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Final Report

Task I


NOTIFICATION SYSTEM SUPPORTIVE SERVICES

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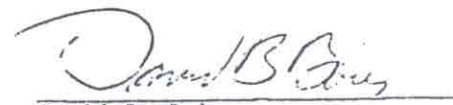
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AIR

SOLID WASTE

WATER

One purpose of the Notification System Supportive Services program was to develop a list of all potential hazardous waste generators, transporters, treaters, storers, and disposers who may be affected by Section 3010 of the Resource Conservation and Recovery Act (RCRA) of 1976 (Public Law 94-580). The list is designed to aid the States and the Environmental Protection Agency (EPA) regional offices in implementing the provisions of the Act.

#### List of Potentially Affected Generators of Hazardous Wastes (List 1)

The List 1 work effort essentially involved two subtasks. The first subtask was to identify the classifications for industries that, by virtue of their processes and operations, would be likely to generate significant amounts of hazardous wastes, and therefore should be included in the list of potentially affected parties.

A group of industrial waste experts met and evaluated all the four-digit Standard Industrial Classification (SIC) categories in terms of possible generation of hazardous wastes and recommended which SIC codes should be included on the list of potentially affected parties and which should be excluded. The group's recommendations and supporting rationales were reviewed by EPA. The list was slightly modified before it was approved.

Certain groups which might have been included were not listed for the following reasons:

- (a) Section 3001 regulations exempt household garbage, household septic tank pumpings, and mining and milling wastes.
- (b) The following types of establishments were eliminated on the basis that they are primarily small establishments, and that the waste oil and solvents from many or most of them are picked up by reclamation or disposal contractors. Such contractors should receive notification under other segments of this effort.

<u>SIC</u>	<u>Type</u>	<u>Estimated number</u>
5541	Gasoline Service Stations	140,000 - 225,000
753	Auto Repair Shops	66,000 - 125,000
7216	Dry Cleaning Plants	23,000 - 29,000

Table 1 shows the industrial classifications chosen for inclusion in the list of those potentially affected by Subtitle C regulations under RCRA, and for each classification, the type of hazard expected to be encountered in the wastes for the industry.

The second subtask was to update a commercial computerized plant-by-plant listing of establishments in the various SIC categories chosen for inclusion. Most of the data on the master file were from Dun & Bradstreet (D&B), with only establishment listings for two SIC codes from a National Business List tape. The lists and documents from State agencies, shown in Table 2, were used in updating and correcting the tapes, along with the State manufacturing directories listed in Table 3.

Initially, membership directories from trade associations were consulted, but this effort was abandoned midway through the project. The process was time consuming and yielded little information that was not contained elsewhere. Most State-provided lists were in the form of manufacturing directories, but in a few instances the results of a statewide survey of industrial wastes were provided.

State directories of manufacturers were the primary source used in updating the D&B tapes. These directories were obtained for 44 of the States. The State directories generally are updated annually and are prepared by groups familiar with the industry in the States. Hence, when there were discrepancies, the information in the directory generally was considered correct.

The data available for Guam and the Virgin Islands was not as recent as for the states and Puerto Rico.

Several steps were involved in updating each State (i.e., correct, delete, and add firms) on the generator list. Each State was reviewed by one employee, whenever possible; thus it was felt, the likelihood of recognizing company duplication would be increased. The State manufacturing directory was visually compared with the corresponding State printout from the D&B tape. A notation was placed in each listing to indicate verification. Corrections to names and/or addresses of companies were made directly on the printout, and later coded onto keypunch forms. These cards then were used to update the tape.

The percentage of firms deleted from the generator file was relatively low. A deletion was made only if a company was listed more than once. At least 35 percent of the companies on the D&B tapes did not appear in any other listing. Because there was no feasible means of verifying these companies' continued operation, all were left on the list.

The process of adding firms to the tape involved the use of the State manufacturing directory. A company was coded onto another form for keypunch and computer entry if it was in the directory and was not on the printout, but was classified in the directory as having a primary SIC code that was on the inclusion list. However, not all State directories specified the primary SIC code. For example, the SIC codes corresponding to a company might be arranged in ascending numerical order, or the product description might be arranged alphabetically. In these cases, when the primary line of business was not classified, the company was added if any of the SIC codes were on the inclusion list. Approximately 22,000 additional firms were added to the original D&B tapes.

Transporters Only (List 2) and Transporters, Treaters, Storers, Disposers (List 3)

The development of Lists 2 and 3 was not significantly different from the procedures for the generator list. The major difference is that Lists 2 and 3 are considerably shorter.

The transporter list is composed mainly of National Business Lists listing of establishments with the primary SIC code of 4212. This master list was



compared with the lists provided by State agencies and with the lists developed from a search of industrial waste transporters in the Yellow Pages telephone directories.

The D&B listing of companies with the primary SIC code of 4953 constitutes the third file. The list gives those firms that treat, store, and/or dispose of potentially hazardous wastes, but that may also engage in transporting in connection with these activities. This file was compared with the following lists and documents: State-provided lists; notations of companies in the Yellow Pages listed as engaging in at least two of the above activities; the EPA report, "Review and Assessment of Deep-Well Injection of Hazardous Waste," Volume III, Appendix D (EPA-6001/2-77-029c); and the EPA report, "Hazardous Waste Management Facilities in the United States--1977" (EPA/530/SW-146.3).

For both Lists 2 and 3, the mechanical procedure described for the generator list was used to correct and supplement the listing with companies from other sources.

The final lists contained over 380,000 names, including 353,687 generators, 21,441 transporters, and 5,423 receivers. The number of potentially affected parties in each list are given by state and by EPA region in Tables 4 and 5 respectively.

It can be seen that there is a wide variation in the number of parties in the various states, ranging from 276 to 48,732 within the 50 states. There were 9 states and 3 territories with fewer than 1,000 generators listed, and 10 states with over 10,000. The EPA regions ranged in size from 9,783 generators for Region VIII to 73,487 for Region V.

The three lists, which form appendices to this report, are in four different formats.

- (a) Microfiche - 3 copies  
Arranged by states, by category (receivers, transporters, generators) within each state, and alphabetically within each category.
- (b) Printed - 1 copy  
Arranged as in (a).
- (c) Adhesive labels - 1 copy  
Arranged by state and category in ascending zip code order.
- (d) Computer tape.

Table 1. Potentially affected industrial classifications

SIC code	Industry	Flam- mable	Corrosive- reactive	Toxic	Infec- tious	Comments
0711	Soil preparation services		X	X		Pesticides, herbicides wastes
0721	Crop planting, cultivation, and protection			X		
0729	General crop services		X	X		Agricultural chemical wastes
074	Veterinary services			X	X	Diseased tissue, medical wastes
0783	Ornamental shrub and tree services		X	X		Herbicide, pesticide, fertilizer wastes
085	Forestry services			X		Pest control chemical wastes
223	Broad woven fabric mills, wool	X		X		Dyestuffs, solvents, finishing agents
224	Knitting mills	X		X		Dyestuffs, solvents, finishing agents
226	Dyeing and finishing textiles, except wool and knits	X		X		Dyestuffs, solvents, finishing agents
2272	Tufted carpets and rugs	X		X		Dyestuffs, solvents, finishing agents
2292	Lace goods	X		X		Dyestuffs, solvents, finishing agents
2295	Coated fabrics, not rubberized	X		X		Dyestuffs, solvents, finishing agents
2296	Tire cord and fabric	X		X		Dyestuffs, solvents, finishing agents
2297	Nonwoven fabrics	X		X		Solvents, finishing agents
2299	Textile goods, NEC <sup>1</sup>	X		X		Dyestuffs, solvents, finishing agents
243	Millwork, plywood, veneer, and structural wood members	X		X		Dyestuffs, solvents, finishing agents Solvents and paint, finish, preservative wastes
245	Wood building and mobile homes	X		X		Solvents and paint, finish preservative wastes
249	Miscellaneous wood products	X		X		Solvents and paint, finish preservative wastes
25	Furniture and fixtures	X		X		Solvents and paint, finish preservative wastes
2611	Pulp mills			X		Biocides, fungicides, byproducts
2621	Paper mills, except building paper mills			X		Biocides, finishing agents, byproducts
2641	Paper coating and glazing	X		X		Solvents, inks, finishes
2661	Building paper and building board mills	X		X		Asbestos, tars, finishes, solvents

Table 1. Potentially affected industrial classifications--Continued

SIC code	Industry	Flam- mable	Corrosive- reactive	Toxic	Infectious	Comments
27	Printing, publishing, and allied industries	X		X		Solvents, inks, pigments, toxic metals
28	Chemicals and allied products	X	X	X		
29	Petroleum refining and related industries	X		X		
30 <sup>2</sup>	Rubber and miscellaneous plastic products	X		X		
311	Leather tanning and finishing			X		Toxic metal tanning agent wastes
3274	Lime products manufacturing		X	X		
3275	Gypsum products manufacturing		X	X		
3291	Abrasive products	X		X		Solvents, binders
3292	Asbestos products			X		Asbestos wastes
3293	Gaskets, packing, and sealing devices	X		X		Solvents, oils, asbestos
3312	Blast furnaces, steel works, rolling and finishing mills			X		Toxic metals, oils
3313	Electrometallurgical products			X		Toxic metals, oils
333	Primary smelting and refining, nonferrous		X	X		Toxic metals, acids, bases
334	Secondary smelting and refining, nonferrous		X	X		Toxic metals, acids, bases
339	Miscellaneous primary metal products	X	X	X		Cleaners, solvents, heat treating salts and oils
34	Fabricated products, except machinery and trans. prods.	X	X	X		Cleaners, solvents, oils, paints
35	Machinery, except electrical	X	X	X		Cleaners, solvents, oils, paints
36 <sup>3</sup>	Electrical and electronic machinery, etc.	X	X	X		Cleaners, solvents, oils, paints
37	Transportation equipments	X	X	X		Cleaners, solvents, oils, paints
39 <sup>4</sup>	Misc. manufacturing industries	X	X	X		Cleaners, solvents, oils, paints
4011	Railroads, line-haul operating	X	X	X		Cleaners, solvents, oils, paints

Table 1. Potentially affected industrial classifications--Continued

SIC code	Industry	Flam- mable	Corrosive- reactive	Toxic	Infec- tious	Comments
4171	Terminal and service facilities for motor vehicle passenger transportation	X	X	X		Cleaners, solvents, oils, paints
4212	Local trucking without storage	X	X	X	X	Includes refuse collecting and hauling
4231	Terminal and joint terminal maintenance facilities, motor freight	X	X	X		Cleaners, solvents, oils, paints
4582	Airports and flying fields, including aircraft maint.	X	X	X		Cleaners, solvents, oils, paints
4911 <sup>5</sup>	Electric services			X		Ash, desulfurization sludges
4941 <sup>6</sup>	Water supply			X	X	Radioactive sludge
4952 <sup>7</sup>	Sewage systems			X	X	Sludges
4953	Refuse systems, collection and disposal	X	X	X		
4959	Sanitary services, NEC			X		Pesticides for mosquito control
5085 <sup>8</sup>	Industrial supplies	X	X	X		Residues, ashes
5093	Scrap and waste materials			X		Oils
7342	Disinfecting and exterminating services			X		Pesticides and other toxics
7391	Research and development laboratories	X	X	X	X	
8051	Skilled nursing care facilities			X	X	
8059	Nursing and personal care facilities			X	X	
806	General medical and surgical hospitals			X	X	Also radioactive wastes
807	Medical laboratories			X	X	
808	Outpatient care facilities			X	X	
809	Health and allied services, NEC			X	X	



Table 1. Potentially affected industrial classifications--Continued

- 1 Not elsewhere classified.
- 2 3079, Miscellaneous plastics products, includes many facilities who simply mold plastic products.
- 3 All except 3624, Carbon and graphite products
- 4 All except 3915, Jewelers' findings and materials, and lapidary work.
- 5 Partial - only power plants burning coal.
- 6 Partial - drinking water plants treating radium contaminated water.
- 7 Partial - sewage treatment plants from EPA federal grant program, 75% or more complete.
- 8 Partial - drum and barrel reconditioners.



Table 2. Information supplied by State agencies and used in updating and correcting computer tapes

State	Information
Arizona	Provided manufacturers directory and lists of private and municipal refuse services, hospitals, and pesticide formulators.
California	Furnished lists of liquid waste haulers and disposal sites.
Colorado	Provided complete handler lists.
Delaware	Sent partial lists on all categories.
Florida	Provided sources for follow-up; furnished good transporter list.
Hawaii	Provided good lists in all categories.
Idaho	Provided no information except identification of the only disposal site.
Louisiana	Sent list of disposal sites.
Maine	Furnished State manufacturing directory.
Massachusetts	Provided excellent list of handlers.
Minnesota	Supplied information on handlers.
Mississippi	Furnished manufacturers directory.
Montana	Provided complete information on all categories, including generators, handlers, hospitals, medical laboratories, and pesticide applicators.
Nebraska	Furnished both generator and handler lists.
New Mexico	Provided State manufacturing directory.
North Dakota	Sent directory of manufacturers.
Ohio	Provided good information on all categories.
Oregon	Furnished handler and hospital lists.
Pennsylvania	Provided complete lists of all categories.
South Carolina	Provided handler and hospital lists.
Vermont	Furnished complete list of generators.
Washington	Provided good lists in all categories.
West Virginia	Provided good lists in all categories.
Wisconsin	Furnished good list of generators.
Puerto Rico	Provided lists in all categories.

Table 3. List of State manufacturing directories used in updating and correcting computer tapes

Alabama Directory of Mining and Manufacturing, 1976  
Directory of Arizona Manufacturers, 1977  
Directory of Manufacturers in Arkansas, 1977  
California Manufacturers Register, 1977  
Directory of Colorado Manufacturers, 1977  
Connecticut State Industrial Directory, 1977  
Delaware Directory of Commerce and Industry, 1977  
The Florida Industries Guide, 1977  
Georgia Manufacturing Directory, 1977  
Manufacturing Directory of Idaho, 1976  
Illinois Manufacturers Directory, 1977  
The Indiana Industrial Directory, 1976-1977  
Directory of Iowa Manufacturers, 1977-1978  
Kansas Manufacturers and Products, 1977  
Kentucky Directory of Manufacturers, 1977  
Maine Marketing Directory, 1976  
Directory of Maryland Manufacturers, 1977-1978  
Directory of Massachusetts Manufacturers, 1976-1977  
Michigan Manufacturers Industrial Directory, 1976-1977  
Minnesota Directory of Manufacturers, 1977-1978  
Mississippi Manufacturers Directory, 1977  
Missouri Directory of Manufacturing and Mining, 1977  
Directory of Montana Manufacturers, 1976-1977  
Nebraska Manufacturers Directory, 1976-1977  
Made in New Hampshire, a Directory of Manufacturers and Manufactured Products, 1977  
New Jersey State Industrial Directory, 1977  
New Mexico Manufacturing Directory  
New York State Industrial Directory, 1977  
Directory of North Carolina Manufacturing Firms, 1976-1977  
Directory of North Dakota Manufacturers, 1976-1977  
Ohio Manufacturers Industrial Directory, 1977  
Oklahoma Directory of Manufacturers and Producers, 1976  
Directory of Oregon Manufacturers, 1976  
Pennsylvania Industrial Directory, 1976  
Rhode Island Directory of Manufacturers, 1977-1978  
South Carolina Industrial Directory, 1976  
South Dakota Manufacturers and Processors Directory, 1977-1978  
The Tennessee Industries Guide, 1977  
Directory of Texas Manufacturers, Volumes I and II, 1976  
Directory of Utah Manufacturers, 1977-1978  
Vermont Directory of Manufacturers, 1976-1978  
Industrial Directory of Virginia, 1976-1977  
West Virginia Manufacturing Directory, 1976  
Wyoming Directory of Manufacturing and Mining, 1977

Table 4. Number of Potentially Affected Parties by State and by Category

State	Abbreviation	Generators	Transporters	Other Receivers
Alabama	AL	4,463	224	133
Alaska	AK	276	45	6
Arizona	AZ	3,043	141	14
Arkansas	AR	2,912	134	28
California	CA	48,732	3,496	587
Colorado	CO	4,800	192	336
Connecticut	CT	7,573	224	137
Delaware	DE	590	56	25
District of Columbia	DC	781	45	63
Florida	FL	14,871	334	123
Georgia	GA	7,484	234	65
Hawaii	HI	955	80	37
Idaho	ID	1,336	57	21
Illinois	IL	21,687	2,016	286
Indiana	IN	7,815	397	121
Iowa	IA	4,880	444	56
Kansas	KS	2,741	186	26
Kentucky	KY	3,986	343	142
Louisiana	LA	4,082	219	52
Maine	ME	1,491	168	33
Maryland	MD	4,443	329	43
Massachusetts	MA	10,951	938	218
Michigan	MI	15,987	727	255
Minnesota	MN	7,236	402	125
Mississippi	MS	2,244	118	9
Missouri	MO	7,868	525	189
Montana	MT	1,033	66	7
Nebraska	NE	2,471	232	63
Nevada	NV	766	61	13
New Hampshire	NH	1,755	133	34
New Jersey	NJ	15,446	661	178
New Mexico	NM	1,527	52	9
New York	NY	32,403	2,198	412
North Carolina	NC	7,262	238	55
North Dakota	ND	838	74	8
Ohio	OH	12,856	893	291
Oklahoma	OK	5,588	257	33
Oregon	OR	5,408	167	55
Pennsylvania	PA	16,606	1,422	418
Rhode Island	RI	2,633	118	49
South Carolina	SC	3,073	103	32
South Dakota	SD	742	114	12
Tennessee	TN	5,579	226	50
Texas	TX	20,982	869	199
Utah	UT	1,631	50	15
Vermont	VT	842	98	24

Table 4. Number of Potentially Affected Parties by State and by Category--  
Continued

State	Abbreviation	Generators	Transporters	Other Receivers
Virginia	VA	4,670	438	80
Washington	WA	5,718	233	141
West Virginia	WV	1,986	312	35
Wisconsin	WI	7,906	294	69
Wyoming	WY	739	52	1
Guam	GU	94	6	--
Puerto Rico	PR	155	--	9
Virgin Islands	VI	6	--	1



Table 5. Number of potentially affected parties  
by EPA region and by category

EPA Region	Generators	Transporters	Other Receivers
I (CT, ME, MA, NH, RI, VT)	25,245	1,679	495
II (NJ, NY, VI, PR)	48,010	2,859	600
III (DE, DC, MD, PA, VA, WV)	29,076	2,602	664
IV (AL, FL, GA, KY, MS, NC, SC, TN)	48,962	1,820	609
V (IL, IN, MI, MN, OH, WI)	73,487	4,729	1,147
VI (AR, LA, NM, OK TX)	35,091	1,531	321
VII (IA, KS, MO, NE)	17,960	1,387	334
VIII (CO, MT, ND, SD, UT, WY)	9,783	548	379
IX (AZ, CA, HI, NV, GU)	53,590	3,784	651
X (AK, ID, OR, WA)	<u>12,738</u>	<u>502</u>	<u>223</u>
TOTALS	<u>353,942</u>	<u>21,441</u>	<u>5,423</u>
Grand Total	380,806		