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Part V

Department of Health and Human Services

Agency for Toxic Substances and Disease Registry

Environmental Protection Agency

The Revised Priority List of Hazardous Substances That Will Be the Subject of Toxicological Profiles; Notice

There is an omission in this notice. Page 52167, at the bottom of column two and the top of column three should read (underlined portion of the notice was omitted in error):

The calculation of the source contribution was included in the methodology to distinguish between those substances that occur at low concentrations but are highly toxic and those substances that occur at higher concentrations but are relatively less toxic. Concentration data in HAZDAT for air, water (surface water, public groundwater, private groundwater, and groundwater unspecified), and soil (top soil, subsurface soil, soil of unspecified depth) were used in this part of the ranking algorithm.

DEPARTMENT OF HEALTH AND HUMAN SERVICES

Agency for Toxic Substances and Disease Registry

ENVIRONMENTAL PROTECTION AGENCY

[ATSDR-40]

The Revised Priority List of Hazardous Substances That Will Be the Subject of Toxicological Profiles

AGENCIES: Agency for Toxic Substances and Disease Registry (ATSDR), Public Health Service (PHS), Department of Health and Human Services (HHS); and Environmental Protection Agency (EPA).

ACTION: Notice.

SUMMARY: The Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA or Superfund), as amended by the Superfund Amendments and Reauthorization Act (SARA), establishes certain requirements for ATSDR and EPA with regard to hazardous substances which are most commonly found at facilities on the CERCLA National Priorities List (NPL). CERCLA, as amended (42 U.S.C. 9604(i)(2)), requires that the two agencies prepare a list, in order of priority, of at least 100 hazardous substances that are most commonly found at facilities on the NPL and which, in their sole discretion, are determined to pose the most significant potential threat to human health (see 52 FR 12866, April 17, 1987). CERCLA also requires the agencies to revise the priority list to include 100 or more additional hazardous substances (see 53 FR 41280, October 20, 1988), and to include at least 25 additional hazardous substances in each of the three successive years following the 1988 revision (see 54 FR 43619, October 26, 1989; 55 FR 42067, October 17, 1990). Each substance on the priority list of hazardous substances becomes the subject of a toxicological profile prepared by ATSDR.

This notice provides a revised priority list of 275 hazardous substances based on the most comprehensive information currently available for substances found at NPL sites. This notice identifies additional substances whose total score did not differ considerably from substances near the lower end of the revised priority list; it also provides substances identified on previous priority lists but not included on the revised priority list. This revised priority list of hazardous substances replaces previously published priority lists. The agencies intend to revise the list of hazardous substances annually to reflect changes and improvements in data collection.

ADDRESSES: Comments on this notice should bear the docket control number ATSDR-40, and should be submitted to: ATSDR, Division of Toxicology, Mail Stop E-29, 1600 Clifton Road NE., Atlanta, GA 30333.

All comments will be placed in a publicly accessible docket; therefore, please do not submit confidential business information.

FOR FURTHER INFORMATION CONTACT: Quality Assurance Branch, Division of Toxicology, ATSDR, Atlanta, GA, 30333; telephone: 404-639-6030 or FTS 236-6030.

SUPPLEMENTARY INFORMATION:

I. Background

Section 104(i) of CERCLA, as amended, requires ATSDR and EPA to: (1) Prepare a list of hazardous substances found at NPL sites (in order of priority), (2) develop toxicological profiles for those substances, and (3) initiate a research program to fill priority data needs identified for the substances.

The first priority list of 100 substances was published in the **Federal Register** on April 17, 1987 (52 FR 12866), with a summary of the procedure used by ATSDR and EPA to compile the list. In that notice, the agencies solicited public comment on the approach adopted for evaluating and ranking hazardous substances found at NPL sites and announced the intention to refine the listing process in response to these comments, as well as continued efforts by the agencies to improve the listing process.

A second priority list of 100 additional substances was published on October 20, 1988 (53 FR 41280), and the revised procedure used to prepare the second priority list was summarized. For the most part, the same procedure was used to generate the third and fourth lists of 25 substances each (54 FR 43619, October 26, 1989, and 55 FR 42067, October 17, 1990).

The previous priority lists of hazardous substances were based on the most comprehensive and relevant information available when the lists were developed. More comprehensive sources of information for the frequency of occurrence of substances at NPL sites and the potential for human exposure at these sites have become available since publication of the first priority list in 1987. A notice announcing the intention of ATSDR and EPA to revise the priority list of hazardous substances was published on June 27, 1991 (56 FR 29485). Comments received by the agencies have been considered in the re-evaluation of the 250 previously listed substances and in the identification of additional substances.

The approach used to generate the revised priority list of hazardous substances is summarized below. ATSDR and EPA solicit comment on this approach; such comments should be submitted in accordance with the instructions given in this notice. The agencies will continue to seek improvements in the listing process as future revisions of the list are prepared. All comments previously received are in the public file (see section V of this notice).

II. Methodology for Selecting Substances for the Revised Priority List

A. General Approach Taken by ATSDR and EPA

The approach used by ATSDR and EPA to generate the revised priority list of hazardous substances is a modification of the approaches used for the previous lists. The modifications reflect efforts to: (1) Improve data acquisition for substances on the previous lists, and (2) adapt the method to include data sources that provide a more direct indication of potential exposure to substances found at NPL sites. The hazardous substances evaluated for the revised priority list included approximately 700 hazardous substances with documented evidence of occurrence at three or more NPL sites. In the development of the list, ATSDR and EPA established the priority of these substances based on the following three criteria for determining the degree to which each substance poses a potential human health risk: (1) Frequency of occurrence at NPL sites, (2) toxicity, and (3) potential for human exposure to the substance. These criteria meet the requirements of section 104(i)(2) of CERCLA, as amended, and reflect the general practice of defining human health risk in terms of the toxicity and human exposure potential of a substance.

B. Determination of the Frequency of Occurrence Criterion of the Ranking Methodology

ATSDR and EPA selected ATSDR's HAZDAT database as the source of data for the frequency of occurrence of substances at NPL hazardous waste sites or facilities. The HAZDAT system is the scientific and administrative database developed by ATSDR as a repository for information on hazardous substances found at NPL and non-NPL

waste sites or emergency events and on the potential health effects of hazardous substances on human populations. The sources of HAZDAT site-specific information include ATSDR health assessments, health consultations, and other site-specific documents submitted to ATSDR by EPA, state agencies, and other parties. HAZDAT has information on approximately 1300 sites that have been proposed for, listed on, or delisted from the NPL. Furthermore, the HAZDAT database contains information on substances that have been identified at sites but are currently not included in EPA's Contract Laboratory Program databases. HAZDAT contains information on substances found in groundwater, surface water, leachate, soil, sludge, sediment, air, soil gas, biota, human tissues, and waste materials or containers. The number of NPL sites at which a substance was identified in any medium in health assessment or site-file documents was used to indicate the frequency of occurrence.

C. Determination of the Toxicity Component of the Ranking Methodology

For several reasons, ATSDR and EPA continued to use the Reportable Quantity (RQ) approach as the toxicity hazard scoring system. It provides the most complete characterization of toxicity of all hazard scoring systems reviewed by the two agencies; other schemes were more limited in either the consideration of different types of toxic effects, severity of effects, or potency. In addition, toxicity data used in the RQ approach are derived from primary peer-reviewed literature, and Rqs have already been established for the majority of substances frequently detected at hazardous waste sites. Moreover, the determination of RQ health effect values utilizes weight-of-evidence considerations in the evaluation of data.

The reportable quantity ranking scheme was developed by EPA to set RQs for hazardous substances as required by CERCLA. Under CERCLA section 103(a), any person in charge of a vessel or an offshore or onshore facility from which a hazardous substance has been released in a quantity that equals or exceeds its RQ must immediately notify the National Response Center and state and local response authorities of the release. RQs are developed for individual chemicals and for waste streams that have already been designated under CERCLA section 101(14) as hazardous substances.

Each CERCLA hazardous substance is assigned to one of five tiered RQ categories (1, 10, 100, 1000, and 5000 pounds) based on acute toxicity, chronic toxicity, carcinogenicity, aquatic toxicity, and ignitability and reactivity. RQs are determined for each criterion separately; the lowest of these is selected as the RQ for the substance, subject to adjustment for potential hydrolysis, photolysis, or biodegradation in the environment. The RQ scoring scheme is described in several **Federal Register** notices (50 FR 13456, April 4, 1985; 51 FR 34534, September 29, 1986; and 52 FR 8140, March 16, 1987; 54 FR 35988, August 30, 1989). The RQ methodology was applied for those candidate substances without final CERCLA RQs to establish a Toxicity/Environmental Score (TES). These scores were developed for use only in the ranking methodology and do not represent regulatory amounts.

D. Determination of the Potential for Human Exposure Component of the Ranking Methodology

In the approach for the revised priority list, ATSDR and EPA identified the most useful and directly relevant data to assess the potential for human exposure to hazardous substances at NPL sites. The exposure component was based on the following information:

1. Concentrations of the Substances in Environmental Media

To provide a means of ranking substances based on concentration data, the following formula for calculating a relative source contribution (SC) was used:

$$SC = \frac{(\overline{C}_a A_a) + (\overline{C}_w A_w) + (\overline{C}_s A_s)}{RQ \text{ or } TES}$$

Where $\overline{C}_x$ = geometric mean concentration of the substance in a particular environmental medium (a = air, w = water, s = soil); A_x = standard exposure assumption for the particular environmental medium to approximate a theoretical daily dose to humans (e.g., 1 liter of drinking water consumed per day); and RQ or TES = the Reportable Quantity or Toxicity/Environmental Score for the substance. The calculation of the source contribution was included in the methodology to distinguish between those substances that occur at low concentrations but are highly toxic and those substances that occur at higher concentratiosurface water, public groundwater, private groundwater, and groundwater unspecified), and soil (top soil, subsurface soil, soil of unspecified depth) were used in this part of the ranking algorithm. Substances with concentration data in HAZDAT were evaluated with respect to the maximum concentration in a particular medium at a site, and the geometric mean concentration across NPL sites for each medium was determined. The agencies applied exposure assumptions for children (e.g., 1 liter of water consumed per day, 200 milligrams of soil ingested per day, and 15 cubic meters of air breathed per day) to determine the theoretical daily dose.

2. Exposure Status of Populations

Information concerning documented exposure or potential exposure to a particular substance or to environmental media in which a substance is found was also used in the exposure component. HAZDAT provides information on exposure or potential exposure to specific substances and to media, such as drinking water, in which substances have been reported. Substances were scored differentially with respect to mention in an ATSDR Health Assessment of exposure or potential exposure to a particular substance or to exposure or potential exposure to an environmental medium containing the substance.

3. Populations Surrounding NPL Sites

In the notice announcing the intent to revise the priority list of hazardous substances (56 FR 29485, June 27, 1991), the agencies indicated that estimates of populations surrounding NPL sites would be used to assess the potential for human exposure for substances that lacked concentration data or information on exposure or potential exposure to substances or media. Population data were not used to develop this list because concentration or exposure data were available for all substances found at three or more sites. The agencies intend to assess the usefulness of 1990 Census data in future listing activities as these data become available.

III. Revised Priority List of Hazardous Substances

A. Generation of the Revised Priority List

Using the data sources described in this notice, ATSDR and EPA have ranked the hazard potential of each candidate substance according to the following algorithm:

$$\underset{(1800\ max.\ points)}{TOTAL\ SCORE} = \underset{(600\ points)}{NPL\ FREQUENCY} + \underset{(600\ points)}{TOXICITY} + \underset{(300\ points)}{POTENTIAL\ FOR\ HUMAN\ EXPOSURE} + (300\ points)$$

The algorithm is described in greater detail in the support document for this notice, which is contained in the public file (see section V of this notice).

B. List of Substances

The revised priority list of 275 hazardous substances is presented in Table 1. The substances are presented in rank order, based on the total score for each substance. For presentation purposes, most values have been rounded to whole numbers; greater detail is provided in the support document (see section V of this notice).

The previous priority lists of 250 hazardous substances actually included 271 substances because some related ubstances were combined in the ranking. For example, p,p'-DDT, p,p'-DDD, and p,p'-DDE were combined to represent one listed substance. In this revised priority list, each substance has been listed separately. This list will be used by ATSDR to guide the development of toxicological profiles and the subsequent identification of priority data needs. Although the substances have been listed separately, related substances may be combined for consideration in a toxicological profile and attending priority data needs.

The CERCLA legislation requires that the agencies prepare a list of at least 275 substances; due to similarities in scoring, an additional 56 substances have been identified in the listing activity and are provided in Table 2. These substances have been provided in this notice because their total scores did not differ considerably from substances near the lower end of the priority list of 275 substances. At the discretion of ATSDR, these substances may be considered for inclusion in future toxicological profiles.

Table 3 provides a list of 67 substances that appeared on previous priority lists but are not included on the revised priority list of 275 hazardous substances nor in Table 2.

The substances in Tables 2 and 3 will not be considered for development of toxicological profiles at this time unless a profile is developed for related forms of the substance that are included on the revised priority list. Some substances in Tables 2 and 3 have been the subject of toxicological profiles; these profiles will not be updated nor will attending priority data needs be developed unless additional concern is generated in future listing activities.

IV. Future Revisions of the Priority List

ATSDR and EPA intend to evaluate the priority list annually and make further refinements where possible. For example, ATSDR intends to assess the data for naturally occurring substances in order to adjust for natural background concentrations in the environment, as well as identify speciation of substances, where possible.

V. Administrative Record

ATSDR and EPA are establishing a single administrative record entitled ATSDR–40 for materials pertaining to this notice. All materials received as a result of this notice will be included in the public file which is available for inspection from 8 a.m. to 4:30 p.m., Monday through Friday, except Federal legal holidays, at the Agency for Toxic Substances and Disease Registry, Building 33, Executive Park Drive, Atlanta, Georgia.

For the Agency for Toxic Substances and Disease Registry.

Dated: October 7, 1991.

Walter R. Dowdle,

Acting Administrator, Agency for Toxic Substances and Disease Registry.

For the Environmental Protection Agency.

Dated: October 10, 1991.

Victor J. Kimm,

Acting Assistant Administrator, Office of Pesticides and Toxic Substances, Environmental Protection Agency.

BILLING CODE 4160-70-M

Table 1. — Revised Priority List of Hazardous Substances

Rank	CAS Number	Contaminant Name	Total Pts	NPL Freq	Freq Pts	RQ	TES	Tox Pts	Source Contrib	Conc Pts	Expos Poten	Expos Pts
1	7439-92-1	LEAD	1673	853	600	1		600	3.9E−01	230	35(1)	243
2	7440-38-2	ARSENIC	1555	729	513	1		600	2.4E−01	224	15(1)	218
3	7439-97-6	MERCURY	1430	568	400	1		600	1.7E−01	221	8(1)	210
4	75-01-4	VINYL CHLORIDE	1348	418	294	1		600	4.6E−01	232	18(1)	222
5	71-43-2	BENZENE	1327	692	487	10		400	5.5E−02	208	27(1)	233
6	7440-43-9	CADMIUM	1291	701	493	10		400	6.1E−03	182	13(1)	216
7	1336-36-3	POLYCHLORINATED BIPHENYLS	1248	314	221	1		600	1.4E−01	218	8(1)	210
8	67-66-3	CHLOROFORM	1234	596	419	10		400	1.3E−02	191	20(1)	224
9	205-99-2	BENZO(B)FLUORANTHENE	1187	273	192	1		600	1.0E−01	214	130(2)	181
10	79-01-6	TRICHLOROETHYLENE	1180	745	524	100		178	4.1E−03	178	82(1)	300
11	57-74-9	CHLORDANE	1177	153	108	1		600	9.3E+00	266	3(1)	204
12	50-32-8	BENZO(A)PYRENE	1171	295	208	1		600	6.7E−02	210	14(2)	153
13	11096-82-5	AROCLOR 1260	1160	207	146	1		600	7.9E−02	212	2(1)	202
14	11097-69-1	AROCLOR 1254	1155	217	153	1		600	2.8E−02	200	2(1)	202
15	50-29-3	DDT, P,P'-	1148	233	164	1		600	5.6E−03	182	2(1)	202
16	8001-58-9	CREOSOTE	1122	30	21	1		600	1.9E+02	300	1(1)	201
17	72-55-9	DDE, P,P'-	1110	189	133	1		600	3.5E−03	176	1(1)	201
18	12672-29-6	AROCLOR 1248	1110	118	83	1		600	2.7E−01	225	1(1)	201
19	18540-29-9	▲CHROMIUM, HEXAVALENT	1100	82	58		1	600	6.3E−01	235	6(1)	207
20	53-70-3	DIBENZO(A,H)ANTHRACENE	1097	141	99	1		600	2.1E−02	196	1(1)	201
21	58-89-9	HEXACHLOROCYCLOHEXANE, GAMMA-	1079	136	96	1		600	5.9E−03	182	1(1)	201
22	127-18-4	TETRACHLOROETHYLENE	1078	673	473	100		178	2.6E−03	173	44(1)	254
23	309-00-2	ALDRIN	1070	126	89	1		600	4.9E−03	180	1(1)	201
24	72-54-8	DDD, P,P'-	1065	146	103	1		600	9.8E−04	182	1(1)	201
25	57-12-5	CYANIDE	1063	366	257	10		400	4.0E−02	204	1(1)	201
26	76-44-8	HEPTACHLOR	1062	126	89	1		600	2.5E−03	172	1(1)	201
27	319-85-7	HEXACHLOROCYCLOHEXANE, BETA-	1059	105	74	1		600	6.8E−03	184	1(1)	201
28	84-74-2	DI-N-BUTYL PHTHALATE	1053	394	277	10		400	5.1E−03	180	194(2)	196
29	53469-21-9	AROCLOR 1242	1040	129	91	1		600	1.3E−02	191	36(2)	159
30	60-57-1	DIELDRIN	1034	149	105	1		600	1.7E−03	168	47(2)	161
31	87-86-5	PENTACHLOROPHENOL	1028	228	160	10		400	9.7E+00	266	1(1)	201
32	72-20-8	ENDRIN	1008	88	62	1		600	1.9E−02	196	3(2)	151
33	56-23-5	CARBON TETRACHLORIDE	1006	266	187	10		400	3.7E−02	203	13(1)	216
34	7440-41-7	BERYLLIUM	1005	329	231	10		400	2.6E−03	173	1(1)	201
35	108-88-3	TOLUENE	1003	787	554	1000		53	5.0E−03	180	13(1)	216
36	87-68-3	HEXACHLOROBUTADIENE	1002	43	30	1		600	1.3E−01	217	19(2)	154
37	8001-35-2	TOXAPHENE	1001	56	39	1		600	7.1E−02	210	3(2)	151
38	959-98-8	ENDOSULFAN, ALPHA	992	66	46	1		600	1.1E−02	189	28(2)	157
39	1746-01-6	2,3,7,8-TETRACHLORO-DIBENZO-P-DIOXIN	992	57	40	1		600	3.3E−04	149	2(1)	202
40	56-55-3	BENZO(A)ANTHRACENE	991	311	219	10		400	1.1E−02	189	138(2)	183
41	319-86-8	HEXACHLOROCYCLOHEXANE, DELTA-	989	84	59	1		600	2.8E−03	173	28(2)	157
42	7440-02-0	NICKEL	982	603	424	100		178	4.0E−03	178	2(1)	202
43	7439-96-5	MANGANESE	970	548	385		100	178	3.4E−02	202	4(1)	205
44	67708-83-2	▲DIBROMOCHLOROPROPANE	964	12	8		1	600	4.8E−04	154	2(1)	202
45	72-43-5	METHOXYCHLOR	964	36	25	1		600	8.6E−03	186	11(2)	153
46	91-94-1	3,3'-DICHLOROBENZIDINE	961	26	18	1		600	9.8E−03	188	19(2)	154
47	75-60-5	▲DIMETHYLARSINIC ACID	957	8	6	1		600	3.0E−02	200	6(2)	151
48	33213-65-9	ENDOSULFAN, BETA	956	39	27	1		600	3.5E−03	176	12(2)	153
49	106-93-4	1,2-DIBROMOETHANE	951	17	12	1		600	1.0E−02	188	3(2)	151
50	192-97-2	▲BENZO(E)PYRENE	951	30	21		1	600	4.4E−03	179	5(2)	151
51	1024-57-3	HEPTACHLOR EPOXIDE	944	81	57	1		600	8.8E−05	134	14(2)	153
52	75-09-2	METHYLENE CHLORIDE	941	711	500	1000		53	2.7E−03	173	12(1)	215
53	7440-66-6	ZINC	938	711	500	1000		53	3.3E−03	175	8(1)	210
54	203-33-8	▲BENZO(A)FLUORANTHENE	932	39	27		1	600	4.9E−04	154	3(2)	151
55	7440-47-3	CHROMIUM	930	815	573	5000		10	6.4E−05	131	13(1)	216
56	117-81-7	DI(2-ETHYLHEXYL)PHTHALATE	928	543	382	100		178	1.4E−03	166	2(1)	202
57	115-29-7	ENDOSULFAN	920	40	28	1		600	9.8E−05	135	27(2)	156
58	53494-70-5	▲ENDRIN KETONE	919	28	20		1	600	3.3E−04	149	2(2)	150

Table 1. — Revised Priority List of Hazardous Substances — Continued

Rank	CAS Number	Contaminant Name	Total Pts	NPL Freq	Freq Pts	RQ	TES	Tox Pts	Source Contrib	Conc Pts	Expos Poten	Expos Pts
59	74-82-8	▲METHANE	915	58	41		10	400	1.7E+01	273	1(1)	201
60	91-20-3	NAPHTHALENE	890	462	325	100		178	6.5E−03	183	3(1)	204
61	107-06-2	1,2-DICHLOROETHANE	881	425	299	100		178	4.5E−03	179	21(1)	226
62	591-78-6	2-HEXANONE	872	169	119		10	400	9.9E−03	188	66(2)	166
63	75-35-4	1,1-DICHLOROETHENE	864	432	304	100		178	8.5E−04	160	18(1)	222
64	71-55-6	1,1,1-TRICHLOROETHANE	864	612	430	1000		53	4.3E−04	152	23(1)	228
65	108-90-7	CHLOROBENZENE	861	408	287	100		178	6.1E−03	182	11(1)	213
66	100-41-4	ETHYL BENZENE	859	618	435	1000		53	1.1E−03	163	7(1)	209
67	12587-46-1	▲ALPHA RADIATION	840	53	37		1◆	600	*N.D.*	0	2(1)	202
68	1330-20-7	TOTAL XYLENES	838	576	405	1000		53	2.6E−03	173	6(1)	207
69	118-96-7	TRINITROTOLUENE	834	18	13		10	400	1.4E−01	218	2(1)	202
70	92-87-5	BENZIDINE	829	26	18	1		600	1.1E−02	189	16(4)	21
71	7440-14-4	RADIUM	827	36	25		1◆	600	*N.D.*	0	1(1)	201
72	99-35-4	1,3,5-TRINITROBENZENE	826	14	10	10		400	1.1E−01	215	1(1)	201
73	7440-61-1	URANIUM	824	33	23		1◆	600	*N.D.*	0	1(1)	201
74	7440-50-8	COPPER	821	666	468	5000		10	1.2E−04	138	4(1)	205
75	206-44-0	FLUORANTHENE	819	393	276	100		178	2.4E−03	172	182(2)	193
76	121-14-2	2,4-DINITROTOLUENE	819	66	46	10		400	2.1E−03	170	2(1)	202
77	319-84-6	HEXACHLOROCYCLOHEXANE, ALPHA-	819	95	67	10		400	3.8E−04	151	1(1)	201
78	7440-29-1	THORIUM	819	25	18		1◆	600	*N.D.*	0	1(1)	201
79	101-14-4	4,4'-METHYLENEBIS-(2-CHLOROANILINE)	816	5	4	10		400	7.9E−02	212	1(1)	201
80	75-34-3	1,1-DICHLOROETHANE	816	516	363	1000		53	5.8E−03	182	15(1)	218
81	10043-92-2	RADON	813	17	12		1◆	600	*N.D.*	0	1(1)	201
82	111-44-4	BIS(2-CHLOROETHYL) ETHER	811	68	48	10		400	4.7E−02	206	32(2)	158
83	621-64-7	N-NITROSODI-N-PROPYLAMINE	805	50	35	10		400	1.8E−03	168	1(1)	201
84	7440-39-3	BARIUM	804	544	383		1000	53	1.2E−03	164	4(1)	205
85	108-95-2	PHENOL	804	512	360	1000		53	8.2E−03	186	4(1)	205
86	1031-07-8	ENDOSULFAN SULFATE	804	70	49	1		600	*N.D.*	0	19(2)	154
87	7723-14-0	PHOSPHORUS	803	68	48	1		600	*N.D.*	0	21(2)	155
88	7782-49-2	SELENIUM	800	373	262	100		178	7.6E−04	159	1(1)	201
89	39001-02-0	▲OCTACHLORODIBENZOFURAN	794	33	23		10	400	1.4E−01	218	9(2)	152
90	1332-21-4	ASBESTOS	791	52	37	1		600	*N.D.*	0	20(2)	155
91	12674-11-2	AROCLOR 1016	789	51	36	1		600	*N.D.*	0	14(2)	153
92	59536-65-1	POLYBROMINATED BIPHENYLS	788	9	6		10	400	5.2E−03	180	1(1)	201
93	3268-87-9	OCTACHLORODIBENZO-P-DIOXIN	783	42	30		10	400	3.3E−02	202	7(2)	152
94	88-06-2	2,4,6-TRICHLOROPHENOL	780	74	52	10		400	3.4E−03	176	9(2)	152
95	218-01-9	CHRYSENE	780	344	242	100		178	2.2E−03	171	165(2)	189
96	156-60-5	1,2-DICHLOROETHENE, TRANS-	774	499	351	1000		53	3.1E−04	148	18(1)	222
97	12587-47-2	▲BETA RADIATION	773	31	22		1◆	600	*N.D.*	0	7(2)	152
98	11141-16-5	AROCLOR 1232	770	25	18	1		600	*N.D.*	0	12(2)	153
99	67-64-1	ACETONE	768	520	366	5000		10	8.4E−03	186	5(1)	206
100	333-41-5	▲DIAZINON	767	22	15	1		600	*N.D.*	0	7(2)	152
101	107-02-8	ACROLEIN	767	24	17	1		600	*N.D.*	0	1(2)	150
102	7421-93-4	ENDRIN ALDEHYDE	764	18	13	1		600	*N.D.*	0	5(2)	151
103	13982-63-3	▲RADIUM-226	763	17	12		1◆	600	*N.D.*	0	5(2)	151
104	5103-71-9	▲ALPHA CHLORDANE	761	15	11	1		600	*N.D.*	0	2(2)	150
105	5103-74-2	▲GAMMA CHLORDANE	760	13	9	1		600	*N.D.*	0	4(2)	151
106	302-01-2	HYDRAZINE	758	6	4	1		600	*N.D.*	0	15(2)	154
107	77-47-4	HEXACHLOROCYCLO-PENTADIENE	757	28	20	10		400	7.4E−03	185	12(2)	153
108	10028-17-8	TRITIUM	757	9	6		1◆	600	*N.D.*	0	3(2)	151
109	198-55-0	▲PERYLENE	757	9	6		1	600	*N.D.*	0	1(2)	150
110	1327-53-3	▲ARSENIC TRIOXIDE	757	9	6	1		600	*N.D.*	0	1(2)	150
111	96-12-8	1,2-DIBROMO-3-CHLORO-PROPANE	755	6	4	1		600	*N.D.*	0	5(2)	151
112	298-04-4	DISULFOTON	755	7	5	1		600	*N.D.*	0	2(2)	150
113	15262-20-1	▲RADIUM-228	755	7	5		1◆	600	*N.D.*	0	2(2)	150
114	12001-29-5	▲CHRYSOTILE	755	6	4	1		600	*N.D.*	0	3(2)	151
115	25167-82-2	▲TRICHLOROPHENOL	754	9	6	10		400	2.3E−02	197	1(2)	150
116	14274-82-9	▲THORIUM-228	754	5	4		1◆	600	*N.D.*	0	2(2)	150

Table 1. — Revised Priority List of Hazardous Substances — Continued

Rank	CAS Number	Contaminant Name	Total Pts	NPL Freq	Freq Pts	RQ	TES	Tox Pts	Source Contrib	Conc Pts	Expos Poten	Expos Pts
117	86-50-0	▲GUTHION	754	5	4	1		600	N.D.	0	1(2)	150
118	786-19-6	▲CARBOPHENOTHION	753	4	3		1	600	N.D.	0	1(2)	150
119	13233-32-4	▲RADIUM-224	753	3	2		1◆	600	N.D.	0	2(2)	150
120	79-34-5	1,1,2,2-TETRACHLOROETHANE	740	253	178	100		178	5.2E−03	181	3(1)	204
121	51-28-5	2,4-DINITROPHENOL	735	55	39	10		400	1.2E+01	269	21(4)	28
122	118-74-1	HEXACHLOROBENZENE	723	78	55	10		400	2.3E−02	198	55(4)	71
123	608-73-1	▲HEXACHLOROCYCLOHEXANE	721	36	25		10	400	2.2E−04	144	6(2)	151
124	7440-48-4	COBALT	720	276	194		100	178	1.7E−03	168	128(2)	180
125	41903-57-5	▲TETRACHLORODIBENZO-P-DIOXIN	719	39	27		10	400	1.9E−06	91	1(1)	201
126	95-50-1	1,2-DICHLOROBENZENE	718	229	161	100		178	4.1E−03	178	1(1)	201
127	83-32-9	ACENAPHTHENE	717	246	173	100		178	1.3E−02	191	105(2)	175
128	91-57-6	2-METHYLNAPHTHALENE	716	267	188		100	178	2.8E−04	148	2(1)	202
129	75-15-0	CARBON DISULFIDE	710	188	132	100		178	2.2E−02	197	2(1)	202
130	105-67-9	2,4-DIMETHYLPHENOL	708	194	136	100		178	4.9E−01	232	46(2)	161
131	25323-89-1	TRICHLOROETHANE	695	215	151		100	178	1.2E−03	164	1(1)	201
132	79-00-5	1,1,2-TRICHLOROETHANE	692	176	124	100		178	9.1E−03	187	3(1)	204
133	85-68-7	BUTYL BENZYL PHTHALATE	686	234	165	100		178	1.5E−03	166	113(2)	177
134	37871-00-4	▲HEPTACHLORODIBENZO-P-DIOXIN	682	40	28		10	400	5.2E−06	102	9(2)	152
135	122-66-7	1,2-DIPHENYLHYDRAZINE	679	22	15	10		400	1.4E−05	114	2(2)	150
136	7440-31-5	TIN	674	190	134		100	178	1.6E−02	194	78(2)	168
137	78-93-3	2-BUTANONE	673	413	291	5000		10	1.8E−03	168	3(1)	204
138	106-46-7	1,4-DICHLOROBENZENE	671	228	160	100		178	8.2E−04	160	96(2)	173
139	75-00-3	CHLOROETHANE	670	235	165	100		178	4.1E−04	152	106(2)	175
140	7429-90-5	ALUMINUM	667	397	279		5000	10	3.6E−03	176	1(1)	201
141	7664-41-7	AMMONIA	663	108	76	100		178	3.4E+00	254	19(2)	154
142	34465-46-8	HEXACHLORODIBENZO-P-DIOXIN	663	39	27		10	400	1.1E−06	84	5(2)	151
143	25167-83-3	▲TETRACHLOROPHENOL	662	14	10		10	400	4.1E−03	178	58(4)	74
144	534-52-1	4,6-DINITRO-O-CRESOL	660	41	29	10		400	1.7E−01	220	8(4)	11
145	120-82-1	1,2,4-TRICHLOROBENZENE	656	143	101	100		178	3.6E−03	176	1(1)	201
146	15117-96-1	▲URANIUM-235	654	9	6		1◆	600	N.D.	0	37(4)	48
147	465-73-6	▲ISODRIN	654	3	2	1		600	N.D.	0	40(4)	52
148	55684-94-1	▲HEXACHLORODIBENZOFURAN	648	33	23		10	400	4.2E−07	73	9(2)	152
149	193-39-5	INDENO(1,2,3-CD)PYRENE	645	216	152	100		178	2.1E−04	144	91(2)	172
150	110-54-3	HEXANE	641	59	42		100	178	1.8E−01	221	1(1)	201
151	38998-75-3	▲HEPTACHLORODIBENZOFURAN	641	30	21		10	400	2.5E−07	67	9(2)	152
152	13966-29-5	▲URANIUM-234	636	9	6		1◆	600	N.D.	0	23(4)	30
153	14269-63-7	▲THORIUM-230	635	11	8		1◆	600	N.D.	0	21(4)	28
154	7440-22-4	SILVER	632	374	263	1000		53	7.3E−05	132	145(2)	184
155	67-72-1	HEXACHLOROETHANE	628	42	30	100		178	1.2E+01	269	5(2)	151
156	143-50-0	▲KEPONE	626	3	2	1		600	N.D.	0	18(4)	24
157	7778-39-4	▲ARSENIC ACID	625	6	4		1	600	N.D.	0	16(4)	21
158	2921-88-2	▲CHLORPYRIFOS	623	8	6	1		600	N.D.	0	13(4)	17
159	7784-42-1	▲ARSINE	622	5	4		1	600	N.D.	0	14(4)	19
160	14255-04-0	▲LEAD-210	620	4	3		1◆	600	N.D.	0	13(4)	17
161	85-01-8	PHENANTHRENE	619	401	282	5000		10	8.9E−05	134	181(2)	193
162	3734-48-3	▲CHLORDENE	619	4	3		1	600	N.D.	0	12(4)	16
163	22967-92-6	▲METHYLMERCURY	618	4	3		1	600	N.D.	0	11(4)	15
164	10045-97-3	▲CESIUM-137	617	5	4		1◆	600	N.D.	0	10(4)	14
165	11104-28-2	AROCLOR 1221	617	19	13	1		600	N.D.	0	2(4)	4
166	27304-13-8	▲OXYCHLORDANE	616	4	3		1	600	N.D.	0	10(4)	14
167	7784-46-5	▲SODIUM ARSENITE	616	3	2	1		600	N.D.	0	10(4)	14
168	56832-73-6	▲BENZOFLUORANTHENE	616	3	2		1	600	N.D.	0	10(4)	14
169	13981-16-3	▲PLUTONIUM-238	615	5	4		1◆	600	N.D.	0	8(4)	11
170	13981-52-7	▲POLONIUM-210	615	5	4		1◆	600	N.D.	0	8(4)	11
171	30402-15-4	▲PENTACHLORODIBENZOFURAN	614	25	18		10	400	3.9E−08	46	2(2)	150
172	7783-06-4	HYDROGEN SULFIDE	612	23	16	100		178	1.0E+01	267	3(2)	151
173	10198-40-0	▲COBALT-60	612	3	2		1◆	600	N.D.	0	7(4)	10
174	13966-32-0	▲SODIUM-22	612	3	2		1◆	600	N.D.	0	7(4)	10
175	25321-22-6	DICHLOROBENZENE	611	74	52	100		178	4.8E−03	180	1(1)	201
176	129-00-0	PYRENE	611	400	281	5000		10	2.2E−05	118	1(1)	201

Table 1. — Revised Priority List of Hazardous Substances — Continued

Rank	CAS Number	Contaminant Name	Total Pts	NPL Freq	Freq Pts	RQ	TES	Tox Pts	Source Contrib	Conc Pts	Expos Poten	Expos Pts
177	7440-62-2	VANADIUM	610	299	210		1000	53	7.0E—04	158	163(2)	189
178	15117-53-0	▲SULFUR-35	608	3	2		1◆	600	N.D.	0	4(4)	6
179	10098-97-2	▲STRONTIUM-90	607	3	2		1◆	600	N.D.	0	3(4)	5
180	7440-07-5	PLUTONIUM	604	3	2		1◆	600	N.D.	0	1(4)	2
181	15117-48-3	▲PLUTONIUM-239	604	3	2		1◆	600	N.D.	0	1(4)	2
182	124-48-1	CHLORODIBROMOMETHANE	604	115	81	100		178	1.9E—04	143	2(1)	202
183	683-53-4	▲BROMODICHLOROETHANE	603	3	2		10	400	N.D.	0	1(1)	201
184	13968-55-3	▲URANIUM-233	602	3	2		1◆	600	N.D.	0	0(0)	0
185	14797-55-8	NITRATE	602	195	137		1000	53	5.7E—02	208	3(1)	204
186	86-30-6	N-NITROSODIPHENYLAMINE	601	168	118	100		178	1.4E—04	140	68(2)	166
187	541-73-1	1,3-DICHLOROBENZENE	601	133	94	100		178	1.3E—03	165	62(2)	165
188	121-82-4	CYCLOTRIMETHYLENE-TRINITRAMINE (RDX)	599	16	11		100	178	5.9E—02	208	1(1)	201
189	540-59-0	1,2-DICHLOROETHYLENE	585	255	179		1000	53	1.7E—04	141	9(1)	211
190	74-87-3	CHLOROMETHANE	584	126	89	100		178	6.3E—04	157	44(2)	160
191	60-29-7	ETHYL ETHER	583	44	31	100		178	2.6E—03	173	1(1)	201
192	7782-50-5	▲CHLORINE	578	38	27	10		400	N.D.	0	7(2)	152
193	95-95-4	2,4,5-TRICHLOROPHENOL	577	36	25	10		400	N.D.	0	8(2)	152
194	75-25-2	BROMOFORM	577	101	71	100		178	4.5E—05	127	1(1)	201
195	62-75-9	N-NITROSODIMETHYLAMINE	575	31	22	10		400	N.D.	0	14(2)	153
196	606-20-2	2,6-DINITROTOLUENE	573	46	32	100		178	9.0E—04	161	2(1)	202
197	95-47-6	▲O-XYLENE	573	171	120	1000		53	2.6E—02	199	1(1)	201
198	7782-41-4	FLUORINE	572	27	19	10		400	N.D.	0	13(2)	153
199	7439-98-7	MOLYBDENUM	572	62	44		100	178	2.0E—02	196	18(2)	154
200	7738-94-5	▲CHROMIC ACID	568	19	13		10	400	N.D.	0	19(2)	154
201	1300-21-6	▲DICHLOROETHANE	567	46	32		100	178	4.7E—04	153	3(1)	204
202	30402-14-3	▲TETRACHLORODIBENZOFURAN	567	22	15		10	400	N.D.	0	6(2)	151
203	56-38-2	PARATHION	563	17	12	10		400	N.D.	0	4(2)	151
204	10588-01-9	▲SODIUM DICHROMATE	559	8	6	10		400	N.D.	0	16(2)	154
205	25321-14-6	▲DINITROTOLUENE	559	13	9	10		400	N.D.	0	1(2)	150
206	143-33-9	▲SODIUM CYANIDE	558	7	5	10		400	N.D.	0	15(2)	154
207	563-12-2	▲ETHION	558	9	6	10		400	N.D.	0	7(2)	152
208	100-02-7	4-NITROPHENOL	558	82	58	100		178	1.5E—03	166	25(2)	156
209	108-10-1	METHYL ISOBUTYL KETONE	558	295	208	5000		10	1.2E—04	138	2(1)	202
210	88-89-1	▲PICRIC ACID	556	7	5		10	400	N.D.	0	6(2)	151
211	27154-33-2	▲TRICHLOROFLUOROETHANE	556	3	2		10	400	N.D.	0	16(2)	154
212	76-01-7	▲PENTACHLOROETHANE	556	8	6	10		400	N.D.	0	1(2)	150
213	39765-80-5	▲NONACHLOR, TRANS-	556	8	6		10	400	N.D.	0	1(2)	150
214	60-51-5	▲DIMETHOATE	555	6	4	10		400	N.D.	0	2(2)	150
215	1563-66-2	▲CARBOFURAN	554	5	4	10		400	N.D.	0	1(2)	150
216	7758-98-7	▲CUPRIC SULFATE	554	5	4	10		400	N.D.	0	1(2)	150
217	62-73-7	▲DICHLORVOS	554	3	2	10		400	N.D.	0	6(2)	151
218	78-11-5	▲PENTAERYTHRITOL TETRANITRATE (PETN)	554	3	2		10	400	N.D.	0	6(2)	151
219	133-06-2	▲CAPTAN	554	3	2	10		400	N.D.	0	6(2)	151
220	75-44-5	PHOSGENE	553	4	3	10		400	N.D.	0	2(2)	150
221	115-32-2	▲DICOFOL	553	4	3	10		400	N.D.	0	1(2)	150
222	298-02-2	PHORATE	553	4	3	10		400	N.D.	0	1(2)	150
223	300-76-5	▲NALED	553	4	3	10		400	N.D.	0	1(2)	150
224	78-00-2	▲TETRAETHYL LEAD	552	3	2	10		400	N.D.	0	1(2)	150
225	7440-05-3	▲PALLADIUM	552	3	2		10	400	N.D.	0	1(2)	150
226	51207-31-9	▲TETRACHLORODIBENZOFURAN	543	20	14		10	400	6.6E—08	52	60(4)	77
227	36088-22-9	▲PENTACHLORODIBENZO-P-DIOXIN	542	24	17		10	400	N.D.	0	98(4)	125
228	50-00-0	FORMALDEHYDE	541	26	18	100		178	1.1E—02	189	23(2)	155
229	10061-01-5	1,3-DICHLOROPROPENE, CIS-	540	57	40	100		178	1.2E—03	164	35(2)	158
230	120-12-7	ANTHRACENE	539	293	206	5000		10	1.6E—04	141	136(2)	182
231	1634-04-4	▲METHYL-T-BUTYL-ETHER	539	6	4		100	178	5.8E—04	156	1(1)	201
232	7440-36-0	ANTIMONY	536	315	222	5000		10	4.3E—05	126	119(2)	178
233	106-44-5	CRESOL, PARA-	535	215	151		1000	53	6.5E—04	157	102(2)	174
234	100-42-5	STYRENE	525	182	128	1000		53	1.9E—04	143	1(1)	201
235	75-69-4	TRICHLOROFLUOROMETHANE	523	193	136	5000		10	3.1E—03	175	2(1)	202
236	117-84-0	DI-N-OCTYL PHTHALATE	521	257	181	5000		10	5.6E—05	129	1(1)	201

Table 1. — Revised Priority List of Hazardous Substances — Continued

Rank	CAS Number	Contaminant Name	Total Pts	NPL Freq	Freq Pts	RQ	TES	Tox Pts	Source Contrib	Conc Pts	Expos Potan	Expos Pts
237	78-87-5	1,2-DICHLOROPROPANE	519	180	127	1000		53	6.1E—05	133	5(1)	206
238	94-75-7	2,4-D ACID	515	39	27	100		178	7.8E—04	159	3(2)	151
239	86-73-7	FLUORENE	512	266	187	5000		10	1.4E—04	139	109(2)	176
240	12002-48-1	TRICHLOROBENZENE	511	29	20		100	178	2.5E—02	199	89(4)	114
241	84-66-2	DIETHYL PHTHALATE	509	223	157	1000		53	5.5E—05	129	88(2)	171
242	16984-48-8	▲FLUORIDE	508	132	93		1000	53	2.7E—02	199	55(2)	163
243	120-83-2	2,4-DICHLOROPHENOL	507	64	45	100		178	7.2E—05	132	9(2)	152
244	479-45-8	TRINITROPHENYLMETHYL-NITRAMINE	504	10	7		100	178	1.5E—03	167	11(2)	153
245	95-57-8	2-CHLOROPHENOL	493	80	56	100		178	7.2E—06	106	14(2)	153
246	65-85-0	BENZOIC ACID	490	213	150	5000		10	1.0E—03	162	74(2)	168
247	108-38-3	▲M-XYLENE	469	136	96	1000		53	2.3E—05	119	1(1)	201
248	109-99-9	TETRAHYDROFURAN	469	83	58	1000		53	6.0E—04	156	1(1)	201
249	106-42-3	▲P-XYLENE	469	121	85	1000		53	5.7E—05	129	1(1)	201
250	67-63-0	ISOPROPANOL	462	61	43		1000	53	6.8E—02	210	28(2)	157
251	86-74-8	▲CARBAZOLE	461	17	12		100	178	2.5E—05	120	4(2)	151
252	207-08-9	BENZO(K)FLUORANTHENE	458	253	178	5000		10	3.2E—06	96	99(2)	173
253	156-59-2	1,2-DICHLOROETHENE, CIS-	455	93	65		1000	53	7.0E—05	132	4(1)	205
254	25323-30-2	▲DICHLOROETHYLENE	454	68	48		1000	53	2.8E—04	147	5(1)	206
255	608-93-5	PENTACHLOROBENZENE	454	10	7	10		400	*N.D.*	0	36(4)	47
256	7440-42-8	BORON	454	124	87		5000	10	5.0E—04	154	2(1)	202
257	90-12-0	▲1-METHYLNAPHTHALENE	450	29	20		100	178	4.4E—06	100	6(2)	151
258	58-90-2	▲2,3,4,6-TETRACHLOROPHENOL	447	4	3	10		400	*N.D.*	0	34(4)	44
259	106-99-0	1,3-BUTADIENE	441	7	5		10	400	*N.D.*	0	28(4)	36
260	4901-51-3	▲2,3,4,5-TETRACHLOROPHENOL	436	3	2		10	400	*N.D.*	0	26(4)	34
261	132-64-9	DIBENZOFURAN	436	181	127		5000	10	7.0E—05	132	72(2)	167
262	108-20-3	▲ISOPROPYL ETHER	435	12	8		1000	53	2.4E—03	172	1(1)	201
263	95-48-7	CRESOL, ORTHO-	434	156	110		5000	10	3.8E—04	151	58(2)	164
264	75-27-4	BROMODICHLOROMETHANE	433	160	113	5000		10	7.8E—06	107	3(1)	204
265	68-12-2	DIMETHYL FORMAMIDE	429	15	11		100	178	1.7E—02	194	36(4)	47
266	510-15-6	▲CHLOROBENZILATE	427	3	2	10		400	*N.D.*	0	19(4)	25
267	1336-35-2	▲CHLORINATED PHENOL	426	3	2		10	400	*N.D.*	0	18(4)	24
268	140-57-8	ARAMITE	423	3	2		10	400	*N.D.*	0	16(4)	21
269	7440-28-0	THALLIUM	421	156	110	1000		53	3.8E—06	98	43(2)	160
270	271-89-6	2,3-BENZOFURAN	421	13	9		100	178	9.4E—07	82	6(2)	151
271	137-26-8	▲THIRAM	421	3	2	10		400	*N.D.*	0	14(4)	19
272	98-95-3	NITROBENZENE	417	71	50	1000		53	7.9E—04	159	20(2)	155
273	7778-54-3	▲CALCIUM HYPOCHLORITE	416	4	3	10		400	*N.D.*	0	10(4)	14
274	5103-73-1	▲NONACHLOR, CIS-	415	4	3		10	400	*N.D.*	0	9(4)	12
275	191-24-2	BENZO(G,H,I)PERYLENE	415	225	158	5000		10	5.1E—07	76	90(2)	171

CAS = Chemical Abstract Service; **Pts** = Points; **NPL** = National Priorities List; **Freq** = Frequency; **RQ** = Reportable Quantity; **TES** = Toxicity/Environmental Score; **Tox** = Toxicity; **Contrib** = Contribution; **Conc** = Concentration; **Expos** = Exposure; **Potan** = Potential; **N.D.** = No Data.

▲ Indicates substance not on previous Priority Lists of Hazardous Substances.

◆ Final RQs (in Curies) have been established for radionuclides (54 FR 22524, May 24, 1989). To provide consistency in the algorithm, each radionuclide has been assigned a TES of 1.

(1) Indicates exposure to the substance (200-300 points).

(2) Indicates exposure to media containing the substance (150-225 points).

(3) Indicates potential exposure to the substance (100-175 points).

(4) Indicates potential exposure to media containing the substance (1-125 points).

Table 2. — Additional 56 Substances (Total Points 415-300)

Rank	CAS Number	Contaminant Name	Total Pts	NPL Freq	Freq Pts	RQ	TES	Tox Pts	Source Contrib	Conc Pts	Expos Poten	Expos Pts
276	74-95-3	▲DIBROMOMETHANE	415	14	10	1000		53	3.4E−04	150	2(1)	202
277	2104-64-5	▲ETHYL P-NITROPHENYL PHENYLPHOSPHOROTHIOATE (EPN)	413	3	2		10	400	N.D.	0	8(4)	11
278	765-34-4	▲GLYCIDYLALDEHYDE	411	3	2	10		400	N.D.	0	6(4)	9
279	7440-33-7	▲TUNGSTEN	411	3	2		10	400	N.D.	0	6(4)	9
280	35822-46-9	▲1,2,3,4,6,7,8-HEPTACHLORO-DIBENZO-P-DIOXIN	407	3	2		10	400	N.D.	0	3(4)	5
281	74-90-8	▲HYDROCYANIC ACID	405	4	3	10		400	N.D.	0	1(4)	2
282	208-96-8	ACENAPHTHYLENE	401	177	125	5000		10	4.3E−06	100	72(2)	167
283	1319-77-3	CRESOL	401	47	33	1000		53	1.1E−03	162	10(2)	152
284	62-53-3	ANILINE	398	45	32	5000		10	3.4E−02	202	19(2)	154
285	75-45-6	CHLORODIFLUOROMETHANE	390	15	11		100	178	N.D.	0	1(1)	201
286	77-78-1	▲DIMETHYL SULFATE	388	5	4	100		178	3.6E−03	177	23(4)	30
287	7440-32-6	TITANIUM	387	75	53		100	178	N.D.	0	28(2)	157
288	131-11-3	DIMETHYL PHTHALATE	386	96	68	5000		10	4.8E−04	153	21(2)	155
289	110-86-1	PYRIDINE	374	12	8	1000		53	1.0E−03	162	2(2)	150
290	78-59-1	ISOPHORONE	373	138	97	5000		10	5.8E−06	103	53(2)	163
291	99-65-0	1,3-DINITROBENZENE	371	12	8		100	178	2.0E−03	170	11(4)	15
292	302-04-5	▲THIOCYANATE	371	4	3		1000	53	1.3E−03	165	1(2)	150
293	10061-02-6	1,3-DICHLOROPROPENE, TRANS-	363	43	30	100		178	N.D.	0	21(2)	155
294	88-75-5	2-NITROPHENOL	360	44	31	100		178	N.D.	0	5(2)	151
295	67-56-1	METHANOL	360	50	35	5000		10	7.6E−04	159	26(2)	156
296	1321-94-4	▲METHYLNAPHTHALENE	354	35	25		100	178	N.D.	0	5(2)	151
297	93-72-1	2,4,5-TP ACID (SILVEX)	351	27	19	100		178	N.D.	0	15(2)	154
298	111-91-1	BIS(2-CHLOROETHOXY) METHANE	347	29	20	1000		53	3.2E−05	123	5(2)	151
299	7440-65-5	▲YTTRIUM	347	25	18		100	178	N.D.	0	7(2)	152
300	7664-39-3	HYDROGEN FLUORIDE	346	21	15	100		178	N.D.	0	15(2)	154
301	121-75-5	MALATHION	345	20	14	100		178	N.D.	0	13(2)	153
302	110-82-7	▲CYCLOHEXANE	345	28	20	1000		53	2.8E−05	121	4(2)	151
303	93-76-5	2,4,5-T	343	24	17	1000		53	3.2E−05	123	3(2)	151
304	107-13-1	ACRYLONITRILE	342	20	14	100		178	N.D.	0	1(2)	150
305	298-00-0	METHYL PARATHION	340	17	12	100		178	N.D.	0	2(2)	150
306	1333-82-0	▲CHROMIUM (VI) TRIOXIDE	336	7	5		100	178	N.D.	0	15(2)	154
307	25168-05-2	▲CHLOROTOLUENE	336	11	8		100	178	N.D.	0	1(2)	150
308	63-25-2	CARBARYL	335	9	6	100		178	N.D.	0	4(2)	151
309	26952-23-8	▲DICHLOROPROPENE	335	10	7	100		178	N.D.	0	1(2)	150
310	563-80-4	▲METHYL ISOPROPYL KETONE	334	14	10		5000	10	1.4E−05	113	1(1)	201
311	28804-88-8	▲DIMETHYLNAPHTHALENE	334	7	5		100	178	N.D.	0	4(2)	151
312	1317-36-8	▲LEAD OXIDE	334	8	6		100	178	N.D.	0	1(2)	150
313	88-85-7	DINOSEB	334	6	4	1000		53	4.4E−05	126	1(2)	150
314	107-18-6	▲ALLYL ALCOHOL	334	6	4	100		178	N.D.	0	6(2)	151
315	195-19-7	▲BENZOPHENANTHRENE	334	6	4		100	178	N.D.	0	6(2)	151
316	8007-45-2	▲COAL TAR	333	7	5		100	178	N.D.	0	1(2)	150
317	28652-77-9	▲TRIMETHYL NAPHTHALENE	332	5	4		100	178	N.D.	0	1(2)	150
318	563-54-2	▲1,2-DICHLOROPROPENE, TRANS-	332	4	3		100	178	N.D.	0	3(2)	151
319	205-82-3	▲BENZO(J)FLUORANTHENE	331	4	3		100	178	N.D.	0	2(2)	150
320	7718-54-9	▲NICKEL CHLORIDE	331	4	3	100		178	N.D.	0	2(2)	150

Table 2. — Additional 56 Substances (Total Points 415-300) — Continued

Rank	CAS Number	Contaminant Name	Total Pts	NPL Freq	Freq Pts	RQ	TES	Tox Pts	Source Contrib	Conc Pts	Expos Poten	Expos Pts
321	75-08-1	▲ETHANETHIOL	331	4	3		100	178	*N.D.*	0	1(2)	150
322	22781-23-3	▲FICAM	331	3	2		100	178	*N.D.*	0	3(2)	151
323	150-68-5	▲MONURON	331	3	2		100	178	*N.D.*	0	2(2)	150
324	74-89-5	▲METHYLAMINE	330	3	2	100		178	*N.D.*	0	1(2)	150
325	75-04-7	▲ETHYLAMINE	330	3	2	100		178	*N.D.*	0	1(2)	150
326	103-33-3	▲AZOBENZENE	330	3	2		100	178	*N.D.*	0	1(2)	150
327	7440-06-4	▲PLATINUM	330	3	2		100	178	*N.D.*	0	1(2)	150
328	7440-56-4	▲GERMANIUM	330	3	2		100	178	*N.D.*	0	1(2)	150
329	13814-96-5	▲LEAD FLUOROBORATE	330	3	2	100		178	*N.D.*	0	1(2)	150
330	96-18-4	1,2,3-TRICHLOROPROPANE	330	19	13		5000	10	5.6E−06	103	3(1)	204
331	75-71-8	DICHLORODIFLUOROMETHANE	315	65	46	5000		10	4.7E−06	101	34(2)	158

See Table 1 for Legend

Table 3. — Previously Listed Substances Not Included on the Revised Priority List

CAS Number	Substance Name	CAS Number	Substance Name
(none)	CHLORODIBENZODIOXINS	108-39-4	CRESOL, META-
(none)	CHLORODIBENZOFURANS	108-60-1	BIS(2-CHLORO-1-METHYLETHYL)ETHER
51-75-2	2,2'-DICHLORO-N-METHYLDIETHYLAMINE	108-94-1	CYCLOHEXANONE
59-50-7	P-CHLORO-M-CRESOL	109-06-8	2-METHYLPYRIDINE
64-17-5	ETHANOL	109-66-0	N-PENTANE
71-36-3	1-BUTANOL	110-00-9	FURAN
74-83-9	BROMOMETHANE	110-75-8	2-CHLOROETHYL VINYL ETHER
74-93-1	METHYL MERCAPTAN	111-65-9	OCTANE
74-97-5	BROMOCHLOROMETHANE	121-69-7	DIMETHYLANILINE
75-21-8	ETHYLENE OXIDE	123-42-2	DIACETONE ALCOHOL
75-43-4	DICHLOROFLUOROMETHANE	123-86-4	BUTYL ACETATE
76-13-1	1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE	123-91-1	1,4-DIOXANE
77-73-6	DICYCLOPENTADIENE	141-78-6	ETHYL ACETATE
79-09-4	PROPANOIC ACID	142-82-5	N-HEPTANE
79-20-9	METHYL ACETATE	505-60-2	MUSTARD GAS
80-62-6	METHYL METHACRYLATE	542-88-1	BIS(CHLOROMETHYL) ETHER
87-61-6	1,2,3-TRICHLOROBENZENE	622-97-9	P-METHYL STYRENE
88-74-4	2-NITROANILINE	637-50-3	PROPENYLBENZENE
92-52-4	BIPHENYL	1912-24-9	ATRAZINE
95-94-3	1,2,4,5-TETRACHLOROBENZENE	2385-85-5	MIREX
98-01-1	FURFURAL	7005-72-3	4-CHLOROPHENYL PHENYL ETHER
98-82-8	CUMENE	7440-24-6	STRONTIUM
99-09-2	3-NITROANILINE	7446-09-5	SULFUR DIOXIDE
99-99-0	4-NITROTOLUENE	7647-01-0	HYDROCHLORIC ACID
100-01-6	4-NITROANILINE	7664-38-2	PHOSPHORIC ACID
100-44-7	BENZYL CHLORIDE	7664-93-9	SULFURIC ACID
100-51-6	BENZYL ALCOHOL	7681-49-4	SODIUM FLUORIDE
101-55-3	1-BROMO-4-PHENOXY BENZENE	7697-37-2	NITRIC ACID
103-65-1	N-PROPYL BENZENE	7726-95-6	BROMINE
106-47-8	4-CHLOROANILINE	14797-65-0	NITRITE
106-48-9	4-CHLOROPHENOL	25154-55-6	NITROPHENOL
107-21-1	ETHYLENE GLYCOL	26471-62-5	TOLUENE DIISOCYANATE
107-92-6	BUTANOIC ACID	39638-32-9	BIS(2-CHLOROISOPROPYL)ETHER
108-05-4	VINYL ACETATE		

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