pathological
Scrap Wood
Sludge

Solid/Biomass Waste
Waste-To-Energy

SOLVENT USE

Miscellaneous Use

C
1
UN

Degreasing Operations Gaseous and aerosol organic compounds
including but not limited to:

Cleaning & Drying
Metal D'grs
Oil, Wax, Fat
Extracting

Photoresist Stripping
Vapor Degreasing

Fabric Finishing (Woven)

Floor Wax

Paint & Varnish Removal

Polish (Shoe, Furniture)

Arsenic
Dioxins, Any other listed metals
Dioxins, Radionuclides, Any listed metals
BaP & other PAHs*, Beryllium, Cadmium,
Chromium, Manganese, Mercury, Nickel, POM
Dioxins
BaP & other PAHs*, POM
Acrolein, Arsenic, Asbestos, Beryllium,
Cadmium, Chromium, Dioxins, Manganese,
Mercury, Nickel, POM, PAHs*, Any other
listed metals
Any listed metals
Acrolein, Dibenzofurans, Dioxins, Manganese,
Nickel, POM, PAHs*, Any other listed metals

Acetaldehyde, Acrolein, Benzene, Carbon
tetrachloride, CFC-113, Chlorobenzene,
Chloroform, Cresols, Dimethyl sulfate,
Dioxane, EDC, Mercury, Methanol, Methylene
chloride, Nitrobenzene, Perc, Toluene,
TCA, TCE, Xylenes, Any other listed
chlorinated solvents

Benzene, Carbon tetrachloride, Chlorinated
fluorocarbon, Chlorobenzene, 1,4-Dioxane,
Freons, Methylene chloride, Perc, Toluene,
TCA, TCE, Any other listed substances
Chlorinated fluorocarbons
Methylene chloride, 1,4-Dioxane, TCA, TCE
Carbon tetrachloride, Dichloroethane,
Methylene Chloride
Glycol ethers, Methylene chloride, Xylenes
Perc, TCE

1,4-Dichlorobenzene

Carbon tetrachloride

Dioxane, Methylene chloride

Carbon tetrachloride

Specific Substances
(see Note 4)

Types of Emissions

Device/Process

SOLVENT USE continued

Rubber Cement

Surface Coating

Gaseous and aerosol organic compounds
including but not limited to:

Carbon tetrachloride

Acetaldehyde, Benzene, Carbon tetrachloride, Chlorobenzenes, Chloroform, Cresols, Dioxane, Methanol, Methylene chloride, Michler's ketone, Nitrobenzenes, 2-Nitropropane, Perc, Phenol, Phthalic anhydride, Styrene, Toluene, TCA, TCE, Xylenes
Carbon tetrachloride, Chloroform, Methylene chloride, Toluene, TCE
Dioxane, Methylene chloride, Perc, Toluene
Formaldehyde

From adhesives

From wood finishing
From metal finishing

Resin Application
Coating Application
Flashoff
Baking/Curing
Quenching
Storage & Handling - see Liquid Storage & Transfer, Appendix C-1

LIQUID STORAGE & TRANSFER (Fugitive Emissions)

Pipelines

Petroleum

Gaseous and aerosol fugitives
From: joints, valves

Benzene, Gasoline vapors, Toluene, Xylenes
Transported listed substances

Process Vents

Tanks

Petroleum Products
Tank Breathing

Gaseous and liquid petroleum products
including but not limited to:

Benzene, EDC, Gasoline vapors, Toluene, Xylenes, Stored listed substances

Tank Cars and Trucks
Filling
Tank Breathing

Gaseous, liquid and volatile solids
including but not limited to:

Each pure organic stored or transferred that is a listed substance
Each component of a mixture that is a listed substance

Fugitives
Equipment Leaks

Gaseous and aerosol organic compounds
From: vents, tanks, condensers
pumps, valves, compressors

Emissions vary according to substances involved in specific process

Supplemental Process Parameter
Reporting Form(s) to Use

Specific Substances
(see Note 4)

Types of Emissions

Device/Process

OTHER PROCESSES

Contaminated Soil/Water
Remediation

Chlorinated organics including:
Other organics including

Carbon tetrachloride, Chloroform, EDC,
Methyl chloroform, Perc, TCA, TCE
Benzene, Chlorobenzene, Toluene, Xylenes

Cooling Towers
Comfort Cooling

Gaseous and aerosol releases
possibly containing additives and
including but not limited to:
In part due to drift loss

S-CT

Chloroform, Chromium, Manganese,
Nickel, Any other additives

Process Cooling

Gaseous and aerosol releases
possibly containing additives and
including but not limited to:
In part due to drift loss

Chloroform, Chromium, Manganese,
Nickel, Any other additives

Drinking Water Treatment

Chloroform

Industrial Wastewater
Treatment

Chlorinated organics including:
Other organics including:

Carbon tetrachloride, Chloroform, EDC,
Methylene chloride, Perc, TCA, TCE
Benzene, Chlorobenzene, Toluene, Xylenes

On-site Fuel
Dispensing

Gaseous and aerosol releases
including but not limited to:

Benzene, Dibromoethane, Dichloroethane,
EDB, EDC, Gasoline vapors, Toluene,
Xylenes

Pesticide Use

Arsenic, Carbon tetrachloride, Dibromoethane,
1,4-Dichlorobenzene, Dioxins, EDB, EDC,
Lead, Nickel titanate, Zinc oxide

Printing - see Solvent Use, Appendix C-I
Also see Printing & Publishing, Appendix C-II

Sterilizers

ETO, Formaldehyde, Lead, Toluene,
Propylene oxide

S-ETO

Surface Coating

Pigments

Polymer & Resin Precursors
Residues/Impurities

Arsenic, Chromium oxide,
Lead oxide, Mercury, Zinc oxide
Acrylonitrile, 1,3-Butadiene, Ethyl acryl-
ate, Formaldehyde, Phenol, Styrene, Vinyl
chloride, Vinylidene chloride, Any other
listed substances

Supplemental Process Parameter
Reporting Form(s) to Use

Specific Substances
(see Note 4)

Types of Emissions

Device/Process

OTHER PROCESSES, Surface Coating, continued

Additives - Curing agents,
Surfactants, Defoamers,
Thickeners, Film-control agents
Plasticizers

Ammonia

Wastewater Treatment

Benzene, Chloroform, EDC, Methylene chloride,
TCE, Vinyl chloride, Any other listed
substances

CONTROL EQUIPMENT

Emission reductions must be quantified:
For each listed subst. & device

APPENDIX C-II FURTHER RESPONSIBILITIES FOR SPECIFIC FACILITY CLASSES

NOTHING IN THIS APPENDIX SHALL BE CONSTRUED AS REQUIRING THAT SOURCE TESTING BE CONDUCTED FOR SUBSTANCES SET FORTH IN THIS APPENDIX. FURTHER, IN CASES WHERE A SUBSTANCE SET FORTH HEREIN IS NOT PRESENT AT A PARTICULAR FACILITY, THE FACILITY OPERATOR SHALL NOT ATTEMPT TO QUANTIFY THE EMISSIONS OF SUCH SUBSTANCE, BUT SHALL PROVIDE ADEQUATE DOCUMENTATION TO DEMONSTRATE TO THE DISTRICT THAT THE POSSIBLE PRESENCE OF THE SUBSTANCE AT THE FACILITY HAS BEEN ADDRESSED AND THAT THERE ARE NO EMISSIONS OF THE SUBSTANCE FOR SPECIFIED REASONS.

Notes For APPENDIX C-II

(1) The following substance abbreviations are used throughout the index:

BaP = Benzo[a]Pyrene
CFC-113 = Chlorinated fluorocarbon
EDB = Ethylene dibromide
EDC = Ethylene dichloride
ETO = Ethylene oxide
PCBs = Polychlorinated biphenyls
PAHs = Polynuclear aromatic hydrocarbons
Perc = Perchloroethylene, Tetrachloroethene
POM = Polycyclic organic matter (other than PAHs)
TCA = 1,1,1-Trichloroethane, Methyl chloroform
TCE = Trichloroethylene

(2) The following Supplemental Process Parameter Reporting Form abbreviations are used throughout the index:

S-CMB = Supplemental Combustion Form
S-CT = Supplemental Cooling Tower Form
S-ETO = Supplemental ETO Sterilizers Form
S-MP = Supplemental Metal Plating Form
S-UP = Supplemental Use/Production Form

(3) PAHs are composed of the following substances:

Acenaphthene
Acenaphthylene
Anthracene
Benz[a]anthracene **
Benzo[b]fluoranthene **
Benzo[k]fluoranthene **
Benzo[a]pyrene **
Benzo[g,h,i]perylene
Chrysene
Dibenzo[a,h]anthracene **
Fluoranthene
Fluorene
Indeno[1,2,3,-cd]pyrene **
Naphthalene **
Phenanthrene
Pyrene

** listed substances

(4) Substances emitted by a particular device or process may not be limited to those listed in Facility Guideline Index.
ALL FACILITIES ARE RESPONSIBLE FOR IDENTIFYING AND ACCOUNTING FOR ANY LISTED SUBSTANCE USED, MANUFACTURED, FORMULATED, OR RELEASED; THIS APPENDIX IS NOT AN EXHAUSTIVE LIST.

(5) Nitrosamines refer to the following listed substances:

Dialkyl nitrosamines
4-(N-nitrosomethylamino)-1-(3-pyridyl)-1-butanone (NNK)
N-Methyl N'-nitro-N-nitrosoguanidine
p-Nitrosodiphenylamine
N-Nitrosodi-n-butylamine
N-Nitrosodilethanolamine
N-Nitrosodimethylamine
N-Nitrosodimethylamine
N-Nitrosodi-n-propylamine
N-Nitroso-N-ethylurea
N-Nitrosomethylethylamine
N-Nitroso-N-methylurethane
N-Nitrosomethylvinylamine
N-Nitroso-N-methylurea
N-Nitrosornicotine
N-Nitrosopiperidine
N-Nitrosopyrrolidine
N-Nitrososarcosine

(6) This Facility Guideline Index is arranged in alphabetical order. The first part of the Index, Appendix C-I, lists devices common to many industries and the second part of the Index, Appendix C-II, lists industry types. Extensive cross-referencing has been incorporated into the Index, particularly in Appendix C-II, to identify industries and processes known by alternative names. It may be necessary to consult alternate names to locate a given industry type. Furthermore, more than one industry type may apply to a given facility. Column four of the Index summarizes the Supplemental Process Parameter reporting forms that are likely to be necessary for reporting emissions from a particular industry type. (If the Industry/Emitting Process category is extensive some of the forms listed with a main category heading may not be necessary for all processes listed under the main category heading.)

APPENDIX C-II
FURTHER RESPONSIBILITIES FOR SPECIFIC FACILITY CLASSES

ALL FACILITIES ARE RESPONSIBLE FOR IDENTIFYING AND ACCOUNTING FOR ANY LISTED SUBSTANCE USED, MANUFACTURED, OR RELEASED; THIS APPENDIX IS NOT AN EXHAUSTIVE LIST.

If a facility falls within one or more of the following specific industry types, the facility operator shall account for the following devices and emitting processes, fugitive releases, and their associated emissions, and shall account for ANY OTHER PROCESS EQUIPMENT THAT MAY BE A SOURCE OF RELEASE OF ANY LISTED SUBSTANCE:

Industry/ Emitting Process	Type(s) of Emissions/ Emitting Process Points	Specific Substances (see Note 4)	Supplemental Processes Parameter Reporting Form(s) to Use
Adhesives Application - see Solvent Use and Other Processes, Appendix C-I			
Adhesives Mfg - see Chemical Mfg. Appendix C-II			
Aerospace Products Mfg. Research - see Chemical Mfg and Research & Development, Appendix C-II Surface Coating - see Solvent Use & Other Processes, Appendix C-I			
Agricultural Production		Ammonia, Chlorine, EDB, Hydrogen Sulfide, Lead, Silica, All listed metals	S-CMB
Agricult Chem Mfg - see Chemical Mfg. Appendix C-II Cotton Ginning Pesticide Use - see Other Processes, Appendix C-I Waste Burning - see Combustion, Appendix C-I		Ammonia, Arsenic	
Aircraft Mfg - see Transportation Equipment Mfg. Appendix C-II			
Airports - see Transportation Stations, Appendix C-II			
Air Stripping - see Contaminated Soil/Water Remediation, Appendix C-I			
Almond Processing Combustion Processes - see Combustion, Appendix C-I		Arsenic	S-CMB
Apparel Mfg - see Textile Mill, Appendix C-II			
Arsenic Mining - see Mining Non-Metals, Appendix C-II			
Artificial Flower Mfg		Toluene	
Asbestos Milling/Processing - see Clay, Glass, & Stone Prod, Appendix C-II			
Asbestos - see Mining Non-Metals, Appendix C-II			

* See Note 3 (Notes appear at the beginning of this Index.)

Industry/ Emitting Process	Type(s) of Emissions/ Emitting Process Points	Some Specific Substances (Including, but not limited to)	Supplemental Process Parameter Reporting Form(s) to Use
Asphalt Mat's Mfg	Asphalt Felts & Ctgs - see Petroleum & Coal Products, Appendix C-II Asphaltic Concrete Prod (Including Asphalt Paving Mat's Mfg) Processes Including: Batch Plants and Continuous Plants Paving Operations		S-CMB
Asphalt Felts & Ctgs - see Petroleum & Coal Products, Appendix C-II			
Asphaltic Concrete Prod			
(Including Asphalt Paving Mat's Mfg)			
Processes Including: Batch Plants and Continuous Plants Paving Operations	Particulate Phases Substances	Asbestos, Benzene, Formaldehyde, Organics, POM, PAHs*, Toluene, TCA, Xylenes. All listed metals	S-CMB
Combustion Processes - see Combustion, Appendix C-I Surface Coating - see Solvent Use & Other Processes, Appendix C-I Storage & Handling - see Liquid Storage & Transfer, Appendix C-I			
Auto Repair, Svc's & Garages - see Transportation Equipment, Appendix C-II			
Auto Parts Mfg - see Transportation Equipment, Appendix C-II			
Battery Production - see Metal Smelters, Appendix C-II			
Beryllium Mining - see Metal Smelters, Appendix C-II			
Bicycle Mfg/Rpr - see Transportation Equipment, Appendix C-II			
Boat Bldg/Rpr - see Transportation Equipment (Ship & Boat Bldg), Appendix C-II			
Box Mfg (folding paperboard type) - see Wood Product Mfg, Paper, Paperboard Containers & Boxes, Appendix C-II			
Bulk Plants and Terminals	Gaseous and aerosol releases including but not limited to: From fixed roof tanks From var. vapor sp. tanks From floating roof tanks From floating roof tanks From flanges, pumps, Valves, Vapor Collect/Control and tank trucks	Benzene, Gasoline vapors, Specific Stored Substances listed in Appendix A-I or A-II	
Barrel Breathing			
Barrel Filling			
Barrel Standing			
Barrel Withdraw			
Valves,			
Vapor Collect/Control			
and tank trucks			
Burial Caskets Mfg		Toluene	
Burning of Solid Waste (Open) - see Combustion, Appendix C-I			
Bus Mfg/Rpr - see Transportation Equipment, Appendix C-II			
Button Mfg		Formaldehyde, Styrene, Toluene, TCE	
Cadmium Plating - see Metal Plating, Appendix C-II			
Camper & Trailer Mfg - see Transportation Equipment, Appendix C-II			
Can Mfg - see Metal Product Fabrication, Appendix C-II			

Industry/ Emitting Process	Type(s) of Emissions/ Emitting Process Points	Some Specific Substances (Including, but not limited to)	Supplemental Process Parameter Reporting Form(s) to Use
Canned Food Product Mfg.	Can Fabrication - see Metal Product Fabrication, Metal Cans, Appendix C-II		S-CMB, S-ETO
	Combustion Processes - see Combustion, Appendix C-I		
	Food Processing - see Food Product Mfg, Appendix C-II		
	Paper Labeling - see Wood Product Mfg, Appendix C-II		
	Printing - see Printing & Publishing, Appendix C-II		
	Sterilization - see Other Processes, Appendix C-I		
	Surface Coating - see Solvent Use And Other Processes, Appendix C-I		
Car Mfg/Rpr - see Transportation Equipment, Appendix C-II			
Carbon Black & Charcoal Mfg - see Chemical Mfg, Carbon, Appendix C-II			
Cement Mfg - see Clay, Glass, & Stone Prod Mfg, Appendix C-II			
Ceramic Plants		Beryllium	S-CMB
Combustion Processes - see Combustion, Appendix C-I			
Charcoal Mfg - see Carbon, Appendix C-II			
Chemical Mfg	Gaseous and aerosol releases Including but not limited to: From process reactor vessel fugitive, storage, handling, ducted building exhaust	Any of the following types of chemicals, listed in Appendix A-I or A-II: FEEDSTOCK CHEMICAL(S) MANUFACTURED CHEMICAL(S) BY-PRODUCT CHEMICALS	S-CMB, S-CT, S-ETO, S-UP
Also see Combustion, Other Processes, Solvent Use, and Storage & Handling, Appendix C-I			
Miscellaneous		Ammonia, Bis(chloromethyl) ether, Carbon tetrachloride, Chlorine, Chloroform, Copper, Cresol, ETO, Formaldehyde, Hydro- gen chloride, Lead, Methylene chloride, Naphthalene, Phenol, Toluene, Toluene dithiocyanate, TCA	
Acids Mfg		Acetaldehyde, Acrolein, Copper, Cresols, Hydrochloric acid, Phenol, Toluene, Xylenes	
Adhesives & Sealants Mfg		Ammonia, Arsenic, Asbestos, Benzene, 1,4- Dioxane, EDC, Lead, Methylene chloride, Nitrosomorpholine, Toluene, TCA, TCE, Xylenes	
Aerospace Chem Mfg		Chloroform, EDC, Phosgene, Toluene	

Chemical Mfg continued
Agricultural Chem Mfg
Miscellaneous

Acetaldehyde, Acrolein, Acrylonitrile,
Ammonia, Arsenic, Benzene, 1,3-Butadiene,
Cadmium, Carbon tetrachloride, Chlorine,
Chlorobenzene, Chloroform, Copper, Cresol,
1,4-Dichlorobenzene, Dimethyl sulfate, EDC,
EDB, ETO, Formaldehyde, Hexachlorobenzene,
Hexachlorocyclopentadiene, Hydrazine,
Hydrogen chloride, Hydrogen sulfide, Lead,
Maleic anhydride, Mercury, Methyl bromide,
Methyl isocyanate, Methylene chloride,
Naphthalene, Phenol, Phosgene, Phthalic
anhydride, Vinyl chloride, Xylenes, Zinc,
Zinc oxide

Alkali Mfg - see Chemical Mfg, Industrial Inorganics, Appendix C-II
Fertilizers

Ammonia, Hydrogen sulfide, Mercury, Metal
compounds, Methanol, Phosphorus,
Sodium hydroxide

Ammonia, Cadmium, Hydrogen sulfide, Lead
Nickel

Ammonia, Arsenic, Cadmium, Hydrogen
sulfide

Ammonia
Arsenic

Aldehyde Mfg

Aldehydes, Toluene

Anti corrosives Mfg

Cresols, Hydrazine

Bases Mfg

Ammonia, Hydrazine, Sodium hydroxide

Carbon Black & Charcoal Mfg

Ammonia, BaP & other PAHs*, Formaldehyde,
Hydrogen sulfide, PCM
Any other listed metals

S-CMB

Combustion Processes - see Combustion, Appendix C-I

Chemical Preparations

Ammonia, Arsenic, Benzene, Cadmium, Chlor-
ine, Chromium, Copper, Formaldehyde,
Hexachlorocyclopentadiene, Hydrazine,
Hydrogen chloride, Hydrogen sulfide, Lead,
Maleic anhydride, Methyl isocyanate,
Methyl methacrylate, Perc, Radionuclides,
Styrene, Toluene, TCE, Vinyl chloride,
Xylenes, Zinc, Zinc oxide

Chlorine (Electrolytic)
Production

From: hydrogen stream
Also see Chem Mfg, Indust Inorg, Alkalies & Chlorine, Appendix C-II

Industry/ Emitting Process	Type(s) of Emissions/ Emitting Process Points	Some Specific Substances (Including, but not limited to)	Supplemental Process Parameter Reporting Form(s) to Use
Chemical Mfg continued Drug/Pharmaceutical Mfg Miscellaneous		Acrylonitrile, Allyl chloride, Ammonia, Arsenic, Benzene, Benzyl chloride, Carbon tetrachloride, Chlorine, Chlorobenzene, Chloroform, Chromium, 1,4-Dichlorobenzene, Dimethyl sulfate, 1,4-Dioxane, Epichlorohydrin, EDB, EDC, Formaldehyde, Hydrazine, Hydrogen chloride, Lead, Mercury, Methanol, Methyl methacrylate, Methylene chloride, Perc, Phenol, Phosgene, Styrene, Toluene, TCA, TCE, Vinylidene chloride, Xylenes, Zinc, Zinc oxide Arsenic, Benzene, EDC, Lead, TCA	
Biological Products		Acrylonitrile, Ammonia, Arsenic, Benzene, Carbon tetrachloride, Chloroprene, Chlorine, EDC, Formaldehyde, Hydrogen chloride, Lead, Mercury, Methyl bromide, Methyl methacrylate, Methylene chloride, Phenol, Styrene, Toluene, Vinylidene chloride	
Medicinals & Botanicals		Acrylonitrile, Ammonia, Arsenic, Benzene, Carbon tetrachloride, Chloroprene, Chlorine, EDC, Formaldehyde, Hydrogen chloride, Lead, Mercury, Methyl bromide, Methyl methacrylate, Methylene chloride, Phenol, Styrene, Toluene, Vinylidene chloride	
Blender Combustion Processes - see Combustion, Appendix C-I Drying Ovens Formulator Other Process Reactors Solvents - see Solvent Use, Appendix C-I Sterilizers - see Sterilizers, Appendix C-I Tanks - see Liquid Storage & Transfer, Appendix C-I			
Dyes Mfg		Benzene, Benzidine, Benzyl chloride, Chlorobenzenes, Chloroform, Cresols, Dichloromethane, Dimethyl sulfate, Dioxane, C.I. Direct Black 38, Hydrazine, POM, PAHs*, TCE, Vinyl chloride, Vinylidene chloride	
Elastomer & Surfactant Mfg Batch Processes		Epichlorohydrin	
Ethers Mfg		Dimethyl sulfate, Nitrobenzene, Propylene oxide	
Ethylene dichloride Pro Oxychlorination Air & Oxygen Proc	From: vents, storage	Carbon tetrachloride, Chloroform, ethylene dichloride	
Explosives		Acetaldehyde, Ammonia, Arsenic, Formaldehyde, Lead, Mercury, Nitrobenzene, Phenol, Toluene	

Industry/ Emitting Process	Type(s) of Emissions/ Emitting Process Points	Some Specific Substances (Including, but not limited to)	Supplemental Process Parameter Reporting Form(s) to Use
Chemical Mfg continued Fertilizers - see Chemical Mfg (Agricultural), Appendix C-II			
Flame Retardants Mfg		Hexachlorocyclopentadiene	
Fluorocarbon Mfg Reactor Venting Distillation Storage	From: vents, storage	Carbon Tetrachloride, Chloroform	
Indust Inorg Chem Mfg Miscellaneous		Acetaldehyde, Acrolein, Acrylonitrile, Allyl chloride, Ammonia, Arsenic, Asbestos, Benzene, Benzidine, Benzyl chloride, 1,3-Butadiene, Cadmium, Carbon tetrachloride, CFC 113, Chlorine, Chlorobenzene, Chloroform, Chromium, Copper, 1,4-Dichlorobenzene, Epichlorohydrin, EDB, EDC, ETO, Formaldehyde, Freon 113, Gasoline vapors, Hexachlorobenzene, Hexachloropentadiene, Hydrogen chloride, Hydrogen sulfide, Lead, Maleic anhydride, Manganese, Mercury, Methyl isocyanate, Methyl methacrylate, Methylene chloride, Naphthalene, Nickel, Nitrobenzene, Nitrosomorpholine, Perc, Phenol, Phosgene, Phosphorus, Phthalic anhydride, PCBs, Propylene oxide, Radionuclides, Styrene, Toluene, Toluene diisocyanate, TCA, TCE, Vinyl chloride, Vinylidene chloride, Xylenes, Zinc, Zinc oxide	
Alkalies & Chlorine		Ammonia, Arsenic, Asbestos, Benzene, 1,3-Butadiene, Carbon tetrachloride, Chlorine, Chlorobenzene, Chloroform, Mercury, Phosgene, Toluene, TCE, Vinyl chloride, Vinylidene chloride	
Cyclic Crudes & Intermediates		Acetaldehyde, Acrolein, Acrylonitrile, Ammonia, Arsenic, Benzene, Benzidine, Benzyl chloride, 1,3-Butadiene, Carbon tetrachloride, Chlorine, Chlorobenzene, Chloroform, Chromium, Cresol, Dibenzofurans, 1,4-Dichlorobenzene, 3,3'-Dichlorobenzidine, Dimethyl sulfate, 1,4-Dioxane, EDC, Formaldehyde, Gasoline vapors, Hexachlorobenzene, Hydrazine, Hydrogen chloride, Hydrogen sulfide, Maleic anhydride, Methyl bromide, Methyl isocyanate, Methylene chloride, Naphthalene, Nitrobenzene,	

Industry/ Emitting Process	Type(s) of Emissions/ Emitting Process Points	Some Specific Substances (Including, but not limited to)	Supplemental Process Parameter Reporting Form(s) to Use
Chemical Mfg, Cyclic Crudes, continued			
Gum & Wood Chems		Nitrosomorpholine, Pentachlorophenol (Chlorophenols), Phenol, Phosgene, Phthalic anhydride, POM, PAHs*, Styrene, Toluene, Toluene diisocyanate, TCE, Xylenes, Vinyl chloride	
	Wood Chem Mfg	Arsenic, Benzene, Bap & other PAHs*, Chromium, Formaldehyde, Naphthalene, POM, Toluene diisocyanate	
	Cresol	Cresols, Phenol, Xylenes	
	Cresylic Acid		
	Phenol		
Industrial Gases			
Pigments, Inorgan		Arsenic, Beryllium, Carbon tetrachloride, ETO, Hydrogen chloride, Mercury Ammonia, Arsenic, Cadmium, Chloroform, Chromium, Copper, Dimethyl sulfate, 1,4-dioxane, Hydrazine, Hydrogen chloride, Lead, Zinc, Zinc oxide	
Inks			
Miscellaneous Printing		Dioxane, Toluene	
		Ammonia, Arsenic, Benzene, Cadmium, Copper, Formaldehyde, Lead, Perc, Toluene, Vinyl chloride, Xylenes, Zinc	
		Cupferron, Thiourea	
Metal Chelating Agent Mfg			
Corrosion Inhib,			
Metal Treatment Chems			
Methionide Analogs Prod (poultry feed supp.)			
Methyl Chloroform Prod	From: hydrochlorinated vent condenser, steam stripper vent condenser	Acrolein Ethylene dichloride	
Military Chem Prod		Chloroform, EDC, Phosgene, Toluene	
Monomers			
Miscellaneous		Acetaldehyde, Acrylonitrile, Ammonia, Benzene, 1,3-Butadiene, Carbon tetrachloride, Chlorine, Chlorofluorocarbons, Dioxane, Epichlorohydrin, Ethyl chloride, EDB, EDC, ETO, Formaldehyde, Glycol ethers, Hydrochloric acid, Isocyanates, Maleic anhydride, Methyl bromide, Methyl methacrylate, Methylene chloride, Naphthalene, Nitrobenzene, Perc, Phenol, Phthalic anhydride,	

Industry/ Emitting Process	Type(s) of Emissions/ Emitting Process Points	Some Specific Substances (Including, but not limited to)	Supplemental Process Parameter Reporting Form(s) to Use
Chemical Mfg. Monomers, continued			
	Vinyl Chloride	PCBs, Propylene, Propylene oxide, Sodium hydroxide, Styrene, Toluene, TCA, TCE, Trichlorophenol, Urethane, Vinyl chloride, Vinylidene chloride, Xylenes, Zinc EDC	
	Nuclear Fuel Fabricat'n		
	Organic Chem Mfg	Radionuclides	
	Paints & Allied Prod's	Acrylamide, Acrylonitrile, Carbon tetrachloride, Chlorobenzene, Chloroform, Methylene chloride, Perc, Toluene	
	Pigment	Acetaldehyde, Ammonia, Arsenic, Asbestos, Benzene, Butadiene, Carbon tetrachloride, Chloroform, Chlorophenols, Chromium, Copper, Cresol, 1,4-Dioxane, Epichlorohydrin, Formaldehyde, Glycol ethers, Lead, Mercury, Methyl methacrylate, Methylene chloride, Naphthalene, Nickel, Nitrobenzene, Perc, Phenol, Phthalic anhydride, Styrene, Toluene, Toluene diisocyanate, TCA, TCE, Zinc, Zinc oxide	
	Perfume	Benzyl chloride, Cadmium, Toluene	
	Pesticides, Herbicides, Fungicides Mfg	Dimethyl sulfate	
	Photographic Chemicals Mfg	Arsenic, Benzene, Carbon tetrachloride, Chlorine, Chlorobenzene, Chloroform, Chloropicrin, Cresols, 1,4-Dichlorobenzene, Dimethyl sulfate, Dioxins, EDB, Hexachlorocyclopentadiene, Hydrazine, Hydrocyanic acid, Isocyanates, Lead arsenate, Methyl bromide, Naphthalene, N-Nitrosodimethylamine, Phenol, Phosphorus	
	Pigment (metal containing) Mfg Also see Chem Mfg, Inks and Paints, Appendix C-II	Methylene chloride	
	Plastics Materials & Synthetics	Cadmium, Chromium, Copper, Lead, Nickel, Zinc	
		Acrylamide, Acrylonitrile, Acrolein, Ammonia, Arsenic, Benzene, Benzidine, Cadmium, Carbon tetrachloride, Chlorine, Chlorobenzene, Chloroform, Chromium, Cresols, Dichloromethane, Dioxins, Formaldehyde, Hydrazine, Hydrocyanic acid, Hydrochloric acid, Hydrogen fluoride, Hydrogen sulfide, Isocyanates, Mercury, Methylene chloride, Nickel, Perc, Phenol, Phosgene, POM, PAlis*, Sodium hydroxide, Toluene, TCE, Vinyl chloride, Vinylidene chloride, Zinc	

Industry/ Emitting Process	Type(s) of Emissions/ Emitting Process Points	Some Specific Substances (Including, but not limited to)	Supplemental Process Parameter Reporting Form(s) to Use
Chemical Mfg. Plastics, continued			
Cellulosic Man-Made Fibers		Ammonia, Arsenic, Benzene, Chlorine, EDC, Hydrogen chloride	
Organic Fibers, noncellulosic		Acrylonitrile, Copper, Dimethyl sulfate, EDC, Toluene diisocyanate, Vinylidene chloride Acetaldehyde, Acrolein, Acrylonitrile, Allyl chloride, Ammonia, Arsenic, Asbes- tos, Benzene, 1,3-Butadiene, Cadmium, Carbon tetrachloride, Chlorine, Chloro- ethane, Cresol, Epichlorohydrin, EDC, ETO, Formaldehyde, Gasoline vapors, Hydrogen chloride, Hydrogen sulfide, Lead, Maleic anhydride, Mercury, Methyl methacrylate, Methylene chloride, Nitrobenzene, Perc, Phenol, Phosgene, PCB, Propylene oxide, Styrene, Toluene, Toluene diisocyanate, TCE, Vinyl chloride, Vinylidene chloride, Xylenes, Zinc oxide	
Resin Mfg.		Acrylamide, Acrylonitrile, Ammonia, Ben- zene, Bis(chloromethyl) ether, Cresols, Dioxins, Epichlorohydrin, Formaldehyde, Hexachlorocyclopentadiene, Maleic anhydride, Phenol, Vinylidene chloride, Xylenes	
Rubber Product'n & Gaseous, Aerosol, & Particulate re- Compoundg leases including but not limited to: Synthetic Monomers		Acrylonitrile, 1,3-Butadiene, Chloropyrene, Epichlorohydrin, Ethyl acrylate, EDC, ETO, Propylene, Styrene n-Nitrosodiphenylamine, Phthalic anhydride Nickel Toluene	
Retardants Catalysts Solvents Miscellaneous		Acetaldehyde, Acrylonitrile, Allyl chloride Ammonia, Benzene, Benzidine, 1,3-Butadiene, Carbon tetrachloride, Chlorine, Chloroform, Chloroprene, 3,3-Dichlorobenzidine, Epi- chlorohydrin, EDC, Hydrogen chloride, Lead, Maleic anhydride, Methylene chloride, Nitrosomorpholine, Perc, Sodium hydroxide, Styrene, Toluene, Toluene diisocyanate, Vinylidene chloride	
	Also see Chem Mfg, Monomers, Appendix C-II Synthetic Fibers	Hydrogen sulfide	
	Polish & Wax Mfg	Chloroform, Dioxane, Nitrosomorpholine	

Industry/ Emitting Process	Type(s) of Emissions/ Emitting Process Points	Some Specific Substances (Including, but not limited to)	Supplemental Process Parameter Reporting Form(s) to Use
Chemical Mfg continued			
Preservatives, disinfectants, biocides -		Cresols, Formaldehyde, Mercury, Phenol, 2,4,5-Trichlorophenol, Zinc Oxide	
Rubber, Non-Vulcanized, Mfg		Dioxins, Formaldehyde, Phenols	
Rubber Compounding	Processing Aids Accelerators	Zinc Ethylene thiourea, n-Nitrosodimethylamine, Zinc	
	Age Restorers Vulcanizing Agents Accelerator Activators	Nickel, Phenol Lead, Selenium, Zinc Zinc, Lead, Ammonia	
Solvents Mfg		Chloroform, Dioxins, Formaldehyde	
Soap, Cleaners, & Toilet Goods		Glycol ethers, Methanol, Dioxane	
Soap & Detergent Mfg Miscellaneous		Ammonia, Chlorine, Hydrogen chloride	
Optical Brighteners Polishes & Sanita- tion Goods		Benzene, EDC, ETO, Formaldehyde, Hydrogen sulfide, Methyl methacrylate, Toluene Nitrosomorpholine	
Surface Active Agts		Ammonia, Arsenic, Benzene, Carbon tetra- chloride, Chlorine, Chloroform, Cresol, 1,4-Dichlorobenzene, 1,4-Dioxane, Epichlorohydrin, Formaldehyde, Hydrogen chloride, Methylene chloride, Nitrobenzene, Perc, Toluene, TCA, TCE, Zinc, Zinc oxide	
Toilet Preparations		Benzene, Benzyl chloride, 1,4-Dioxane, Propylene oxide, Toluene, Zinc, Zinc oxide Acetaldehyde, Acrolein, Ammonia, Arsenic, Benzene, Benzyl chloride, CFC-113, Di- methyl sulfate, 1,4-Dioxane, Formaldehyde, Methylene chloride, Perc, Toluene, TCA, TCE, Zinc, Zinc oxide	
Textile Chemical Mfg		Acetamide, 2,4-Diaminoanisole, 2,4-Diamino- anisole sulfate, Urethane	
Varnish Mfg		Benzene, Dioxane	
(High)-Vinylidene Chloride Copolymer Fabric Process		Vinylidene Chloride	
Wax Mfg - see Polish Mfg, Appendix C-II			

Industry/ Emitting Process	Type(s) of Emissions/ Emitting Process Points	Some Specific Substances (Including, but not limited to)	Supplemental Process Parameter Reporting Form(s) to Use
Chemical Mfg continued			
Wood Chem Mfg - see Chem Mfg, Indus Inorgan, Gum & Wood, Appendix C-II			
Chemicals, Sales		Ammonia, Benzene, 1,3-Butadiene, Hydrogen chloride, Methylene chloride, Styrene, Toluene, TCA, Vinyl chloride	
Storage & Handling - see Liquid Storage & Transfer, Appendix C-I			
Chrome Plating - see Metal Plating, Appendix C-II			
Clay, Glass & Stone Pro Miscellaneous			S-CMB, S-CT
Abrasive Products		Ammonia, Arsenic, Cadmium, Chlorine, Chromium, Hydrogen chloride, Lead, Mercury, Nickel, Silica, Toluene, TCA, TCE Ammonia, Cadmium, Chlorine, Chromium, Formaldehyde, Hydrogen chloride, Lead, Manganese, Methylene chloride, Perc, Phenol, Styrene, Toluene, TCA, Xylenes, Zinc Asbestos, Benzene, Chromium, Copper, Nickel, Silica Formaldehyde, Hydrogen sulfide, Naphthalene, TCA, Xylenes	
Asbestos Mill/Processing			
Cement Products Floor Tile Friction Material Textiles Cement Mfg	Particulate, Gaseous, Aero Emis including but not limited to: From stacks, feed to mill & air separator, kiln, dryers, grinders	Asbestos, BaP, Benzene, Beryllium, Cadmium, Chromium, Copper, Formaldehyde, Hydrogen chloride, Lead, Manganese, Nickel, PCBs, POM, PAHs*, Zinc, All listed metals	S-CMB
Clinker Cooler Combustion Processes		Benzene, Formaldehyde, Hydrogen chloride, PCBs, POM, PAHs*, All listed metals	
	Also see Combustion, Appendix C-I		
Dry Processes Hydraulic		Arsenic, Cadmium, Chlorine, Chromium, Copper, Hydrogen chloride, Lead, Mercury, Nickel, Toluene, Zinc	
Wet Process Clay Products, Structrl Brick & Structrl Clay Tile Ceramic Wall & Floor Tile Clay Refractories		Arsenic, Beryllium, Lead Arsenic, Beryllium, Lead Beryllium, Chromium, Mineral fibers	

Clay, Glass & Stone Pro continued		
Concrete, Gypsum, & Plaster Products		Chromium, Styrene
Concrete Block & Brick		Ammonia, Chromium, Gasoline vapors, Toluene, Zinc
Concrete Products		Asbestos, Hydrogen sulfide
Ready-mixed Concrete		Mercury
Lime		TCE
Cut Stone & Stone Prod		Ammonia, Arsenic, Cadmium, Chlorine, Chromium, Hydrogen, Nickel, Toluene
Flat Glass		Ammonia, Asbestos, Chlorobenzene, Gasoline vapors, Hydrogen chloride, Lead, Toluene, TCE, Zinc
Gaskets, Packing, & Sealing Devices		Ammonia, Arsenic, Cadmium, Chlorine, Chromium, Formaldehyde, Hydrogen chloride, Lead, Mercury, Methylene chloride, Nickel, Perc, Styrene, Toluene, TCA
Glass & Glassware, Pressed & Blown		Arsenic
		Arsenic, Chlorine, Hydrogen chloride, Methylene chloride
Glass Container Mfg	From glass furnace	Chlorine, Chromium, Copper, Gasoline vapors, Hydrogen chloride
Minerals, Ground or Treated		Ammonia, Carbon tetrachloride, Formaldehyde, Mineral fibers, Phenol
Mineral Wool Prod		Ammonia, Beryllium, Chromium, Formaldehyde, Hydrogen chloride, Mineral fibers, Phenol, Zinc, Zinc oxide
Nonclay Refractories		Chlorine, Copper, Hydrogen chloride, Mineral fibers, Styrene, Toluene, Lead, TCA
Nonmetallic Mineral Prod		Styrene, Toluene
Pottery & Related Prod		Ammonia, Beryllium, Copper, Hydrogen sulfide, Lead, Methyl bromide, Naphthalene, Perc, Toluene, TCE, Zinc
Vitreous Plumbing Fixtures		Ammonia, Toluene, TCE, Xylenes
Fine Earthen Food Utensils		
Purchased Glass Products		
Combustion Processes - see Combustion, Appendix C-1		
Other Processes - see Other Processes, Appendix C-1		
Coal Combustion - see Combustion, Appendix C-1		
Coal, Wholesaling		Zinc, Zinc oxide
Coke Combustion - see Combustion, Appendix C-1		

Industry/ Emitting Process	Type(s) of Emissions/ Emitting Process Points	Some Specific Substances (Including, but not limited to)	Supplemental Process Parameter Reporting Form(s) to Use
Coke Production Also see Metal Smelters, Appendix C-II		POM, PAHs*, Toluene	S-CMB
Colleges & Universities Miscellaneous		Benzene, Carbon tetrachloride, Chloroform, Methylene chloride, Dioxane, Formaldehyde, Mercury, Nitrobenzene, Phenol, Toluene, TCA, Xylenes, Any other listed substance	S-CMB, S-CT, S-ETO, S-UP
Also see Chem Mfg. Appendix C-II Combustion, Appendix C-I Research & Development, Appendix C-II Solvent Use, Appendix C-I			
Combustion Processes - see Combustion, Appendix C-I			
Commercial/Institutional Combustion - see Combustion, Appendix C-I			
Cooling Towers - see Other Processes, Appendix C-I			
Correctional Institutions - see Combustion, Appendix C-I			
Cotton Ginning - see Agricultural Prod, Appendix C-II			
Crop Production - see Agricultural Prod, Appendix C-II			
Dry Cleaning Operations		Chlorinated Fluorocarbon, EDC, Perc, Toluene, TCA, TCE	S-CMB
Dyeing of Textiles	Gaseous, aerosol, and particulate releases, including but not limited to: Due to toxics in the solutions Fixatives Oxidizing Agents Dyeing Aids	Dyes - Auramine, Direct Black 38, Copper, Chromium Copper, Chromium Chromium Formaldehyde, Perc, Sodium hydroxide (caustic soda)	
Combustion Processes - see Combustion, Appendix C-I			
Elec. or Nat'l Gas Service Combustion Processes - see Combustion, Appendix C-I Cooling Towers - see Other Processes, Appendix C-I		TCA	S-CMB, S-CT
Electrical Assembly Cleaning - see Degreasing, Appendix C-I			
Electrical & Electronic Equip Miscellaneous		Freon 113, Methylene chloride, Perc, TCA, TCE	

Industry/ Emitting Process	Type(s) of Emissions/ Emitting Process Points	Some Specific Substances (Including, but not limited to)	Supplemental Process Parameter Reporting Form(s) to Use
Electric & Electronic Equip continued Communication Equipment Radio & TV Commun- ication Equipment		Ammonia, Benzene, Chlorine, Copper, For- maldehyde, Hydrogen chloride, Hydrogen sulfide, Lead, Methylene chloride, Perc, Toluene, Toluene diisocyanate, TCA, TCE, Xylenes, Zinc	S-CMB
Telephone & Tele- graph Apparatus		Ammonia, Copper, Formaldehyde, Hydrogen chloride, Methylene chloride, Perc, Styrene, Toluene, TCA, TCE, Xylenes	
Electric Distrib Equip Transformers		Ammonia, Naphthalene, Toluene, TCA, TCE Ammonia, Beryllium, Hydrogen chloride, Lead, Methylene chloride, Naphthalene, Perc, PCB, Toluene, TCA, TCE, Vinyl chloride, Xylenes, Zinc oxide	
Switchgear & Switch- board Apparatus		Ammonia, Formaldehyde, Hydrogen chloride, Perc, Toluene, TCA, TCE	
Electrical Industrial Apparatus		Ammonia, Arsenic, BaP, Copper, Hydrogen chloride, Lead, Mercury, Perc, PCB, Toluene, TCA, TCE	
Motors & Generators		Ammonia, Formaldehyde, Hydrogen chloride, Lead, Naphthalene, Phenol, Styrene, Toluene, TCA, TCE	
Industrial Controls Welding Apparatus, Electric Carbon & Graphite Products		Ammonia, Styrene, Toluene, TCA, TCE Nickel, Toluene	
Electronic Components & Accessories		BaP, Chlorine, Hydrogen chloride, Hydrogen sulfide, Styrene Acetaldehyde, Ammonia, Arsenic, Benzene, Benzyl chloride, Beryllium, Cadmium, Chlorine, Chloroform, Chromium, Copper, Epichlorohydrin, EDC, Formaldehyde, Gaso- line vapors, Hydrazine, Hydrogen chloride, Hydrogen sulfide, Lead, Manganese, Mercury, Methylene chloride, Naphthalene, Nickel, Perc, Phenol, Phosgene, PCB, Styrene, Toluene, Toluene diisocyanate, TCA, TCE, Xylenes, Zinc, Zinc oxide	
Batteries Primary, Dry & Wet Storage Cat'd Ray Pict'r Tubes		Cadmium, Lead, Naphthalene, Nickel, Zinc, Zinc Oxide Beryllium, Cadmium, Lead, Manganese, Nickel, TCA, Zinc, Zinc oxide Beryllium, Lead	

Industry/ Emitting Process	Type(s) of Emissions/ Emitting Process Points	Some Specific Substances (Including, but not limited to)	Supplemental Process Parameter Reporting Form(s) to Use
Electric & Electronic Equipment Prod continued			
Electron Tubes, Transmitting		Ammonia, Benzene, Beryllium, Cadmium, Chromium, Copper, Hydrogen chloride, Lead, Nickel, Styrene, Toluene, TCE, Xylenes	
Electron Capacitors		Allyl chloride, Chromium, Epichlorohydrin, Lead, Methylene chloride, TCA, TCE	
Integrated Circuit Board Mfg	From: developer, stripper screening-hardener	Butyl cellosolve (a Glycol ether)	
Semiconductors & Related Devices		Formaldehyde, Methylene chloride	
		Acetone, Ammonia, Arsene, Arsenic, Beryllium, Chlorine, Chlorobenzene, Ethylene glycol, Hydrazine, Hydrochloric acid, Hydrogen chloride, Hydrogen fluoride, Lead, Mercury, Methanol, Methylene chloride, Nickel, Perc, Phenol, Phosphene, Styrene, Toluene, Toluene diisocyanate, TCA, TCE, Xylenes, Zinc	
	Solvent Stations - see Liquid Storage & Transfer, Appendix C-I		
	Wet Chemical Stations		
	Mfg Process Reactors (Siliconizing)		
	Chemical Vapor Deposition		
	Diffusion Furnaces - see Combustion, Appendix C-I		
	Photorealist Lines		
	Surface Coating/Cleaning - see Solvent Use, Appendix C-I		
	Household Appliances		
	Elec Housewares/Fans	Beryllium, Toluene	
	Household Cooking Equipment	TCA, TCE	
	Household Laundry Equipment	Perc, Toluene	
	Household Refriger- ators & Freezers	Toluene	
	Sewing Machines	Toluene, TCA	
	Electric Lighting & Wiring Equipment	Toluene, TCE	
	Electric Lamps	Ammonia, Cadmium, Mercury, Toluene, TCA, TCE	
	Lighting Fixtures Commercial	Toluene, TCA	
	Residential Wiring Devices	Ammonia, Hydrazine, Toluene, TCA, TCE	
	Current-Carrying	Ammonia, Copper, Formaldehyde, Hydrogen chloride, Manganese, Methylene chloride, Nickel, Perc, Phenol, Toluene, Toluene diisocyanate, TCA, TCE, Zinc	
		Copper, Hydrogen chloride, Styrene, Toluene, TCE, Vinyl chloride, Zinc	
		Ammonia, Toluene, TCA, TCE, Xylenes	
	Noncurrent-Carry		
	Radio & TV Rec'ing Sets		
	Semiconductor Production - see Electric & Electronic Equip, Integrated Circuit, Appendix C-II		

Industry/ Emitting Process	Type(s) of Emissions/ Emitting Process Points	Some Specific Substances (Including, but not limited to)	Supplemental Process Parameter Reporting Form(s) to Use
Electric & Electronic Equip continued X-Ray Apparatus & Tubes		Beryllium, Hydrogen chloride, Perc, Toluene, TCA	
Elec, Gas, & Sanitary Svc's Electric Services		Acetaldehyde, Arsenic, Benzene, BaP, Beryllium, Cadmium, Chromium, Copper, Formaldehyde, Lead, Manganese, Mercury, Nickel, POM, PAHs*, PCBs, TCA	
Gas & Other Svc's Water Supply		Hydrogen sulfide	
Sanitary Services		Arsenic, Chromium, Hydrogen chloride, Hydrogen sulfide, Mercury, Perc, TCA, TCE	
Refuse Systems		Benzene, Chloroform, EDC, Methylene chlor- ide, Perc, TCA, TCE, Vinyl chloride	
Sewerage Systems		Ammonia, Arsenic, Beryllium, Cadmium, Chlor- ine, Chromium, Copper, Hydrogen chloride, Lead, Manganese, Mercury, Nickel, POM, PAHs*, PCBs, Toluene, Vinyl chloride, Zinc	
Steam Supply		Ammonia, Arsenic, Cadmium, Chromium, Copper, Hydrogen chloride, Lead, Mercury, Nickel, Zinc	
Electroplating - see Metal Plating. Appendix C-II		Benzene, Formaldehyde, Toluene	
Extermination - see Other Processes, Pesticide Use, Appendix C-I			
1 Felt Mfg		Asbestos	
26 Fiberboard Mfg - see Wood Product Mfg, Appendix C-II		Benzene	
Floor Cover Mfg, Hard Surface		Asbestos	
Floor Tile Mfg.			S-CMB, S-CT, S-ETO
Food Prod Mfg		Perc, Toluene	
Miscellaneous		Benzene, Formaldehyde, Toluene	
Bakery Products		Ammonia, Formaldehyde,	
Beverages		Ammonia, Benzene, Formaldehyde, Toluene	
Milk (Condens & Evap)		Arsenic, Toluene	
Soft Drinks		Arsenic, Benzene, Formaldehyde, Toluene	
Canned Foods		EDC, Methylene chloride	
Fats & Oils		Nickel, Toluene	
Shorten & Cook Oils		EDC	
Soybean Oil Mills		Acetaldehyde, Benzene, Benzidine, Carbon	
Food Preparation, Misc		Tetrachloride, Chloroform, Dimethyl sul- fate, Epichlorohydrin, ETO, Formaldehyde, Maleic Anhydride	

Industry/ Emitting Process	Type(s) of Emissions/ Emitting Process Points	Some Specific Substances (Including, but not limited to)	Supplemental Process Parameter Reporting Form(s) to Use
Food Prod Mfg continued Grain Mill Products Prepared Feeds Wet Corn Milling Manufactured Ice Meat Packing Plants Sausages & Other Prepared Meats	Roasted Coffee Seafood, Canned & Cured Sugar & Confec Prods Beet Sugar Confectionary Prod Canning - see Canned Food Prod, Appendix C-II Combustion Processes - see Combustion, Appendix C-I Solvents - see Solvent Use, Appendix C-I Sterilization - see Other Processes, Appendix C-I	Acrolein, Methyl bromide Chlorine, Hydrochloric Acid Arsenic Arsenic, Formaldehyde, Hydrochloric Acid Acetaldehyde, Ammonia, Arsenic, Chloroform, Formaldehyde, Phenol, Toluene, TCA Acetaldehyde, Acrolein, Methylene chloride, TCE Arsenic, Hydrogen sulfide Beryllium Benzene, Toluene, Formaldehyde	
Food Prod Machinery Mfg	Foundries - see Metal Smelters & Foundries, Appendix C-II	Methylene chloride, Perc, TCA, TCE	
Forestry Services	Also see Wood, Appendix C-II	Naphthalene	
Furniture & Fixture Mfg	Miscellaneous	Methylene chloride, Perc, TCE Methylene chloride, Phthalic anhydride, Toluene, TCE	S-CMB
Drapery Hardware and Blinds & Shades Household Furniture	Metal Upholstered Wood	Benzene, TCA	
TV & Radio Cabinets Office Furniture	Metal	Cresol, Toluene, TCE, Xylenes Cadmium, Copper, Lead, Toluene Ammonia, Methylene chloride, Naphthalene, Styrene, Toluene, TCA, TCE, Xylenes Toluene	
Wood		Ammonia, Formaldehyde, Methylene chloride, Perc, Styrene, Toluene, TCA, TCE, Xylenes, Zinc Oxide Formaldehyde, Methylene chloride, Naphthal- ene, Toluene, Toluene diisocyanate, TCA, TCE, Xylenes	
Partitions & Fixtures Metal Wood	Public Bldg & Related Furn	Methylene chloride, Perc, Toluene, TCA, TCE Ammonia, Toluene, Toluene diisocyanate, TCE Ammonia, Toluene, Xylenes	

Industry/ Emitting Process	Type(s) of Emissions/ Emitting Process Points	Some Specific Substances (Including, but not limited to)	Supplemental Process Parameter Reporting Form(s) to Use
Furniture & Fixture Mfg. continued			
Combustion Process - see Combustion, Appendix C-I			
Degreasing - see Solvent Use, Appendix C-I			
Metal Working - see Metal, Appendix C-II			
Surface Coating - see Solvent Use and Other Processes, Appendix C-I			
Upholstery Mfg - see Textiles, Appendix C-II			
Wood Working - see Wood, Appendix C-II			
Furniture Stores			
Furniture Rpr/Reupholstr		Ammonia, Methylene chloride, Toluene, TCA Ammonia, Lead, Methylene chloride, Toluene, Xylenes	
Cleaning - see Dry Cleaning, Appendix C-II			
Gas Combustion - see Combustion, Appendix C-I			
Gas Stations		Benzene, EDB, EDC, Gasoline vapors, Toluene, Xylenes	
Liquid Storage & Transfer - see Liquid Storage & Transfer, Appendix C-I			
Vehicle Refueling - see Other Processes, Appendix C-I			
Glass Products - see Clay, Glass & Stone Products, Appendix C-II			
Grain Production - see Agricultural Prod and Food Prod, Appendix C-II			
Grain Wholesaling			
Grey Iron Foundries - see Metal Smelters & Foundries, Appendix C-II			
Hospitals			
Gen'l Medical & Surgical			
Medical Labs			S-CMB, S-ETO
Combustion Processes - see Combustion, Appendix C-I			
Medical Instrument Mfg - see Instrument Mfg, Appendix C-II			
Research - see Research & Development, Appendix C-II			
Sterilizers - see Other Processes, Appendix C-I			
Incineration - see Combustion, Appendix C-I			
Industrial Combustion - see Combustion, Appendix C-I			
Industrial Wastewater Treatment - see Other Processes, Appendix C-I			
Inorganic Chemical Mfg - see Chemical Mfg, Inorganic, Appendix C-II			
		ETO, Hydrogen chloride, Hydrogen sulfide, Phenol, Styrene ETO	

Industry/ Emitting Process	Type(s) of Emissions/ Emitting Process Points	Some Specific Substances (Including, but not limited to)	Supplemental Process Parameter Reporting Form(s) to Use
Instruments & Related Prod's Engin'ring & Science Instr		Freon 113, Toluene, TCA Ammonia, Arsenic, Asbestos, Beryllium, Cadmium, Chromium, Copper, Formaldehyde, Hydrogen chloride, Lead, Methylene chloride, Perc, Phenol, Toluene, TCA, TCE, Zinc Ammonia, ETO, Mercury, Toluene Beryllium, Chlorine, Hydrogen chloride, Mercury, TCE Beryllium, Cadmium, Hydrogen chloride, Toluene, Zinc, Zinc oxide	S-ETO
Meas & Controlling Devices Environmental Contls		Beryllium, Toluene, TCA Ammonia, Hydrogen chloride, Toluene, TCE Ammonia, Cadmium, Chlorine, ETO, Formalde- hyde, Phenol, Toluene, TCA, Zinc, Zinc oxide Ammonia, TCA, TCE	
Process Control Inst		Acetaldehyde, Acrylonitrile, Ammonia, Arsenic, Asbestos, Benzene, Benzidine, Benzyl chloride, Bis(chloromethyl) ether, Cadmium, Carbon tetrachloride, Chlorine, Chlorobenzene, Chloroform, Chromium, Dimethyl sulfate, 1,4-Dioxane, Epichloro- hydrin, EDC, Formaldehyde, Hydrazine, Hydrogen chloride, Lead, Mercury, Methylene chloride, Naphthalene, Nickel, Perc, Phenol, Phosgene, Propylene oxide, Styrene, Toluene, Toluene diisocyanate, TCA, TCE, Vinyl chloride, Vinylidene chloride, Xylenes, Zinc, Zinc oxide ETO, Formaldehyde, Perc, Toluene, TCA, TCE, Zinc	
Electricity Meas- uring Instruments		Ammonia, Chromium, ETO, Formaldehyde, Hydrogen chloride, Lead, Nickel, Toluene, TCA, Vinylidene chloride Acetaldehyde, Formaldehyde, Methylene chloride, Toluene, TCA, TCE Hydrogen chloride, Toluene, TCE	
Medical Instr & Supplies Dental Equip & Supp			
Ophthalmic Goods Photographic Equip & Supplies			
Surgical & Med Instr			
Srg Appliances & Sup			
Optical Instr & Lenses			
Watches/Clocks/Watchcases Plating - see Metal Plating, Appendix C-II			
Also see - Combustion, Other Processes, and Solvent Use Appendix C-I Metal, Plastic, and Rubber, Appendix C-II			
Jewelry, Silverware, & Plated Ware Jewelry, Costume		Ammonia, Chlorine, Hydrogen chloride, Lead, Perc, Toluene, TCE Ammonia, Freon 113, Hydrogen chloride, Lead, Toluene, TCA, TCE Ammonia, Hydrogen chloride, Lead	
Jewelry, Precious Metal			
Jewlrs Matls & Lapidary Wrk			

Industry/ Emitting Process	Type(s) of Emissions/ Emitting Process Points	Some Specific Substances (Including, but not limited to)	Supplemental Process Parameter Reporting Form(s) to Use
Jewelry, Silver & Plated Ware continued Silverware & Plated Ware		Ammonia, Beryllium, Hydrogen chloride, Lead, TCE	
Degreasing - see Solvent Use, Appendix C-I			
Landfills			
Gas Recovery		Benzene, Methylene chloride, Perc, TCE, Vinyl chloride, Vinylidene chloride	S-CMB
Refuse Landfills		Asbestos	
Combustion Processes - see Combustion, Appendix C-I			
Fugitives - see Liquid Storage & Transfer, Appendix C-I			
Laundry, Cleaning, & Garment Svc's - see Dry Cleaning, Appendix C-II			
Leather & Leather Products			
Leather Tanning & Finishing		Arsenic, Chromium Copper, Formaldehyde, Lead, Naphthalene, Toluene	S-CMB
Footwear, not rubber		Toluene, TCE	
Personal Leather Goods		Chromium, Cresols, Formaldehyde, Phenol	
Tanning Processes	Tanning agents	Cresols, Formaldehyde, Phenol	
	Dyes, pigments, & coloring agents	Cadmium, Chromium, Copper, Direct Black 38, Lead, Nickel, Zinc compounds	
	Miscellaneous	Ammonia, Chlorine, Chloroform, 1,2-Dichloro- benzene, Glycol ethers, Hydrochloric acid, Methylene chloride, Perc, Sodium hydroxide, Toluene, TCA, TCE, Xylenes	
Combustion Processes - see Combustion, Appendix C-I			
Liquid Storage and Transfer - see Liquid Storage & Transfer, Appendix C-I			
Surface Coating - see Solvent Use and Other Processes, Appendix C-I			
Lumber Prod Mfg - see Wood Product Mfg, Appendix C-II			
Machinery Mfg, Except Electrical		Ammonia, Formaldehyde, Freon 113, Methylene chloride, Nickel, Phenol, Toluene, TCA, TCE	S-CMB
Construction & Related Machinery		Carbon tetrachloride, Hydrogen chloride, Perc, Toluene	
Construct'n Machin		Ammonia, Toluene, TCE	
Conveyors & Convey- ing Equipment		Toluene	
Elevators & Moving Stairways		Ammonia, Cadmium, Copper, Lead, Zinc	
Hoists, Cranes, & Monorails		Perc, Toluene	
Indstl Trucks/Tractors			

Industry/ Emitting Process	Type(s) of Emissions/ Emitting Process Points	Some Specific Substances (Including, but not limited to)	Supplemental Process Parameter Reporting Form(s) to Use
Machinery, Construction Related continued			
Oil Field Machinery Engines & Turbines Internal Combust'n Engines		Chromium, Lead, Nickel, TCA, Xylenes	
Farm Machinery & Equip Turbines & Turbine Generator Sets		Ammonia, Benzene, EDB, EDC, Gasoline vapors, Hydrazine, TCA Toluene	
General Industrial Machinery		Ammonia, Formaldehyde, Hydrogen chloride, Maleic anhydride, Perc, Phenol, Styrene, Toluene, Toluene diisocyanate, TCA, Xylenes Ammonia, Chromium, Copper, Cresol, Epi- chlorohydrin, Formaldehyde, Hydrogen chloride, Lead, Nickel, Phenol, Toluene, TCA, TCE, Zinc oxide Copper, Naphthalene, Toluene, TCA	
Bell & Roller Bearings Blowers & Fans		Copper, Gasoline vapors, Lead, Toluene, TCA, TCE Toluene	
Comprtrs, Air & Gas Industrial Furnaces & Ovens		Arsenic, Copper, Hydrogen chloride, Lead, Toluene, TCE, Zinc	
Industrial Patterns Power Transmission Equipment		Formaldehyde, Phenol	
Pumps & Pumping Equipment Speed Changers, Drives & Gears		Ammonia, Copper, Hydrogen chloride	
Metalworking Machinery Machine Tool Acces- sories		Ammonia, Formaldehyde, Hydrogen chloride, Lead, Perc, Phenol, Toluene, TCA, Xylenes Perc, Toluene, TCA Arsenic, Perc	
Machine Tools, Metal Cutting Types Machine Tools, Metal Forming Types		Ammonia, Beryllium, Chromium, Hydrogen chloride, Toluene, TCA, TCE	
Rolling Mill Ma- chinery Special Dyes, Tools, Jigs, & Fixtures		Ammonia, Lead, Toluene, TCE	
Office & Computing Ma- chines		Ammonia, Benzene, Lead, Perc, Toluene, TCA, TCE	
Miscellaneous Calculating & Accounting Machines		Cadmium, Chromium, Zinc, Zinc oxide	
		1,4-Dichlorobenzene, Formaldehyde, Hydrogen chloride, Methylene chloride, Naphthalene, Toluene, TCE, TCA, Zinc	
		CFC-113, Hydrogen chloride, Toluene, TCA	
		Arsenic, Hydrogen chloride, TCA	

Industry/ Emitting Process	Type(s) of Emissions/ Emitting Process Points	Some Specific Substances (Including, but not limited to)	Supplemental Process Parameter Reporting Form(s) to Use
Machinery, Office & Computing, continued Electronic & Com- puting Equipment		Ammonia, Arsenic, Asbestos, Benzene, Benzidine, BaP, Bis(chloromethyl)ether, Chlorine, Chloroform, Chromium, Copper, Freon 113, Hydrogen chloride, Hydrogen sulfide, Lead, Methylene chloride, Naphthalene, Nickel, Nitrobenzene, Perc, Phenol, Toluene, TCA, TCE, Vinyl chloride, Zinc	
	Also see - Electric & Electronic, Appendix C-II		
Typewriters		Ammonia, Benzene, Beryllium, Cadmium, Formaldehyde, Hydrogen chloride, Lead, Nickel, Toluene, Xylenes	
Refrigerat'n & Svc Machin Automatic Merchandising Commercial Laundry Equipment Measur & Dispense Pumps Refrig & Htg Equip		Toluene Arsenic, Perc, Toluene Toluene Ammonia, Copper, Formaldehyde, Freon 113, Hydrogen sulfide, Lead, Methylene chloride, Phthalic anhydride, Toluene, TCA, TCE, Xylenes, Zinc Toluene Ammonia, Arsenic, Benzene, Chromium, Copper, Lead, Methylene chloride, Perc, Toluene, TCA, TCE Arsenic Ammonia, Perc, Toluene, TCE Ammonia, Chromium, Lead, Methylene chloride, Toluene, Toluene diisocyanate, TCA, Zinc oxide Toluene, TCE, Xylenes Chlorine, Hydrogen chloride, Toluene	
Misc Svc Indus Mach Special Industry Machinery Food Prods Machinery Paper Indus Machin Printing Trades Mach			
Textile Machinery Woodworking Machin			
Combustion Processes - see Combustion, Appendix C-I Metal Forming - see Machining Mfg and Metal Forming, Appendix C-II Surface Coating/Degreasing - see Solvent Use and Other Processes, Appendix C-I			
Machining - see Metal Forming, Metal Prod Fabrication, and Metal Smelting, Appendix C-II			
Magazine (Periodical) Publishing - see Printing & Publishing, Appendix C-II			
Mechanical Assembly Cleaning - see Solvent Use, Degreasing, Appendix C-I			
Metal Forming Aluminum Forming Machining Also see - Metal Product Fab and Metal Smelters, Appendix C-II		Chloroform, Methylene chloride, TCE TCA	S-CMB

Industry/ Emitting Process	Type(s) of Emissions/ Emitting Process Points	Some Specific Substances (Including, but not limited to)	Supplemental Process Parameter Reporting Form(s) to Use
Metal Furniture Mfg - see Furniture Mfg. Appendix C-II			
Metal Plating	Particulate metals Including but not limited to: From electrocleaning, and plating Gaseous and aerosol releases Including but not limited to: Alkaline cleaning agents Acid cleaning, pickling agents Chelating agents, solvents Plating/other process bath compon. Plating tank, Electric arc furnace	Cadmium, Chromium (VI), Nickel, TCA Sodium hydroxide Chromic acid, Hydrochloric acid Nitrotriacetic acid, Theourea Ammonia, Arsenic, Cadmium, Chromium, Copper, Lead, Nickel, Selenium, Sodium hydroxide, Zinc	S-CMB S-MP
	Combustion Processes - see Combustion, Appendix C-I Degreasing Processes - see Solvent Use, Appendix C-I Storage and Handling - see Liquid Storage & Transfer, Appendix C-I		
Metal Product Fabrication			
		Acrylonitrile, Ammonia, 1,3-Butadiene, Cadmium, Chlorine, Copper, Formaldehyde, Freon 113, Hydrazine, Hydrogen chloride, Lead, Mercury, Methylene chloride, Perc, Styrene, Toluene, TCA, TCE, Zinc	S-CMB, S-ETO, S-UP
Metal Cans & Shipping Containers			
	Metal Cans	Benzene, Lead, Perc, Toluene, TCA, TCE, Xylenes	
	Metal Barrels, Drums & Pails	Ammonia, Naphthalene, Toluene, TCA	
	Metal Cutlery, Handtools & Hardware	Chromium, Lead, Toluene, TCE Ammonia, Chlorine, Chromium, Hydrogen chloride, Methylene chloride, Styrene, Toluene, TCA, TCE, Zinc	
	Hand & Edge Tools	Copper, Lead, Nickel, Toluene, TCE, Zinc Ammonia, Chlorine, Chromium, Copper, Hydro- gen chloride, Hydrogen sulfide, Lead, Methylene chloride, Naphthalene, Perc, Phenol, Toluene, TCA, TCE, Zinc, Zinc oxide Ammonia, Copper, Hydrogen chloride, Lead, Perc, Zinc, Zinc oxide	
	Hand Saws & Saw Blades	Hydrogen sulfide Ammonia, Perc, Toluene Lead	
	Misc Hardware	Copper, Perc, Toluene, TCA, TCE	
Metal Foil & Leaf			
Metal Forgings & Stamp'gs			
	Iron & Steel Forgings		
	Auto Stampings		
	Crowns & Closures		
	Misc Metal Stampings		

Industry/ Emitting Process	Type(s) of Emissions/ Emitting Process Points	Some Specific Substances (Including, but not limited to)	Supplemental Process Parameter Reporting Form(s) to Use
Metal Prod Fabric continued Misc-Metal Services Plating & Polishing		Toluene Acrolein, Ammonia, Arsenic, Benzene, Cadmium, Chloride, Chlorine, Chloroform, Chromium, Copper, Formaldehyde, Hydrogen chloride, Lead, Methylene chloride, Nickel, Nitrobenzene, Perc, Toluene, TCA, TCE, Zinc, Zinc oxide	
Metal Coating & Allied Services		Acetaldehyde, Arsenic, Benzene, Cadmium, Chlorine, Chromium, Copper, Formaldehyde, Hydrogen chloride, Lead, Methylene chloride, Nickel, Perc, Toluene, TCA, TCE, Xylenes, Zinc, Zinc oxide	
Ordnance & Accessories Small Arms Ammun't'n Ammun, exc sml arms Small Arms		Lead Hydrogen sulfide, Toluene, TCE Ammonia, Arsenic, Formaldehyde, Freon 113, Hydrogen chloride, Lead, Phenol, Toluene, Zinc oxide	
Plumbing & Heating, except electric Metal Sanitary Ware Plumbing Fittings & Brass Goods		Methylene chloride, Toluene Ammonia, Cadmium, Formaldehyde, Hydrogen chloride, Phenol, Toluene, TCE, Zinc oxide	
Heating Equipment, except electric		Ammonia, Benzene, Chromium, Formaldehyde, Perc, Phenol, Toluene	
Screw Machine Products, Bolts, etc. Screw Machine Prod Bolts, Nuts, Rivets, & Washers		TCA, TCE Cadmium, Hydrogen chloride, Methylene chloride, TCA, TCE, Zinc Hydrogen chloride, Toluene, TCA	
Steel Springs, exc wire Structural Metal Product Fabrication Structural Metal Fabrication Metal Doors, Sash, & Trim		Toluene Copper, Toluene, Xylenes, Zinc oxide Ammonia, Cadmium, Formaldehyde, Perc, Toluene, TCA, Xylenes, Zinc	
Fabricated Plate Work, boiler shops		Copper, Gasoline vapors, Hydrogen chloride, Lead, Perc, Styrene, Toluene, TCA, TCE	
Sheet Metal Work		Ammonia, Perc, Toluene, Toluene diisocyanate, TCA, TCE	
Architectural Metal Work		Ammonia, Copper, Perc, Toluene, TCA, TCE	

Metal Prod Fabric, Structural Metal, continued

Prefabric Metal Bldgs

Misc Metal Work

Valves & Pipefittings

Wire Product Fabricat'n

Toluene, Xylenes
Ammonia, Benzene, Toluene
Copper, Phenol, Toluene, TCA, TCE, Zinc
Ammonia, Hydrogen chloride, Nickel, Perc,
Toluene, TCA, Vinyl chloride

Combustion Processes - see Combustion, Appendix C-I

Degreasing - see Solvent Use, Appendix C-I

Forming - see Metal Forming and Metal Smelters, Appendix C-II

Surface Coating - see Solvent Use, Appendix C-I

Metal Smelters & Foundries - (for non-metals mining see Mining, Appendix C-II)

S-CMB

For any type of metal smelter - see Combustion and Liquid Storage & Transfer, Appendix C-I

For any type of metal smelter

Hydrogen sulfide, All listed metals

Primary Aluminum Pro

Gaseous, aerosol, partic releases
including but not limited to:

From the calciner, furnace, mat'l
crusher/mill, storage & handling,
service road, prebake/reduction/
soderberg stud cell

Anode bake furnace

Benzene, Chloroform, Cresols,
Fluorides, Methylene chloride,
POM, PAHs*, TCE

Secondary Aluminum

Gaseous, aerosol, partic releases
including but not limited to:
From the furnace, and the service
road

Benzene, Cresols, POM, PAHs*

Furnace Tapping

Gaseous, aerosol, partic releases

including but not limited to:

From the furnace, and the service
road

Nickel

Furnace Charging

Gaseous, aerosol, partic releases

Metal Casting

Gaseous, aerosol, partic releases

including but not limited to:

From the furnace, condenser,
material storage and handling

Chloroform, Methylene chloride, TCE

Beryllium Alloys

Gaseous, aerosol, partic releases

including but not limited to:

Gaseous, aerosol partic releases

including but not limited to:

From the furnace, condenser,
material storage and handling

Cadmium

Material Prep

Gaseous, aerosol, partic releases

including but not limited to:

From the sintering machine, and
material storage and handling

Cadmium, Lead, Nickel

Cadmium-Nickel Battery

Gaseous, aerosol, partic releases

including but not limited to:

From the sintering machine, and
material storage and handling

Chromium

Chromite Ore Refining

Gaseous, aerosol, partic releases

including but not limited to:

From dryer, mill, cyclone, storage

Chromium

Metallurgical Coke

Gaseous, aerosol partic releases

including but not limited to:

From the coke oven, vessels, mat'l
storage and handling, and outdoor
storage pile

Acetaldehyde, Benzene, Cresols,
Formaldehyde, Phenol, Toluene, Xylenes

Ammonia, Arsenic, Beryllium, Cadmium, Hy-
drogen sulfide, Lead, Manganese, Mercury,
Nickel, POM, PAHs*

Coke Oven Charging/
Pushing

Material Prep

Coke Quenching

Coke Production

POM, PAHs*, Toluene

Industry/ Emitting Process	Type(s) of Emissions/ Emitting Process Points	Some Specific Substances (Including, but not limited to)	Supplemental Process Parameter Reporting Form(s) to Use
Metal Smelters & Foundries continued			
Primary Copper Smelt	Gaseous, aerosol, partic releases including but not limited to:		
Converter Charging	From the converter, furnace, roaster	Arsenic, Cadmium, Copper, Lead, Mercury, POM, PAHs*, Selenium, Zinc	
Furnace Tapping	vessel, material storage and		
Furnace Charging	handling, outdoor storage pile,		
Material Prep	service road		
Metal Casting			
Slag Dumping			
Mining Operations		Arsenic, Mercury, Cadmium, Copper	
Copper Forming		Perchloroethylene	
Secondary Copper Oper	Gaseous, aerosol, partic releases		
(Brass and Bronze Pro)	Including but not limited to:	Cadmium, Copper, Lead, Manganese, Mercury, POM, PAHs*, Selenium, Zinc	
Furnace Tapping	From the furnace, and service road		
Furnace Charging			
Metal Casting			
Electrometallurgical			
Products			
Ferroalloy Production	Gaseous, aerosol, partic releases	Arsenic, Cadmium, Chromium, Copper, Manganese, Nickel	
Furnace Tapping	Including but not limited to:		
Furnace Charging	From material storage & handling,	Cadmium, Chromium, Copper, Lead, Manganese, Nickel, POM, PAHs*, Zinc	
Material Prep	storage pile, furnace, decarbur-		
Metal Casting	izing vessels		
Mining, except V		Nickel	
Slag Dumping			
Iron and Steel Foundries			
Iron and Steel Pro	Gaseous, aerosol, partic releases		
Coke Oven Charging/	Including but not limited to:	Ammonia, Arsenic, Benzene, Beryllium, Cad-	
Pushing	From the coke oven, cupola, furnace,	mium, Chlorine, Chromium, Coke oven emis-	
Furnace Tapping	sintering machine, storage	Copper, Formaldehyde, Hydrogen chloride,	
Furnace Charging	& handling, storage pile,	Hydrogen sulfide, Lead, Manganese, Mer-	
Material Preparation	service road	cury, Naphthalene, Nickel, POM, PAHs*,	
Coke Quenching		Phenol, Toluene, TCE, Xylenes, Zinc	
Slag Dumping			
Mining Operations			
Drying			
Crushing			
Sizing			
Weighing			
Feeding Furnace			
Also see Combustion	(Blast Furnace), Appendix C-I		
Gray Iron Foundries	Gaseous, aerosol, partic releases	Acetaldehyde, Acrolein, Ammonia, Arsenic,	
Furnace Tapping	Including but not limited to:	Benzene, Beryllium, Cadmium, Chromium,	
Furnace Charging	From the furnace, foundry mold &	Copper, Formaldehyde, Hydrogen sulfide,	
Converter Charging	core decomposition, & service road	Iron, Lead, Manganese, Mercury,	
Metal Casting		Naphthalene, Nickel, Phenol, POM, PAHs*,	
Cupola		Styrene, Toluene, TCA, Xylenes, Zinc	
		Ammonia, Formaldehyde, Zinc	
Malleable Iron Foundries		Cadmium, Chromium	
Steel Investment Fndrs			

Metal Smelters & Foundries continued	Steel Foundries	Gaseous, aerosol, partic releases Including but not limited to:	Arsenic, Beryllium, Cadmium, Chromium, Manganese, Nickel, Zinc
	Converter Charging	From furnace, foundry mold & core decomposition, and service road	
	Furnace Charging		
	Metal Casting	From argon oxygen decarburization vessels, coke ovens	
	Basic Oxygen Proc		
	Miscellaneous		
Cold Finish Steel Shapes	Steel Pipe & Tubes		
	Steel Wire & Related Products		
	Primary Lead Smelting	Gaseous, aerosol, partic releases Including but not limited to:	Ammonia, Arsenic, Cadmium, Chromium, Copper, Hydrogen chloride, Lead, Naphthalene, Nickel, Perc, Phenol, Styrene, Toluene, TCA, Xylenes, Zinc Methylene chloride, Toluene
	Furnace Tapping	From the furnace, sintering machine, material storage and handling, outdoor storage pile, and service road	Ammonia, Perc Ammonia, Chlorine, Hydrogen chloride, Lead, PCB, Toluene, Zinc
	Furnace Charging		Arsenic, Cadmium, Copper, Lead, POM, PAHs*, Mercury, Selenium
	Material Prep		
	Metal Casting		
	Slag Dumping		
	Mining Operations		
	Secondary Lead Smelt	Gaseous, aerosol, partic releases Including but not limited to:	Arsenic, Lead, Manganese, POM, PAHs*, Selenium
	Furnace Tapping	From the furnace, service road, and outdoor storage pile	
	Furnace Charging		
	Metal Casting	Gaseous, aerosol, partic releases Including but not limited to:	Arsenic, Cadmium, Lead, Manganese Mercury
	Lead Acid Battery Pro		
	Material Prep		
	Metal Casting		
	Screening		
	Storage & Handling		
	Miscellaneous Lead Pro	Gaseous, aerosol, partic releases Including but not limited to:	Arsenic, Cadmium, Lead
	Converter Charging		
	Material Preparation		
	Metal Casting		
	Manganese Production	Gaseous, aerosol, partic releases Including but not limited to:	Manganese, POM, PAHs*
	Furnace Charging	From the furnace, mat'l storage & handling, storage pile, slips, casthouse, sinter discharge, windbox & discharge	
	Furnace Tapping		
	Material Crusher/ Mill		
	Metal Casting		
	Slagging		
	Synthetic Mang Pro		
	Roasting		
	Drying		
	Grinding		
	Packaging/Handling		
	Melting		
	Refining		
	Hot Metal Transfr		

Industry/
Emitting Process

Type(s) of Emissions/
Emitting Process Points

Some Specific Substances
(Including, but not limited to)

Supplemental Process Parameter
Reporting Form(s) to Use

Metal Smelters & Foundries continued	Dry Battery Production	Particulate substance releases Including but not limited to:		
	Material Prep	From the material crusher/mill and material storage	Manganese, Mercury	
Storage & Handling	Also see Electrical	& Electronic Equipment, Appendix C-II		
	Mercury Production	Particulate releases Including but not limited to:	Mercury	
Mining	Prim. Ore Process	From smelter, hoeling, retort		
	Secondary Prod			
Nickel Production	Metal Casting	Gaseous, aerosol, partic releases Including but not limited to:	Arsenic, Cadmium, Lead, Nickel, POM, PAHs*, Selenium, Zinc	
	Mining Operations	From the calciner, furnace, material crusher/mill, roaster, material storage & handling, rotary dryers, storage pile, day bin, skip hoists		
Melting/Roasting	Crushing			
	Drying			
Nonferrous Metal Prod	Super Alloys	Gaseous, aerosol, partic releases Including but not limited to:	Nickel	
	Permanent Magnet Alloys			
Electrical Alloys	Secondary Processing	Gaseous, aerosol, partic releases Including but not limited to:	Nickel	
	of Nickel Scrap	Gaseous, aerosol, partic releases Including but not limited to:	Ammonia, Gasoline vapors, Hydrogen Sulfide, Radionuclides	
Radium, Uranium, & Vanadium Mining				
Steel Foundries - see Metal Smelters, Iron & Steel, Appendix C-II	Uranium Prod - see Metal Smelters, Radium, Appendix C-II			
	Vanadium Prod - see Metal Smelters, Radium, Appendix C-II			
Primary Zinc Smelting	Material Prep	Gaseous, aerosol, partic releases Including but not limited to:	Arsenic, Cadmium, Copper, Mercury, POM, PAHs*, Selenium, Zinc	
	Slag Dumping	From the condenser, furnace, roastr, retart, material storage and handling, outdoor storage pile, and service road		
Mining Operations				
Secondary Zinc Process	Furnace Tapping	Gaseous, aerosol, partic releases Including but not limited to:	Cadmium, Mercury, Nickel, Selenium, Zinc	
	Furnace Charging	From the furnace, condenser, retart service road, and galvanizing vessel		
Metal Casting				

Industry/ Emitting Process	Type(s) of Emissions/ Emitting Process Points	Some Specific Substances (Including, but not limited to)	Supplemental Process Parameter Reporting Form(s) to Use
Military Bases	Chemical Prod - see Chemical Mfg, Military Chem Mfg, Appendix C-II Combustion Process - see Combustion, Appendix C-I Degreasing - see Solvent Use, Appendix C-I Research - see Research & Development, Appendix C-II Surface Coating - see Solvent Use and Other Processes, Appendix C-I Vehicle Refueling - see Other Processes, Appendix C-I		
Millworks - see Wood Product Mfg, Appendix C-II			
Mining of Non-Metals (for Metals Mining see Metal Smelters, Appendix C-II)			
Arsenic Mining		Arsenic	S-CMB
Anthracite Mining		Arsenic, POM, PAHs*, Toluene diisocyanate	
Asbestos		Asbestos, Silica	
Clay		Arsenic, Beryllium, Lead, Toluene diisocyanate	
Coal (Bituminous) &		Arsenic, Hydrogen sulfide, Toluene diisocyanate	
Lignite		Nickel	
Limestone		Arsenic, Asbestos, Beryllium, Cadmium, Chromium, Lead, Toluene diisocyanate	
Minerals, Nonmetallic		Radionuclides	
Phosphate Rock		Asbestos, Crystalline silica	
Sand & Gravel		Vinyl Chloride	
Construction		Arsenic, Beryllium, Lead, Phenol, Toluene diisocyanate	
Industrial		Arsenic, Hydrogen sulfide	
Sulfur			
Monofilament Fiber Mfg	Gaseous and particulate releases including but not limited to: From: polymer and solvent storage	Polymer constituents - Acrylonitrile, Propylene, Vinyl chloride	S-CMB
Wet Spin	dope preparation (blending),	Solvents/precipitants - Sodium hydroxide, Toluene, Zinc chloride	
Dry Spin	filtration, spin cell, lubrication, and drawing, finish application, and drying	Flame retardants - Vinyl bromide	
Filter-tow Dry Spin		Promoters/activators - Hydrazine	
Filament Yarn Dry Spin		Lubricants - Ammonium salts	
Combustion Processes - see Combustion, Appendix C-I			
Storage - see Liquid Storage & Transfer, Appendix C-I			
Surface Coating - see Solvent Use and Other Processes, Appendix C-I			
Motor Vehicle Production - see Transportation Equipment, Appendix C-II			
Motorcycle Mfg - see Transportation Equipment, Appendix C-II			
Musical Instrument Mfg		Lead, Toluene, TCE	
Also see - Combustion, Other Processes, and Solvent Use, Appendix C-I			
Wood Product Mfg, Appendix C-II			

Industry/ Emitting Process	Type(s) of Emissions/ Emitting Process Points	Some Specific Substances (Including, but not limited to)	Supplemental Process Parameter Reporting Form(s) to Use
National Defense		Carbon tetrachloride, CFC 113, Chromium, Dioxin, Hydrazine, Mercury, Methylene chloride, Perc, Phenol, PCBs, TCA, Xylenes	S-CMB, S-CT, S-Up
Also see Military Bases, Appendix C-II			
National Security		Ammonia, Benzene, Beryllium, Cadmium, Chlorinated phenols, Chromium, ETO, Formaldehyde, Gasoline vapors, Hydrogen chloride, Hydrogen sulfide, Lead, Manganese, Methylene chloride, Nickel, Perc, Phenol, POM, PAHs*, Radionuclides, TCA, TCE, Xylenes	
Natural Gas Combustion - see Combustion, Appendix C-I			
Needle, Pln. & Fastener Mfg		Formaldehyde, Hydrogen chloride, Lead, Toluene, TCE, Zinc	
Also see Metal Prod Fabrication, Appendix C-II			
Newspaper Publishing - see Printing & Publishing, Appendix C-II			
Nickel Plating - see Metal Plating, Appendix C-II			
Office Machine Mfg - see Machinery Mfg, Appendix C-II			
Office Supplies Mfg			
Carbon Paper & Inked		Toluene	
Ribbons		Copper, Formaldehyde, Toluene	
Lead Pencils & Art Goods		Lead, Toluene, TCE, Zinc	
Marking Devices		Chlorine, Methylene chloride, Perc,	
Pens & Mech Pencils		Toluene, TCE	
Ink/Dye Mfg - see Chemical Mfg, Appendix C-II			
Oil Combustion - see Combustion, Appendix C-I			
Oil and Gas Extraction			S-CMB, S-CT
Drilling Wells		Benzene, Phenols, POM, PAHs*, Sulfur compounds, Toluene, Xylenes	
Exploration		Hydrogen sulfide	
Extraction		Benzene, Carbon tetrachloride, Chlorobenzene, 1,4-Dichlorobenzene, EDC, Hydrogen sulfide, Toluene, TCA, Xylenes	
Natural Gas &		Ammonia, Formaldehyde, Gasoline vapors,	
Crude Petroleum		Hydrogen sulfide	
Nat'l Gas Liquide		Ammonia, Hydrogen sulfide	
Field Services		Hydrogen sulfide, Gasoline vapors	
Gas Stripping			
Fugitive Losses		EDC	
		Gaseous and aerosol releases	
		From field separator	

Industry/ Emitting Process	Type(s) of Emissions/ Emitting Process Points	Some Specific Substances (Including, but not limited to)	Supplemental Process Parameter Reporting Form(s) to Use
Oil Production	Caseous and aerosol releases from: sumps, wells, well heads, well cellars, pumps, fittings, oil pits, compressors, oil/ water separators,		
Tertiary Oil Production	Gaseous and aerosol releases from: steam drive wells, cyclic wells, pseudo cyclic wells Gaseous and aerosol releases From test stations		
Heavy Oil Test Stations	Combustion Processes - see Combustion, Appendix C-I		
Oil Storage	Oil Storage - see Liquid Storage and Transfer, Appendix C-I		
Other Processes	Other Processes - see Other Processes & Fugitives, Appendix C-I		
Solvent Use	Solvent Use - see Solvent Use, Appendix C-I		
Storage & Handling	Storage & Handling - see Liquid Storage & Transfer, Appendix C-I		
Organic Chemical Mfg	Organic Chemical Mfg - see Chemical Mfg, Appendix C-II		
Paint & Allied Products Mfg	Paint & Allied Products Mfg - see Chemical Mfg, Appendix C-II		
Paper & Paper Prod. Mfg/Treating	Paper & Paper Prod. Mfg/Treating - see Wood, Appendix C-II		
Pens & Pencils	Pens & Pencils - see Office Supplies, Appendix C-II		
Petroleum Bulk Stations & Terminals		Benzene, Benzyl chloride, Carbon Tetrachloride Chlorine, EDB, EDC, Formaldehyde, Gasoline vapors, Hydrogen chloride, Hydrogen sulfide, Methyl methacrylate, Styrene, Toluene, Xylenes	S-CMB, S-CT
Also see - Bulk Plants & Terminals, Appendix C-II			
Petroleum & Coal Products		Chromium, Gasoline vapors, Naphthalene Asbestos, Carbon tetrachloride, Chromium, Formaldehyde, POM, PAHs*	
Miscellaneous		Asbestos, Benzene, Epichlorohydrin, Formaldehyde, Hydrogen sulfide, Toluene, TCA, TCE, Xylenes	
Asphalt Felts & Ctg		Ammonia, Asbestos, Benzene, BaP & other PAHs*, Chloroform, Chromium, Formaldehyde, Mercury, Methyl isocyanate, POM, Toluene, TCA	
Lubricating Oils & Greases		Acetaldehyde, Ammonia, Arsenic, Benzene, BaP & other PAHs*, Beryllium, Cadmium, Carbon disulfide, Chlorine, Chromium, Cresol, Dimethyl sulfate, EDB, EDC, Formal- dehyde, Gasoline vapors, Hydrogen chloride, Hydrogen sulfide, Lead, Maleic anhydride, Mercury, Naphthalene, Nickel, Phenol, POM, Toluene, Xylenes, Zinc, Zinc oxide	
Paving & Roofing Mat'ls Pav'g Mixt'rs & Blocks			
Petroleum Refineries (1)Most Refinery Operations	Gaseous, aerosol, partic releases including but not limited to: From: boiler, cat cracker, flare, incinerator, process heater		

Industry/ Emitting Process	Type(s) of Emissions/ Emitting Process Points	Some Specific Substances (Including, but not limited to)	Supplemental Process Parameter Reporting Form(s) to Use
Petroleum & Coal continued (2)Crude Separation Gas Product'n	In addition to item (1) absorber, distillation/fractionation	In addition to item (1)-Ammonia, Chlorides, Cresols, EDC, Maleic anhydride, Michler's Ketone, Phenols, POM, PAHs*, Sulfur Cmpds, Zinc	
(3)Light Hydrocarbon Processing	In addition to item (1): catalyst regeneration	In addition to item (1)-Nickel Carbonyl	
(4)Middle and Heavy Distillate Process	In addition to items (1) and (2): evaporation, stripper	In addition to item (1)-Acetaldehyde, Ammonia, Copper, Cresols, Formaldehyde, Maleic anhydride, Michler's ketone, Nickel, Phenols, POM, PAHs*, Sulfur Compounds, Xylenes, Zinc, Any other listed Aromatic amine	
(5)Residual Hydrocarbon Processing	In addition to items (1) and (2): visbreaker furnace, process vent, stripper	In addition to item (1)-Acetaldehyde, Ammonia, Chromates, Cresol, Formaldehyde, Lead, Maleic anhydride, Michler's Ketone, Lead, Nickel, Nickel carbonyl, Phenols, POM, PAHs*, Sulfur Cmpds, Zinc, Any other listed Aromatic amine	
Also see Combustion, Liquid Storage & Transfer, and Other Processes, Appendix C-I Chemical Mfg. and Oil & Gas Extraction, Appendix C-II			
Pharmaceutical Industries - see Chemical Mfg. Drugs, Appendix C-II			
Photocopying & Blueprinting		Ammonia	
Photographic Chemicals Mfg - see Chemical Mfg. Appendix C-II			
Photographic Studios		Ammonia	
Photofinishing Labs		Methylene chloride, TCA	
Pipelines - see Other Processes and Liquid Storage & Transfer, Appendix C-I			
Plastic & Synthetics Mfg - see Chemical Manufacturing, Appendix C-II			
Plastic Products Mfg Plastics Forming		TCA	S-CMB
Printing & Publishing Miscellaneous Blankbooks & Bookbind'g Blankbooks & Loose- leaf Binders Bookbinding etc		Toluene	S-CMB
Books Printing Publishing		Ammonia, Toluene, TCA, TCE Toluene Lead, TCA Arsenic, Lead	

Industry/ Emitting Process	Type(s) of Emissions/ Emitting Process Points	Some Specific Substances (Including, but not limited to)	Supplemental Process Parameter Reporting Form(s) to Use
Printing & Publishing continued			
Newspapers		TCE	
Printing (Commercial)		Toluene, TCA	
Engraving & Plate		Benzene	
Gravure		Ammonia, Benzene, Cadmium, Formaldehyde, Gasoline vapors, Methylene chloride, Nickel, Perc, Toluene, TCA, TCE, Xylenes	
Letterpress		Ammonia, Benzene, Chromium, Methylene chloride, Naphthalene, Perc, Toluene, TCE	
Lithographic		Ammonia, Benzene, Toluene, TCE	
Printing Trade Svcs		Ammonia	
Typesetting		Lead	
Electrotyping & Stereotyping		Toluene	
Publishing (Misc)			
Combustion Processes - see Combustion, Appendix C-I			
Ink Mfg - see Chemical Mfg, Appendix C-II			
Printing - see Solvent Use, Appendix C-I			
Surface Coating - see Solvent Use, Appendix C-I			
Process Gas Combustion - see Combustion, Appendix C-I			
Publicly Owned Treatment Works (POTWs)	Miscellaneous	Acrylonitrile, Benzene, Carbon tetrachloride, CFC-113, Chlorine, Chlorobenzene, Chloroform, EDC, Fluorocarbons, Hydrogen sulfide, Methylene chloride, Perc, Toluene, TCA, TCE, Vinyl chloride, Vinylidene chloride, Xylenes	S-CMB
Combustion	Gaseous products including but not limited to: From raw sewage offgases From exhaust gases of digester gas burning engines modified to lower NOx emissions	Carbon tetrachloride, Chlorobenzene, p-Dichlorobenzene, EDC Acrolein, 1,3-Butadiene	
Sludge Composting	From sawdust used as bulking agent (sawdust from lumber obtained at structural demolition projects)	Ammonia, Dimethylamine Asbestos Dimethylamine	
Sludge Dewatering (using an aminomethyl- ated polyacrylamide having a dimethylamine group in the polymer)			
Sludge Treatment		Chloroform	
Aeration Tanks - see Liquid Storage & Transfer, Appendix C-I			
Chlorinator Discharge			
Digesters			
Headworks			
Sludge Incinerators - see Combustion, Appendix C-I			
Water Treatment - see Other Processes, Appendix C-I			

Industry/ Emitting Process	Type(s) of Emissions/ Emitting Process Points	Some Specific Substances (Including, but not limited to)	Supplemental Process Parameter Reporting Form(s) to Use
Pulp Mills - see Wood Product Mfg. Appendix C-II			
Quarries	Particulate-phase substances including but not limited to:	Asbestos, Arsenic, Silica	
Railroad Equip Mfg - see Transportation Equip. Appendix C-II			
Refractory Production		Chromium	
Research & Devel. Labs		Ammonia, Cadmium, Chloride, Chromium, Copper, Formaldehyde, Hydrogen chloride, Hydrogen sulfide, Lead, Manganese, Mercury, Methylene chloride, Nickel, Perc, Phosgene, Phthalic anhydride, Styrene, Toluene, TCA, TCE, Zinc, Zinc oxide Epichlorohydrin, Hydrogen sulfide	S-CMB, S-UP
Commercial Testing Labs			
Chemical Mfg - see Chemical Mfg. Appendix C-II Combustion Processes - see Combustion, Appendix C-I Other Processes - see Other Processes, Appendix C-I Solvents - see Solvent Use, Appendix C-I Storage and Handling - see Liquid Storage & Transfer, Appendix C-I			
Roadway Surfacing		Asbestos, Benzene	
Rubber Mfg - see Chemical Mfg. Appendix C-II			
Rubber & Misc Plastics Prod Fabricated Rubber Prod			S-CMB
Plastics Prod, Misc		Ammonia, Benzene, Chlorine, ETO, Formaldehyde, Hydrogen chloride, Lead, Methylene chloride, Naphthalene, Perc, Styrene, Toluene, Toluene diisocyanate, TCA, Vinyl chloride, Zinc, Zinc oxide Acetaldehyde, Acrylonitrile, Ammonia, Benzene, Benzyl chloride, Beryllium, Chlorine, EDC, ETO, Formaldehyde, Freon 113, Gasoline vapors, Hydrogen chloride, Hydrogen sulfide, Lead, Mercury, Methyl methacrylate, Methylene chloride, Naphthalene, Phenol, Phthalic anhydride, Styrene, Toluene, Toluene diisocyanate, TCA, TCE, Vinyl chloride, Zinc oxide Benzene, Cadmium, Lead, Naphthalene, Toluene Naphthalene, Toluene, TCA Perc, Toluene Ammonia, Benzene, Methylene chloride, Styrene, Toluene, TCA, Zinc oxide	
Reclaimed Rubber Rubber & Plastic Footwear Rubber & Plastic Hose/Belting Tires & Inner Tubes			
Rubber Mfg - see Chemical Mfg. Appendix C-II Surface Coating - see Solvent Use, Appendix C-I			

Industry/
Emitting Process

Type(s) of Emissions/
Emitting Process Points

Some Specific Substances
(Including, but not limited to)

Supplemental Process Parameter
Reporting Form(s) to Use

Rubber Cement Application/Manufacture Application - see Solvent Use, Appendix C-I Manufacture - see Solvent Use, Appendix C-I and Chemical Mfg, Appendix C-II			
Saw Mills - see Wood Product Mfg, Appendix C-II			
Semiconductor Mfg - see Electronic Equipment Mfg, Integrated Circuits, Appendix C-II			
Sewage Plants - see Combustion (Incineration), Appendix C-I			
Shingle & Siding Mfg Also see Plastics, Appendix C-II		Asbestos	S-CMB
Sign & Advert. Display Mfg		Ammonia, Beryllium, Hydrogen chloride, Naphthalene, Perc, Toluene, TCA, TCE, Zinc	
Smelters - see Metal Smelters, Appendix C-II			
Solvent Recycling Also see - Solvent Use, Appendix C-I		Benzene, Chlorinated organics	
Space Research & Technology Combustion Processes - see Combustion, Appendix C-I Degreasing - see Solvent Use, Appendix C-I Research - see Research & Development, Appendix C-II Surface Coating - see Solvent Use and Other Processes, Appendix C-I Vehicle Refueling - see Other Processes, Appendix C-I			S-CMB, S-UP
Sporting & Athletic Goods Mfg Also see Combustion, Solvent Use, and Surface Coating, Appendix C-I Chemical Mfg, Metal Product Mfg, Rubber Product Mfg, and Textiles Mfg, Appendix C-II		Methylene chloride, TCA	S-CMB
Stone Products Mfg - see Clay, Glass & Stone Products, Appendix C-II			
Surface Coating Application/Manufacture Application - see Solvent Use and Surface Coating, Appendix C-I Manufacture - see Chemical Mfg, Appendix C-II			
Surgical & Med Supp Mfg Combustion Processes - see Combustion, Appendix C-I Degreasing - see Solvent Use, Appendix C-I Instruments - see Instrument Mfg, Appendix C-II Other Processes - see Other Processes, Appendix C-I Pharmaceuticals Mfg - see Chemical Mfg, Appendix C-II Sterilization - see Sterilizers, Appendix C-I Surface Coating - see Solvent Use, Appendix C-I			

TSDFs - see Transfer, Storage, & Disposal Facilities, Appendix C-II

Industry/ Emitting Process	Type(s) of Emissions/ Emitting Process Points	Some Specific Substances (Including, but not limited to)	Supplemental Process Parameter Reporting Form(s) to Use
Textile Mill Product'n Mfg. Miscellaneous		Asbestos, Benzene, Benzidine, Bis(chloromethyl) ether, 1,4-Dichlorobenzene, Dichloroethane, Dioxane, Ethylenimine, Formaldehyde, Hydrazine, Methyl Bromide, Perc, Phenol, TCE	S-CMB
Apparel/Other Text'l Prod		Ammonia, Arsenic, Chlorine, EDC, Toluene, TCA	
Fur Goods		Ammonia, Perc	
Apparel Belts		Ammonia, Cadmium, Copper, Toluene, Zinc	
House Furnishings		Toluene	
Auto/Apparel Trimings		Napthalene, Toluene	
Floor Covering Mills		Ammonia, Arsenic, Benzene, Toluene, Vinyl chloride	
Miscellaneous		Arsenic	
Woven Carpets & Rugs		Benzene, Formaldehyde	
Tufted Carpets & Rugs		Benzene, Benzidine	
Knitting Mills		Acrylonitrile, Benzene	
Hosiery		Ammonia, Arsenic, Benzene, Perc	
Knit Outerwear Mills		Benzene, 1,4-Dioxane, Mineral fibers	
Narrow Fabric Mills		Bis(chloromethyl) ether	S-CMB
Nonwoven Industry		Acrylonitrile, Benzene, Benzidine, 1,3-Butadiene, Formaldehyde, Hydrazine, Perc, Toluene, Vinyl chloride, Vinylidene chloride, Xylenes	
Textile Finishing			
Miscellaneous			
Finish Plants			
Cotton		Acrylonitrile, Benzene, Chromium, 1,4-Dichlorobenzene, Toluene	
Synthetic		Benzene, Copper, 1,4-Dioxane, Formaldehyde, Hydrazine, Perc, Xylenes	
Weaving Mills			
Cotton		Acrylonitrile, Benzene, 1,4-Dioxane, EDC, Toluene	
Synthetics		Acrylonitrile, Benzene, Chloroform, 1,4-Dioxane, EDC, Formaldehyde, Mineral fibers, Perc, Styrene, Toluene diisocyanate	
Wool		Benzene, 1,4-Dioxane, Formaldehyde, Perc, 1,4-Dichlorobenzene	
Woven Fabric Finishing			
Yarn & Thread Mills		Toluene diisocyanate	
Yarn Mills, not wool		Ammonia, Lead, Toluene diisocyanate	
Throwing & Winding		Arsenic	
Wool Yarn Mills			
Misc Textile Goods		Arsenic, Benzene, Cresol, Formaldehyde, Hydrogen chloride, Lead, Perc, Styrene, Toluene, Xylenes	
Coated Fabrics, not rubberized		TCA	
Cordage & Twine			

Industry/ Emitting Process	Type(s) of Emissions/ Emitting Process Points	Some Specific Substances (Including, but not limited to)	Supplemental Process Parameter Reporting Form(s) to Use
Textile Mill Product'n Mfg (Misc) continued			
Felt goods		Arsenic, TCA	
Paddings & Upholstery		Benzene	
Filling		Formaldehyde	
Processes Textile		Ammonia, Asbestos, Benzene, Formaldehyde, Perc	
Waste			
Tire Cord & Fabric			
Cleaning - see Degreasing, Appendix C-I and Dry Cleaning, Appendix C-II			
Combustion Processes - see Combustion, Appendix C-I			
Dyeing - see Chemical Mfg and Dyeing of Textiles, Appendix C-II			
Surface Coating/Solvent Use - see Solvent Use, Appendix C-I			
Tobacco Mfg		Benzene, Chloroform, Formaldehyde, Methylene chloride, Perc, Toluene	
Cigarette Mfg		Benzene	
Tobacco Stemming & Redrying			
Toy & Sporting Good Mfg			S-CMB
Dolls		Acrylonitrile, Toluene	
Games, Toys, & Children's Vehicles		Styrene, Toluene	
Sport & Athletic Goods		Perc, Styrene, Toluene	
Combustion Processes - see Combustion, Appendix C-I			
Degreasing/Surface Coating - see Solvent Use and Other Processes, Appendix C-I			
Labeling/Packaging - see Printing and Wood (Paper) Products, Appendix C-II			
Also see - Metal, Rubber, and Wood Products, Appendix C-II			
47 Train Mfg/Rpf - see Transportation Equipment, Appendix C-II			
Transfer, Storage, & Disposal Facilities (TSDFs)			
Combustion Processes - see Combustion, Appendix C-I			
Other Processes - see Other Processes, Appendix C-I			
Solvent Recycling - see Solvent Use, Appendix C-I			
Storage - see Liquid Storage & Transfer, Appendix C-I			
Transportation Equip Mfg/Rpr			
Auto Repair/Auto Body Repair		Hydrogen chloride, Methylene chloride, Perc, Toluene, TCE	S-CMB
Gen'l Auto Repair		Ammonia, Asbestos, Formaldehyde, Toluene, TCA	
Tire Retreading & Rpr		Benzene, Naphthalene, Toluene, Xylenes	
Paint Shops		Zinc Oxide	
Top & Body Rpr Shops		Naphthalene, Toluene	
Motor Vehicles & Car Bodies		Ammonia, Cadmium, Chromium, Formaldehyde, Hydrogen chloride, Lead, Methylene chloride, Phenol, Toluene	

Industry/ Emitting Process	Type(s) of Emissions/ Emitting Process Points	Some Specific Substances (Including, but not limited to)	Supplemental Process Parameter Reporting Form(s) to Use
-------------------------------	--	---	--

Transportation Equip. Auto Mfg/Rpr, continued
Motor Vehicle Parts
& Accessories

Truck, Camper, Trailer,
& Bus Bodies

Auto Parts Mfg
Brake Lining Mfg
Aircraft & Parts

Guided Missiles, Space
Vehicles, & Parts
Guid Miss'ls Spc Vehs

Spc Propulsion Units
& Parts
Spc Veh Equipment

Motorcycles, Bicycles &
Parts
Railroad Equipment

Ship & Boat Bld & Rpr

Combustion Processes - see Combustion, Appendix C-I
Degreasing - see Solvent Use, Appendix C-I
Metal Forming - see Machining and Metal Smelters, Appendix C-II
Military Transport - see Military, Appendix C-II
Paint Preparation - see Chemical Mfg, Appendix C-II
Research - see Research & Development, Appendix C-II
Space Transport - see Space Research & Technology, Appendix C-II
Storage & Handling - see Liquid Storage & Transfer, Appendix C-I
Surface Coating/Touch-up - see Solvent Use and Other Processes, Appendix C-I
Upholstery Mfg - see Textile Mill Prod Mfg, Appendix C-II

Transportation Equip Sales
Boat Dealers
Used Car Dealers

Ammonia, Asbestos, Benzene, Cadmium,
Chlorine, Chloroform, Chromium, Copper,
Formaldehyde, Hydrogen chloride, Hydrogen
sulfide, Lead, Manganese, Methylene
chloride, Naphthalene, Perc, Toluene,
Toluene diisocyanate, TCA, TCE,
Zinc, Zinc oxide

Chromium, Methylene chloride, Nickel,
Styrene, Toluene

Asbestos
Ammonia, Chromium, Hydrogen chloride, Hy-
drogen fluoride, Hydrogen sulfide, Lead,
Methylene chloride, Nickel, Perc, Styrene,
Toluene, TCA, TCE, Xylenes, Zinc, Zinc oxide

Formaldehyde, Hydrazine, Perc, Toluene,
TCE, Xylenes

Hydrazine, TCE
Ammonia, Hydrazine, Hydrogen chloride,
Lead, Methylene chloride, Toluene

Toluene
Ammonia, Chromium, Hydrogen chloride,
Methylene chloride, Nickel, Toluene,
Toluene diisocyanate, TCA
Asbestos, Hydrazine, Methylene chloride,
Phenol, PCBs, Styrene, TCE

Toluene
Toluene

Industry/ Emitting Process	Type(s) of Emissions/ Emitting Process Points	Some Specific Substances (Including, but not limited to)	Supplemental Process Parameter Reporting Form(s) to Use
Transportation Ports/Stations Airports & Flying Fields Inspection & Weighing Marine Cargo Handling		Benzene, Dioxins, POM, PAHs*, Radionuclides, Toluene EDC, Lead, Methylene chloride, Perc, Toluene, Toluene diisocyanate, TCA, TCE, Xylenes	
Combustion Processes - see Combustion, Appendix C-I Degreasing/Paint Stripping - see Solvent Use, Appendix C-I Electroplating - see Metal Plating, Appendix C-II Refueling - see Other Processes, Appendix C-I			
Truck Mfg - see Transportation Equipment, Appendix C-II			
Universities - see Colleges, Appendix C-II			
Varnish Mfg - see Chemical Mfg, Appendix C-II			
Water Treatment - see Other Processes, Appendix C-I			
Wood Combustion - see Combustion, Appendix C-I			
Wood Preservation Cellon Process Chromated Copper Arsenate Process Dricon Process Diluent/Creosote Process Oil/Penta Process	Gaseous and aerosol releases from: wood preserving agents vapor drying agents preserving carriers fire retardants	Arsenic, Benzene, Chloroform, Chromium, Copper, Cresols, Dibenzofuran, Dioxins, Hydrogen chloride, Phenol, Naphthalene, Toluene, Zinc, Zinc Oxide various solvents various solvents Formaldehyde, Zinc chloride	S-CMB
Combustion Processes - see Combustion, Appendix C-I			
Wood Chemicals Mfg - see Chemical Mfg, Appendix C-II			
Wood Products Mfg. Fiberboard Mfg. Lumber Millwork, Plywood, & Structural Members Millwork	Miscellaneous	Cresols, Formaldehyde, Dioxins, TCE Chloroform Cresols, Formaldehyde, Dioxins, TCE, Toluene Asbestos, Carbon tetrachloride, Chlorophenols, Formaldehyde, Methylene chloride, Toluene, Xylenes Methylene chloride, Naphthalene, Styrene, Toluene, TCA, Xylenes Formaldehyde, Perc	S-CMB
Wood Kitchen Cabinets Hardwd Veneer/Plywd			

Industry/ Emitting Process	Type(s) of Emissions/ Emitting Process Points	Some Specific Substances (Including, but not limited to)	Supplemental Process Parameter Reporting Form(s) to Use
Wood Product Mfg continued Paper & Allied Prod Mfg	Gaseous/aerosol/particulate releases including but not limited to: From: Sizing agents Wet & dry-strength agents Adhesives Dyes & pigments Binders Pigment fillers/coatings Humectants Coatings Oil-resistant additives Machine operating aids Retention aids Biocides & slime cont'l Deinking agents Bleaching chemicals	Acrylamide, Styrene Epichlorohydrin, Formaldehyde Acrylamide, Ammonia Binzidine, Direct Black 38, Direct Blue 6 Lead, o-Tolidine Styrene Asbestos, Styrene, Zinc, Zinc Oxide Formaldehyde Ammonia, Sodium hydroxide Fluorochemical chrome complex Asbestos, Epichlorohydrin Acrolein, TCA, Trichlorophenol Sodium hydroxide Ammonia, Chlorine, Chloroform, Chromic sulfate, Methanol, Sodium hydroxide, Zinc	
Bldg Paper & Board Mills Deink Fine & Tissue Paper, Secondary Fiber Mills Paper Mills Misc	From chemicals imported in waste paper: Ink pigments, coating agents, binders, adhesives -	Chloroform, Phenol, Toluene Ammonia, Asbestos	
Paperboard Contain- ers & Boxes Mfg Corrug. & Solid Folding Box Sanitary Food Containers Fiber Cans, Drums, etc Set-Up Box		Chloroform Arsenic, Cadmium, Chlorine, Chloroform, Hydrogen sulfide, Toluene, TCE	
Paperboard Mills Converted Paper Prod Die-Cut Paper & Board Paper Bags		Ammonia, TCE Formaldehyde Acetaldehyde, Ammonia, Toluene Ammonia, Toluene Toluene Cadmium, Chloroform, Formaldehyde, Toluene	
Pressed & Molded Pulp Goods Miscellaneous		Toluene, TCE Acetaldehyde, Ammonia, Formaldehyde, Hydrogen chloride, Methylene chloride, Naphthalene, Perc, Toluene, TCA Zinc Ammonia, Formaldehyde, Toluene	

Industry/ Emitting Process	Type(s) of Emissions/ Emitting Process Points	Some Specific Substances (Including, but not limited to)	Supplemental Process Parameter Reporting Form(s) to Use
Wood Prod Mfg continued Pulp Mill Mfg Groundwood/Mechanical Pulp Mfg Chemical Pulp Mfg Dissolving Pulp Kraft or Sulfite Sulfite Papergrade Pulp Delink Fine & Tissue Paper Pressed & Molded Pulp Goods Miscellaneous Also see - Paperboard, Coarse Paper, Tissue Paper, Appendix C-II Plywood Mfg Presswood & Laminated Wood Products Mfg		Ammonia, Calcium, Carbon, Caustic soda, Sodium sulfate, Sulfur dioxide Chloroform Chloroform Chloroform Zinc Chlorine, Chloroform, Hydrogen sulfide Appendix C-II Cresols, Dioxins Phenol-formaldehyde resins - Formaldehyde, Phenol Melamine-formaldehyde resins - Formaldehyde Dispersion agent (during glue formulation) - Sodium hydroxide Formaldehyde scavengers - Ammonia	
Sawmills & Planing Mills Hardwood Dimension & Flooring Softwood Veneer Mfg Wood Containers Wood Furniture Mfg Wood Finishing		Acetaldehyde, Formaldehyde, Lead, POM, PAHs*, Toluene Toluene Cresols, Dioxins Toluene Chromium, Methylene chloride, TCA	
Combustion Processes - see Combustion, Appendix C-I Surface Coating - see Solvent Use and Other Processes, Appendix C-I			
Wool Fabric Mills - see Textile Mfg			
All Other Industries	Gaseous releases from combustion, storage, handling, process vessels, etc	feedstocks that are on list of substances or may contain listed substances as substances.	Check all materials manufactured for components that on listed substances
	Particulate and aerosol releases from combustion, storage, handling, process vessels, etc		
	Process loss and fugitive releases anywhere along the process train		

APPENDIX D

SUMMARY OF REQUIREMENTS FOR MEASUREMENTS AND ALTERNATIVES

APPENDIX D

Summary of Requirements for Measurements and Alternatives

***** NOTES FOR FOLLOWING TABLE *****

- (1) Each reference to a measurement requirement includes the following requirements for the substances to be tested and type of test to be performed:
 - (a) The test shall measure the quantities of all listed substances whose presence in detectable quantities can be determined using the ARB-adopted test method or other method specified in Section 93336 for the substance indicated. Therefore the test indicated for "dioxins" shall include measurement of all the polychlorinated dibenzodioxins and dibenzofurans to which the ARB-adopted method for dioxins and furans applies. Specifically, the test results shall include the determination of total tetra-, penta-, hexa-, hepta-, and octa- PCDD/PCDF homologue groups and all the 2,3,7,8-substituted PCDD/PCDF isomers listed in the method; and
 - (b) ARB-adopted test methods which are necessary to characterize associated source conditions, including stack flow rate and moisture content, shall also be performed to ensure a proper source test for the material indicated. These associated tests shall be identified in the proposed source test protocol in the inventory plan.
- (2) Reference to the "full set of metals" or "all metals" herein refers to the following listed substances which are required to be measured and reported: arsenic (As), beryllium (Be), cadmium (Cd), chromium (Cr) which includes total chromium and hexavalent chromium (Cr VI), copper (Cu), lead (Pb), manganese (Mn), mercury (Hg), nickel (Ni), selenium (Se), and zinc (Zn).
- (3) Fuel analysis shall include analysis for the full set of metals referred to in Note (2), chlorine content, and sulfur content.

APPENDIX D

Summary of Requirements for Measurements and Alternatives*

Emitting Process, Device or Facility Activity	Substance and Type of Test	Alternative (if any)
----- --COMBUSTION-- -----		
1. Incinerators		
(a) Incinerators burning hazardous, municipal, or biomedical waste, or burning tires. Does not include refuse incinerators at schools, prisons, restaurants, or hotels.	a. Full set metals/stack test b. Hydrogen chloride/stack test c. PAH/stack test d. Dioxins/stack test e. Formaldehyde/stack test f. Benzene/stack test g. Vinyl chloride/stack test h. PCBs/stack test:required any time that dioxins are tested	Small business:Fuel analysis Small business:Fuel analysis - - Small business:Not required Small business:Not required Small business:Not required -
(b) Incinerators at schools, prisons, and restaurants, and hotels.	Full set metals/stack test	-
(c) Metal reclamation when surface is coated with plastic material	Same as 1(a) above	Same as 1(a) above

* See notes preceding the table for further explanation of terms used in the table.

- | | | |
|---|---|--|
| 2. Coal and coke combustion including incineration* | a. Full set metals/stack test
b. Hydrogen chloride/stack test
c. PAH/stack test
d. Dioxins/stack test
e. Formaldehyde/stack test | Small business:Fuel analysis
Small business:Fuel analysis
-
-
-
Requirements a-e shall not apply to universities, schools, colleges, hospitals, and correctional institutions where coal or coke combustion is used primarily for space heating. |
| 3. Residual and crude oil combustion and incineration* | a. Full set metals/stack test
b. Metals, chloride/fuel analy.
c. Benzene/stack test
d. PAH/stack test
e. Formaldehyde/stack test | Small business:Fuel analysis
-
-
-
-
Requirements a-e shall not apply to universities, schools, colleges, hospitals, and correctional institutions where residual or crude oil combustion is used primarily for space heating. |
| 4. Distillate and diesel combustion and incineration* | a. Metals, chloride/fuel analy.
b. PAH/stack test
c. Formaldehyde/stack test | -
-
-
Requirements a-c shall not apply to universities, schools, colleges, hospitals, and correctional institutions where distillate or diesel combustion is used primarily for space heating.

<u>Requirements a-c shall not apply to emergency or stand-by equipment that primarily burn distillate or diesel fuel.</u> |
| 5. Waste oil combustion and incineration* (including oil containing used, recycled, reprocessed, or re-refined oil) | a. Full set metals/stack test
b. Halogenated organics/stack test
c. Benzene/stack test
d. PAH/stack test
e. Dioxins/stack test
f. Formaldehyde/stack test
g. PCBs/stack test: required any time that dioxins are tested | Small business:Fuel analysis
-
-
-
-
Small business:Not required
- |

 * If co-fired with hazardous, municipal, or biomedical waste, or burning tires, then include all testing required under 1(a).

- | | | |
|--|---|---|
| 6. Wood, wood waste, and agricultural waste combustion and incineration* (includes untreated and treated wood) | a. Full set metals/stack test
b. PAH/stack test
c. Dioxins/stack test
d. Formaldehyde/stack test | Small business: Fuel analysis
-
-
- |
| | | Requirements a-d shall not apply to universities, schools, colleges, hospitals, and correctional institutions where wood, wood waste, or agricultural waste combustion is used primarily for space heating. |
| 7. Natural gas combustion | a. Formaldehyde/stack test for electric utilities only | - |

--OTHER PROCESSES--

- | | | |
|--|---------------------------|---------------------------|
| 8. Waste water treatment facilities - including Publicly Owned Treatment Works (POTWs) | | |
| - Sludge incinerator | Same as Incinerators 1(a) | Same as Incinerators 1(a) |

/ HEADWORKS	a/ Halogenated organics stack test if ducted, otherwise as applicable in method; sampling on a minimum of 18 days randomly distributed throughout the year, except that these days shall include at least two weekend days, and one day each quarter when NPDES FF liquid sampling is performed, if applicable. This sampling schedule shall be deemed to meet the sampling frequency requirements specified in subsection 93334 (b).	/
-------------	---	---

/ CHLORINATOR discharge	a/ Halogenated organics/ducted or as applicable in method	/
-------------------------	---	---

 * If co-fired with hazardous, municipal, or biomedical waste, or burning tires, then include all testing required under 1(a).

FF NPDES = National Pollution Discharge Elimination System

9. Agriculture-related facilities: dust	a. Metals/Lab analysis of dust representative of fugitive dust *	Small business:Not required
10. Pharmaceutical mfg.		
- Blender	a. Halogenated organics/ducted or as applicable in method	-
	b. Benzene/ducted or as applicable in method	-
- Drying oven	a. Halogenated organics/ ducted or as applicable in method	-
	b. Benzene/ducted or as applicable in method	-
11. Smelters and foundries		
(a) All	a. Full set metals/stack test	Small business:Metals test/ feed material analysis for As, Be, Cd, Cr(VI), Ni, Pb
	b. Hydrogen sulfide/stack test	Small business:Not required
(b) Secondary copper smelters	a. Same as 11(a) plus dioxins/stack test	-
12. Petroleum refineries		
- CO boilers	a. Benzene/as applicable in method	-
	b. Formaldehyde/as applicable in method	-
	c. All metals/ducted or as applicable in method	-
- Catalytic crackers	a. Benzene/as applicable in method	-
	b. Formaldehyde/as applicable in method	-
	c. All metals/ducted or as applicable in method	-
- Oil combustion	a. Same as appropriate oil combustion by fuel type	Same as oil combustion
13. Asphaltic concrete production	a. Full set of metals/ducted or as applicable in method	-
	b. Benzene/ducted or as applicable in method	-
	c. PAH/ducted or as applicable in method	Small business:Not required

* Preferably dust trapped by the particulate control equipment, if any.

- | | | |
|--|---|--|
| 14. Cement mfg. | a. Full set of metals/stack test | - |
| | b. Formaldehyde/stack test | - |
| | c. Benzene/stack test | - |
| | d. Dioxins/stack test * | - |
| | e. PAH/stack test * | Small business:Not required |
| | f. Hydrogen chloride/stack test* | Small business:Fuel analysis,
Including total
chloride |
| 15. Pulp and Paper mfg. | | |
| - Combustion | a. All combustion,
as applicable by fuel type | Same as for Combustion |
| - Bleaching | a. Formaldehyde/ducted or as
applicable in method | - |
| | b. Halogenated organics/ducted
or as applicable in method | - |
| 16. Textile mfg. | | |
| - Combustion | a. All combustion,
as applicable by fuel type | Same as for Combustion |
| - Other processes | a. Benzene/ducted or
as applicable in method | - |
| | b. Formaldehyde/ducted or as
applicable in method | - |
| | c. Halogenated
organics/ducted or as
applicable in method | - |
| 17. Solvent recycling
(re-refining) | a. Halogenated
organics/ducted or as
applicable in method | - |
| | b. Benzene/ducted or as
applicable in method | - |
| 18. Fiberboard mfg. | a. Formaldehyde/ducted or
as applicable in method | - |
| 19. Glass mfg. | a. Arsenic/stack test | - |
| | b. Cr(VI) and lead/stack test | Small business:Not required |
| 20. Bulk plant/terminal | a. Gasoline vapors/existing
compliance tests must be
provided | - |

* except when burning primarily natural gas; then not required

APPENDIX E

REQUIREMENTS FOR CLASSES OF FACILITIES EMITTING
LESS THAN 10 TPY OF CRITERIA POLLUTANTS

E-I

CLASSES OF FACILITIES EMITTING LESS THAN 10 TPY
FOR WHICH THE FACILITY OPERATORS MUST
PREPARE COMPLETE PLANS AND REPORTS

E-II

CLASSES OF FACILITIES EMITTING LESS THAN 10 TPY
FOR WHICH THE FACILITY OPERATORS MUST
COMPLETE A SURVEY OF PRODUCTION, USE, OR OTHER PRESENCE

NOTES TO APPENDIX E

- a Except facilities using less than four pounds of ethylene oxide per year.
- b Except facilities using solvents for cold cleaning and vapor degreasing in the following quantities:
 - (1) less than 55-gallon (drum) quantities per year of a listed substance which is designated as a human carcinogen or potential human carcinogen; and
 - (2) less than 55-gallon (drum) quantities per month of a listed substance which is not designated as a human carcinogen or potential human carcinogen.
- c Any facility at which asbestos removal occurs on a routine and predictable basis for a period of at least one year.
- d Any treatment, storage, disposal, and recycling facility (as defined by "hazardous waste facility" in Health and Safety Code, Section 25117.1 and in Title 22, California Code of Regulations (CCR), Section 66096) except:
 - (1) transfer stations (as defined in Title 22, CCR, Section 66212) that do not pump or package hazardous waste; and
 - (2) storage facilities (as defined in Health and Safety Code, Section 25123.3) that store only containerized waste.
- e Only the described portions of the SIC are included.
- f [] Indicates an SIC formerly used by the Executive Office of the President, Office of Management and Budget, which has been reassigned.

APPENDIX E-I

Classes of Facilities Emitting Less Than 10 tpy of Criteria Pollutants for Which the Facility Operators Must Prepare Complete Emission Inventory Plans and Reports

<u>Standard Industrial Classification Code (SIC)</u>	<u>Description of Class</u>
Any SIC	Metal platers using cadmium or chromium
Any SIC	Facilities using ethylene oxide for sterilization ^a
Any SIC	Facilities with cooling towers using hexavalent chromium
Any SIC	Facilities that perform degreasing ^b
Any SIC	Facilities using incinerators that burn hazardous, municipal, or biomedical waste, or burning tires
Any SIC	Long term asbestos removal (over one year) ^c
Any SIC	Treatment, storage, disposal, and recycling facilities (TSDFs; TSDR facilities) ^d
2221 ^e , 3229 ^e	Fiberglass and various fiberglass materials and products manufacturing facilities within SICs 2221 and 3229
2611, 2621, [2631] ^f	Pulp and paper mills
2711-2771, 2782	Printing and publishing including printshops and miscellaneous commercial printing
2812-2899	Chemicals and allied products manufacturing
2911-2999	Petroleum refining and related industries
3011-3089, [3293] ^f , [3555] ^f	Rubber and miscellaneous plastics products manufacturing
3471-3479	Miscellaneous plating, polishing, coating, engraving, and allied services
3674	Semiconductors and related devices manufacturing
3731-3732	Boat and ship building and repair
4952	Wastewater treatment facilities (including publicly owned treatment works, POTWs)
5171-5172	Petroleum bulk stations and terminals and related
5511-5521, [7531] ^f , 7532, [7535] ^f	Auto body shops (including new and used car dealers where body work occurs)
5541	Gasoline stations
7216	Dry cleaners
7261 ^e	Funeral services with crematories

APPENDIX E-II

Classes of Facilities Emitting Less Than 10 tpy of Criteria Pollutants for Which the Facility Operators Must Complete a Survey of Production, Use, or Other Presence of Listed Substances

<u>Standard Industrial Classification Code (SIC)</u>	<u>Description of Class</u>
0723,[0729] ^f	Crop preparation services for market
0724,[0729] ^f	Cotton ginning
1311	Crude petroleum and natural gas extraction
1321	Natural gas liquids plants
1381	Drilling oil and gas wells
1422-1429	Miscellaneous crushed and broken stone mining
1442-1446	Construction sand and gravel mining
2033-2034	Canned and dehydrated fruits and vegetables
2041,2044,2046, 4221	Grain mill products manufacturing and warehousing
2434-2439	Veneer, plywood, structural wood members, and related manufacturing
2441-2499	Miscellaneous wood containers, buildings, and products manufacturing
2511-2599,7641	Furniture or cabinet manufacturing and repair
3241	Hydraulic cement manufacturing
3292-3296	Asbestos and miscellaneous nonmetallic mineral products manufacturing
3312-3325	Blast furnaces and steel mills
3341-3369	Primary metal industries and secondary smelting
3411-3469, 3482-3499	Miscellaneous fabricated metal products manufacturing
3511-3537	Various industrial machinery manufacturing
3612-3672, [3673] ^f , 3675-3699	Electronic and other electrical equipment and components, except computer equipment
3721-3728	Aircraft and parts
3761-3769	Guided missile and space vehicle propulsion units and propulsion unit parts
7218	Industrial launderers
7533-7534, 7537-7539	General automotive repair shops and related
8062	General medical and surgical hospitals
8731,8733-8734, [7391] ^f ,[7397] ^f , [8922] ^f	Research, development, and testing services