



Date: November 27, 1996

Subject: Estimation of the Number of Affected Sources in the
Production of Pesticide Active Ingredients Source
Category--Production of Pesticide Active Ingredient
NESHAP
EPA Contract No. 68-D1-0115; Work Assignment No. VI-144
ESD Project No. 93/59; MRI Project No. 6506-44

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I. Introduction

This memorandum summarizes the methodology used to estimate the number of affected sources in the production of pesticide active ingredients (PAI) source category. The EPA is developing maximum achievable control technology (MACT) for national emissions standards for hazardous air pollutants (NESHAP) for the production of PAI source category. The number of affected sources will be used in estimating the nationwide impacts and in determining the number of sources required for the MACT floor calculation for existing sources. Affected sources for the PAI source category are those sources that (1) manufacture pesticide active ingredients, and (2) are major with respect to hazardous air pollutants (HAP) (i.e., 10 tons per year or more of a single HAP or 25 tons per year or more of any combination of HAP).

II. Estimation of the Number of Affected Sources

A. Initial Lists of Facilities

Two lists of facilities were used to identify possible affected sources: (1) the Section Seven Tracking System (SSTS), and (2) a list of PAI manufacturers that the Office of Water identified while developing effluent guidelines and standards for PAI manufacturing facilities. The SSTS tracks information about which facilities produce pesticide products and what pesticide products are being made. The EPA requires all producers of pesticide products, both technical grade (i.e., active ingredient) and formulated product (i.e., active ingredient plus inerts), to report annually the amount of pesticides produced. The SSTS data base identifies the name and address of the producer, the pesticide products that producer made in a

particular year, where the product is marketed (within U.S or exported), and the pesticide product's use and class. Facilities indicate the type of product they make on EPA Form 3540-16. The SSTS data base search was limited to only those facilities that indicated they manufacture PAI; this search identified 316 facilities in 1991.¹

In 1986, the Office of Water collected information on the PAI manufacturing industry in an effluent guidelines study. The Office of Water study surveyed all facilities that were manufacturing specific PAI's in 1984 and 1985.² This study identified 90 facilities that manufacture PAI.² By promulgation of the effluent guidelines in 1993, 15 facilities were no longer manufacturing PAI. The Office of Water study identified a total of 75 facilities that manufacture PAI (September 28, 1993; 58 FR 50642).

A total of 329 facilities were identified as possible producers of PAI, and these facilities are listed alphabetically by State in Table 1. The list from the Office of Water study contains an additional 11 facilities not on the SSTS list. The other 64 facilities on the Office of Water list are also contained on the SSTS list. In addition to the 327 facilities identified on the SSTS and Office of Water list, two other facilities were also identified; one was identified by one of the State agencies contacted and another was identified by an EPA site visit to the facility.

B. Confirmation of Affected Sources

There was some question as to whether all 316 facilities identified in the 1991 SSTS were PAI manufacturers. This question was based on (1) the large difference in the number of facilities from the SSTS list relative to the Office of Water list, and (2) some of the facility names (i.e., the name indicated that it was a formulator or packager). The SSTS data base likely included formulators, packagers, and research facilities in addition to active ingredient manufacturers. The 75 facilities identified in the Office of Water study included active ingredient manufacturers but only included those that produced specific active ingredients.

Several State and local agencies and, in some instances, the facilities themselves were contacted to confirm whether the facilities on these two lists are: (1) PAI manufacturers, and (2) major sources for HAP with respect to potential to emit. The facilities that meet both criteria were confirmed in twelve States. These States are listed in Table 2, along with the number of facilities identified on the two lists and the number of confirmed affected sources (i.e., the number of sources that meet both criteria) for each State. Ten of the States were contacted individually by telephone. In addition to telephone contact, the list of facilities was sent to STAPPA/ALAPCO, which

they sent to the States. Two of the States, Michigan and New York, responded to this request for information. The ten States that were contacted individually were contacted because the State had a large number of possible sources listed in SSTS, the State was a member of the MACT Partnership group, or because there was a State contact from previous information gathering for the PAI source category.

In these twelve States, a total of 140 facilities were identified on the lists. Of these 140, 33 were confirmed affected sources for the PAI source category (24 percent).³⁻⁴⁰ The 33 confirmed affected sources are listed in Table 3.

C. Estimate of the Number of Affected Sources

The nationwide number of affected sources was estimated assuming 24 percent of 329 facilities are major source PAI manufacturers. Therefore, there are an estimated 78 affected sources in the PAI source category.

TABLE 1. LIST OF FACILITIES THAT PRODUCE PAI

COMPANY NAME	CITY	STATE	LIST (OW/SSTS)
Akzo Nobel Chemicals	Axis	AL	SSTS
Ciba Geigy Corp.	McIntosh	AL	OW/SSTS
Du Pont Mobile Plant	Axis	AL	OW/SSTS
Elf Atochem N.A. Inc.	Axis	AL	OW/SSTS
Monsanto Co.	Anniston	AL	SSTS
Olin Corp.	McIntosh	AL	SSTS
Tull Chemical Company	Oxford	AL	SSTS
Zeneca, Inc.	Bucks	AL	OW/SSTS
Arkansas Eastman Division	Magness	AR	SSTS
Cedar Chemical Corp.	West Helena	AR	OW/SSTS
Ethyl Corporation	Magnolia	AR	OW
Great Lakes Chemical Corp.	El Dorado	AR	OW/SSTS
Helena Chemical Company	West Helena	AR	SSTS
Amvac Chemical Corp.	Los Angeles	CA	OW/SSTS
California Spray Dry Company	Stockton	CA	SSTS
Chevron Chemical Co.	Richmond	CA	OW
Continental Candle Company	Compton	CA	SSTS
Custom Chemicides	Fresno	CA	SSTS
Dow Chemical	Pittsburg	CA	OW/SSTS
FMC Corporation	Fresno	CA	SSTS
Fillmore Piru Citrus	Piru	CA	SSTS
Golden Bear Division Witco Corp.	Oildale	CA	SSTS
Imperial West Chemical Company	Antioch	CA	SSTS
Kerr-McGee Chemical	Trona	CA	SSTS
Lonza Inc.	Carson	CA	SSTS
Monterey Co. Dept. of Ag.	Salinas	CA	SSTS
Niklor Chemical Co. Inc.	Carson	CA	OW/SSTS
North American Chemical	Trona	CA	SSTS
Reaction Products Company	Richmond	CA	SSTS
Rio Linda Chem	Sacramento	CA	SSTS
Sandoz Agro Inc.	East Palo Alto	CA	OW/SSTS
Sandoz Agro Inc.	Wasco	CA	SSTS
Sungro Chemicals	Los Angeles	CA	SSTS
United States Borax & Chemical	Boron	CA	SSTS
Unocal Petroleum Products	Rodeo	CA	SSTS
Washburn & Sons	Riverside	CA	SSTS
Western Farm Service	Hanford	CA	SSTS
Western Farm Service	Firebaugh	CA	SSTS
Zeneca, Inc.	Richmond	CA	OW/SSTS

TABLE 1. LIST OF FACILITIES THAT PRODUCE PAI (CONTINUED)

COMPANY NAME	CITY	STATE	LIST (OW/SSTS)
Alpha Labs	Denver	CO	OW/SSTS
Cargill Inc.	Cope	CO	SSTS
Cargill Inc.	Limon	CO	SSTS
Platte Chemical Company	Greeley	CO	SSTS
Bedoukian Research, Inc.	Danbury	CT	SSTS
Macdermid, Inc.	Waterbury	CT	SSTS
Nefes Forest Insect and Disease	Hamden	CT	SSTS
Thor Chemicals, Inc.	Meriden	CT	SSTS
Uniroyal Chemical	Naugatuck	CT	SSTS
Chloramone Division/Kuehne Chemical	Delaware City	DE	SSTS
Standard Chlorine Chemical	Delaware City	DE	SSTS
Texaco Chemical Company	Delaware City	DE	SSTS
Arizona Chemical Company	Panama City	FL	SSTS
Bestech, Inc.	Pompano Beach	FL	SSTS
Bulk Storage	Tampa	FL	SSTS
Chevron Chemical Co.	San Francisco	FL	SSTS
Chevron Chemical Co.	Tampa	FL	SSTS
Conrads Pool Supply	Titusville	FL	SSTS
FLA Potting Soils	Orlando	FL	SSTS
FMC Corporation	Jacksonville	FL	SSTS
Fleetwing Corporation	Lakeland	FL	SSTS
Gator Pool & Spa Service	Fort Myers Beach	FL	SSTS
Insecta Sales Inc.	Oakland Park	FL	SSTS
Knox Pools Inc.	Pompano Beach	FL	SSTS
SCM Glidco Organics	Jacksonville	FL	SSTS
Southern Mill Creek Products	Tampa	FL	SSTS
Sun Refining	Lake Alfred	FL	SSTS
Union Camp Corporation	Jacksonville	FL	SSTS
Universal Water Industries	Miami	FL	SSTS
Bold Corporation	Tifton	GA	SSTS
Chemical Specialties	Valdosta	GA	SSTS
Georgia Gulf Sulfur Corporation	Bainbridge	GA	SSTS
Hickson Corporation	Conley	GA	SSTS
LCP Chemicals	Brunswick	GA	SSTS
Micro-Flo Company	Rockmart	GA	SSTS
Olin Corp.	Augusta	GA	SSTS
Prentiss Inc.	Sandersville	GA	SSTS
Rockland React-Rite	Rockmart	GA	SSTS
Southern Chemical Products	Macon	GA	SSTS

TABLE 1. LIST OF FACILITIES THAT PRODUCE PAI (CONTINUED)

COMPANY NAME	CITY	STATE	LIST (OW/SSTS)
Stepan Company	Winder	GA	SSTS
Vinings Industries Inc.	Marietta	GA	OW/SSTS
A to Z Drying	Osage	IA	SSTS
Albaugh Chemical Corporation	Ankeny	IA	SSTS
Bio Products Inc.	Manson	IA	SSTS
Denbo Corporation	Alkeny	IA	SSTS
Farmers Coop Company	Manson	IA	SSTS
Monsanto Co.	Muscatine	IA	OW/SSTS
Abbott Labs	North Chicago	IL	SSTS
CP Inorganics	Joliet	IL	SSTS
Cabery Fertilizer Company	Cabery	IL	SSTS
Cabery Fertilizer Company	Union Hill	IL	SSTS
Chase Products Company	Broadview	IL	SSTS
ChemTech	Cabery	IL	SSTS
Du Pont	El Paso	IL	SSTS
Ecolab	Joliet	IL	SSTS
Elkhart Fertilizer Service	Elkhart	IL	SSTS
Farmers Ag Service	Gifford	IL	SSTS
Gateway FS	Waterloo	IL	SSTS
K A Steel Chemicals	Lemont	IL	SSTS
Lakefork Fertilizer Service	Lakefork	IL	SSTS
Lonza Inc.	Mapleton	IL	OW/SSTS
Mason Chemical Corporation	Joliet	IL	SSTS
Monsanto Co.	Sauget	IL	SSTS
Morton International	Lansing	IL	SSTS
Morton International	Ringwood	IL	SSTS
Olin Corp.	Joliet	IL	SSTS
Riverdale Chemical Co	Chicago Heights	IL	OW/SSTS
Stepan Company	Elwood	IL	SSTS
West Agro	Des Plaines	IL	SSTS
3M Company	Hartford City	IN	SSTS
Eli Lilly Tippecanoe Labs	Lafayette	IN	OW/SSTS
H&S Chemicals	Huntington	IN	OW/SSTS
Pfizer Vigo Plant	Terre Haute	IN	SSTS
Reilly Industries	Indianapolis	IN	SSTS
Agco Inc.	Dorrance	KS	SSTS
Bubeck Water Services	Lenexa	KS	SSTS
PBI Gordon Corporation	Crestline	KS	SSTS
Simmons Turf Grass Farm	Wichita	KS	SSTS

TABLE 1. LIST OF FACILITIES THAT PRODUCE PAI (CONTINUED)

COMPANY NAME	CITY	STATE	LIST (OW/SSTS)
Vulcan Chemicals	Wichita	KS	OW
W. F. Leonard Company	Meridan	KS	SSTS
Elf Atochem N.A. Inc.	Carrollton	KY	OW/SSTS
Vanderbilt Chemical Corp.	Murray	KY	OW
Angus Chemical Company	Sterlington	LA	SSTS
Chem-Lig International	Port Allen	LA	SSTS
Ciba Geigy Corp.	St. Gabriel	LA	OW/SSTS
Erco Industries	Monroe	LA	SSTS
LaRoche	Gramercy	LA	SSTS
Magnolia Chemicals	Jefferson	LA	SSTS
Micro Chemical Company	Winnsboro	LA	SSTS
Monsanto Co.	Luling	LA	OW/SSTS
Olin Corp.	Lake Charles	LA	SSTS
PPG Industries	Lake Charles	LA	SSTS
Pioneer Chlor Alkali	St. Gabriel	LA	SSTS
Uniroyal Chemical	Geismar	LA	SSTS
Witco Corp. Argus Chem. Div.	Taft	LA	OW/SSTS
Zeneca, Inc.	St. Gabriel	LA	SSTS
Chemdesign Corporation	Fitchburg	MA	SSTS
Ecoscience Corporation	Worcester	MA	SSTS
Zeneca Inc.	Dighton	MA	SSTS
Central Chemical Corporation	Elkton	MD	SSTS
Espro Inc.	Columbia	MD	SSTS
FMC Corp. Ag. Chem. Group	Baltimore	MD	OW/SSTS
Niro Inc.	Columbia	MD	SSTS
W.R. Grace & Company	Baltimore	MD	SSTS
LCP Chemicals	Orrington	ME	OW/SSTS
Moosehead Products	Corinna	ME	SSTS
Anderson Development Company	Adrian	MI	SSTS
BVA D/B/A B-V Associates	Wixom	MI	SSTS
Berger & Company	Croswell	MI	SSTS
Cropmate Fertilizer	Mulliken	MI	SSTS
Dow Chemical	Midland	MI	OW/SSTS
Elf Atochem N.A. Inc.	Riverview	MI	SSTS
IB Kremer Company	Livonia	MI	SSTS
Nal Company	Novi	MI	SSTS
Nor-Am Chemical Company	Muskegon	MI	SSTS
Pennisula Copper Industries	Hubbell	MI	SSTS

TABLE 1. LIST OF FACILITIES THAT PRODUCE PAI (CONTINUED)

COMPANY NAME	CITY	STATE	LIST (OW/SSTS)
3M Company	St. Paul	MN	SSTS
3M Company	St Paul	MN	SSTS
Diversified Mfg	St Paul	MN	SSTS
H B Fuller Company	Minneapolis	MN	SSTS
Hawkins Chemical	Minneapolis	MN	SSTS
McLaughlin Gormley King Co.	Chaska	MN	SSTS
McLaughlin Gormley King Co.	Minneapolis	MN	OW/SSTS
Munson Feed Company	Howardlake	MN	SSTS
Timed Release Corporation	Maple Plain	MN	SSTS
Water Technologies Corporation	Plymouth	MN	SSTS
Agrolinz Inc. (Albaugh Inc.)	St. Joseph	MO	OW/SSTS
American Cyanamid Co.	Hannibal	MO	OW/SSTS
Bayer Corporation	Kansas City	MO	OW/SSTS
Buckman Laboratories Inc.	Cadet	MO	SSTS
Calgon Vestal Labs (Convatech)	St. Louis	MO	SSTS
Chevron Chemical Co.	Maryland Heights	MO	SSTS
Dial Corporation	St. Louis	MO	SSTS
Farmland Industries	St. Joseph	MO	OW/SSTS
Findett Corporation	St. Charles	MO	SSTS
Lange-Stegman Fertilizer	St. Louis	MO	SSTS
Monsanto Co.	St. Louis	MO	OW/SSTS
Rhone Poulenc Ag. Co.	St. Louis	MO	
Rhone-Poulenc Ag Co.	St. Joseph	MO	SSTS
West Agro	Kansas City	MO	SSTS
Eka Nobel	Columbus	MS	SSTS
Kerr-McGee Chemical	Hamilton	MS	SSTS
Morton International	Moss Point	MS	SSTS
Odom Industries	Waynesboro	MS	SSTS
Red Panther Chemical	Clarksdale	MS	SSTS
American Chemet Corporation	East Helena	MT	SSTS
Transbas Inc.	Billings	MT	SSTS
FMC Corporation	Bessemer City	NC	SSTS
Fair Products	Cary	NC	SSTS
Forrest Farm Supply	Bayboro	NC	SSTS
Holtrachem	Riegelwood	NC	SSTS
Mac-Page Blending	Dunn	NC	SSTS
Mineral R & D Corp.	Harrisburg	NC	
Monsanto Co.	Fayetteville	NC	OW/SSTS
Morflex Inc	Greensboro	NC	OW/SSTS

TABLE 1. LIST OF FACILITIES THAT PRODUCE PAI (CONTINUED)

COMPANY NAME	CITY	STATE	LIST (OW/SSTS)
Occidental Chemical	Castle Hayne	NC	SSTS
Pisgah Labs	Pisgah Forest	NC	SSTS
Prochem Chemicals	High Point	NC	SSTS
Rhone Poulenc Ag. Co.	RTP	NC	OW/SSTS
SCM Metal Products	RTP	NC	SSTS
Sandoz Chemicals Corp.	Charlotte	NC	OW/SSTS
Southchem	New Bern	NC	SSTS
Trinity Mfg	Hamlet	NC	SSTS
Farmers Union Oil Company	Kulm	ND	SSTS
Akzo Chemicals Inc.	New Brunswick	NJ	OW/SSTS
Akzo Nobel Chemicals	Edison	NJ	SSTS
American Cyanamid Co.	Princeton	NJ	SSTS
Arsynco Inc.	Carlstadt	NJ	SSTS
Atomergic Chemetals	Patterson	NJ	OW
CDI Dispersions	Newark	NJ	SSTS
Cell and Cell Products Fermentation	Piscataway	NJ	SSTS
Cosan Chemical Corporation	Carlstadt	NJ	SSTS
Givauden-Roure Corp.	Clifton	NJ	OW/SSTS
Hercules Chemical	Passaic	NJ	SSTS
Hoechst Celanese	Newark	NJ	SSTS
Jame Fine Chemical	Bound Brook	NJ	SSTS
Martz Mountain Corporation	Bloomfield	NJ	SSTS
Mason Chemical Corporation	Paterson	NJ	SSTS
Merck & Co. Inc.	Rahway	NJ	OW/SSTS
Old Bridge Chemical	Old Bridge	NJ	SSTS
Pfister Chemical	Ridgefield	NJ	SSTS
Princeton Pool and Patio	Princeton	NJ	SSTS
Purefine Washing Fluid	Elizabeth	NJ	SSTS
Roscom Inc.	Trenton	NJ	SSTS
Troy Chemical Corp.	Newark	NJ	OW/SSTS
Kerr-McGee Chemical	Henderson	NV	SSTS
Pioneer Chlor Alkali	Henderson	NV	SSTS
Diaz Chemical	Holley	NY	SSTS
FMC Corporation	Middleport	NY	SSTS
FMC Corporation	Tonawanda	NY	SSTS
Olin Corp.	Rochester	NY	OW/SSTS
Witco Corp.	Brooklyn	NY	OW/SSTS
Archem Corporation	Portsmouth	OH	SSTS
Ashta Chemicals Inc.	Ashtabula	OH	OW

TABLE 1. LIST OF FACILITIES THAT PRODUCE PAI (CONTINUED)

COMPANY NAME	CITY	STATE	LIST (OW/SSTS)
G Frederick Smith Chemical	Columbus	OH	SSTS
Hess & Clark	Ashland	OH	SSTS
Jones Hamilton Company	Walbridge	OH	SSTS
MTM Chemicals	Columbus	OH	OW/SSTS
Monsanto Co.	Dayton	OH	SSTS
Ohio Grain Company	Urbana	OH	SSTS
PMC Specialties	Cincinnati	OH	SSTS
Purex Corporation	Marion	OH	SSTS
Ricerca Inc.	Concord	OH	SSTS
Vigoro Industries	Shandon	OH	SSTS
Zeneca Inc.	Perry	OH	OW
Avitrol Corporation	Tulsa	OK	SSTS
Phillips Petroleum Company	Bartlesville	OK	SSTS
Chevron Chemical Co.	Portland	OR	SSTS
Elf Atochem N.A. Inc.	Portland	OR	SSTS
Gatx Tank Storage Terminals	Portland	OR	SSTS
Rhone Poulenc Ag. Co.	Portland	OR	OW
ACT	Allentown	PA	SSTS
Advanced Chemicals	Lansdowne	PA	SSTS
Bayside Marine Paint	Conshohocken	PA	SSTS
Huntington Labs.	Lansdale	PA	SSTS
Ionics Incorporated	Bridgeville	PA	SSTS
Merck & Co. Inc.	Riverside	PA	SSTS
Mooney Chemicals Inc.	Franklin	PA	OW/SSTS
PPG Industries	Folcroft	PA	SSTS
Pagoda Industries	Sinking Springs	PA	SSTS
Rohm & Haas Inc.	Philadelphia	PA	OW/SSTS
Ruetgers-Nease Chemical Company	State College	PA	SSTS
Sun Company	Marcus Hook	PA	SSTS
Ultra-Hyd	Horsham	PA	SSTS
Pacific Anchor Chemical	Cumberland	RI	SSTS
CP Chemicals	Sumter	SC	SSTS
Hickson Corporation	Hickory Grove	SC	SSTS
MTM-Hardwicke Inc.	Elgin	SC	OW/SSTS
Mobay Corporation	Goose Creek	SC	SSTS
Pulverizing Services	North Charleston	SC	SSTS
Alco Chemical	Chattanooga	TN	OW/SSTS
Bit Manufacturing Inc.	Copperhill	TN	OW/SSTS
Buckman Laboratories Inc.	Memphis	TN	OW/SSTS

TABLE 1. LIST OF FACILITIES THAT PRODUCE PAI (CONTINUED)

COMPANY NAME	CITY	STATE	LIST (OW/SSTS)
Chapman Chemical Co	Memphis	TN	OW
Drexel Chemical Co	Memphis	TN	OW/SSTS
Eastman Kodak-Tennessee Eastman	Kingsport	TN	OW/SSTS
Great Lakes Chemical Corp.	Newport	TN	SSTS
IBC Mfg	Memphis	TN	SSTS
Music City Supplement Company	Nashville	TN	SSTS
Nutra Basics	Chattanooga	TN	SSTS
Olin Corp.	Charleston	TN	SSTS
Pro-Serve Inc.	Memphis	TN	SSTS
Rhone-Poulenc Ag Co.	Mt. Pleasant	TN	OW/SSTS
Rohm & Haas Inc.	Knoxville	TN	OW/SSTS
Tennessee Valley Performance	Dayton	TN	SSTS
Velsicol Chemical Corp	Memphis	TN	OW/SSTS
Zeneca Inc.	Mt. Pleasant	TN	OW/SSTS
Agrevo Environmental Health	Pasadena	TX	SSTS
Agtrol Chemical Products	Houston	TX	SSTS
Alliance Packaging	Irving	TX	SSTS
American Chrome & Chemicals	Corpus Christi	TX	SSTS
Betz Labs	West Orange	TX	SSTS
Biomedical & Pharm. Mfg.	Houston	TX	SSTS
Chemical Specialties	Gilmer	TX	SSTS
Cumberland	Houston	TX	OW
Dow Chemical	Freeport	TX	OW/SSTS
Du Pont LaPorte Plant	LaPorte	TX	OW/SSTS
Ennis Agri-Tech	Ennis	TX	SSTS
Exxon Chemical	Houston	TX	SSTS
Griffin Corporation	Houston	TX	SSTS
ISK Biotech Corp.	Houston	TX	OW/SSTS
Rohm & Haas Inc.	La Porte	TX	OW/SSTS
Sandoz Agro Inc.	Beaumont	TX	OW/SSTS
Schenectady International	Freeport	TX	SSTS
Southwestern Livestock Mineral Co.	San Angelo	TX	SSTS
Sun Company	Nederland	TX	SSTS
Synergy Fluids	Hull	TX	SSTS
Zeneca, Inc.	Pasadena	TX	SSTS
Zoecon Corporation	Dallas	TX	SSTS
Amphos Ltd.	Weyers Cave	VA	SSTS
CSS Employment	Tacoma	WA	SSTS
Olympic Mountain & Marine Prod. Inc.	Kent	WA	SSTS

TABLE 1. LIST OF FACILITIES THAT PRODUCE PAI (CONTINUED)

COMPANY NAME	CITY	STATE	LIST (OW/SSTS)
Weyerhaeuser Co. Chemcial Plant	Tacoma	WA	SSTS
Aldrich Chemical Company	Milwaukee	WI	SSTS
Athea Labs	Milwaukee	WI	SSTS
Coating Place	Verona	WI	SSTS
Hacco Inc.	Randolph	WI	SSTS
Northland Foods Cooperative	Owen	WI	SSTS
Specialtychem Products	Marinette	WI	SSTS
Witco Co. Sherex Chemical Company	Janesville	WI	OW/SSTS
Clearon Corporation	So. Charleston	WV	SSTS
Cytec Industries	Willow Island	WV	OW/SSTS
Du Pont Belle Plant	Belle	WV	OW
FMC Corp. Institute Plant	Institute	WV	OW/SSTS
Hanlin Chemicals	Moundsville	WV	SSTS
Kincaid Enterprises Inc.	Nitro	WV	OW/SSTS
Newell Specialty Chemicals	Newell	WV	SSTS
PPG Industries	New Martinsville	WV	SSTS
Rhone-Poulenc Ag Co.	Institute	WV	OW/SSTS
Union Carbide	South Carleston	WV	SSTS

TABLE 2. PERCENTAGE OF SOURCES THAT ARE MAJOR ACTIVE INGREDIENT MANUFACTURERS

STATE	ORIGINAL NUMBER OF FACILITIES (OW + SSTs)	CONFIRMED		PERCENTAGE		CUMULATIVE MAJOR A1'S	CUMULATIVE SOURCES
		MAJOR SOURCE ACTIVE INGREDIENT MANUFACTURERS	MAJOR SOURCE ACTIVE INGREDIENT MANUFACTURERS	OF CONFIRMED MAJOR SOURCE ACTIVE INGREDIENT MANUFACTURERS	OF CONFIRMED MAJOR SOURCE ACTIVE INGREDIENT MANUFACTURERS		
ARKANSAS	5	3	3	60.00%	60.00%	3	5
GEORGIA	12	0	0	0.00%	17.65%	3	17
ILLINOIS	21	5	5	23.81%	21.05%	8	38
KANSAS	6	1	1	16.67%	20.45%	9	44
MARYLAND	5	1	1	20.00%	20.41%	10	49
MICHIGAN	10	3	3	30.00%	22.03%	13	59
MISSOURI	13	3	3	23.08%	22.22%	16	72
NEW YORK	5	0	0	0.00%	20.78%	16	77
NORTH CAROLINA	15	2	2	13.33%	19.57%	18	92
TENNESSEE	17	4	4	23.53%	20.18%	22	109
TEXAS	21	6	6	28.57%	21.54%	28	130
WEST VIRGINIA	10	5	5	50.00%	23.57%	33	140

TABLE 3. MAJOR SOURCES IDENTIFIED AS AFFECTED SOURCES IN THE PRODUCTION OF PESTICIDE ACTIVE INGREDIENT SOURCE CATEGORY^a

Company name	City	State
Arkansas Eastman Division	Magness	AR
Ethyl Corporation	Magnolia	AR
Great Lakes Chemical Corp.	El Dorado	AR
Abbott Labs	North Chicago	IL
Lonza Inc.	Mapleton	IL
Monsanto Co.	Sauget	IL
Morton International	Ringwood	IL
Riverdale Chemical Co.	Chicago Heights	IL
Vulcan Chemicals	Wichita	KS
FMC Corp. Ag. Chem. Group	Baltimore	MD
Anderson Development Company	Adrian	MI
Dow Chemical	Midland	MI
Elf Atochem N.A., Inc.	Riverview	MI
American Cyanamid Co.	Hannibal	MO
Buckman Laboratories Inc.	Cadet	MO
Farmland Industries	St. Joseph	MO
FMC Corporation	Bessemer City	NC
Occidental Chemical	Castle Hayne	NC
Eastman Kodak-Tennessee Eastman	Kingsport	TN
Great Lakes Chemical Corp.	Newport	TN
Olin Corp.	Charleston	TN
Zeneca Inc.	Mt. Pleasant	TN
Dow Chemical	Freeport	TX
Du Pont	LaPorte	TX
ISK Biotech Corp.	Houston	TX
Sandoz Agro Inc.	Beaumont	TX
Schenectady International	Freeport	TX
Zeneca Inc.	Pasadena	TX
Cytec Industries	Willow Island	WV
Du Pont	Belle	WV
PPG Industries	New Martinsville	WV
Rhone-Poulenc Ag. Co.	Institute	WV
Union Carbide	South Charleston	WV

^aGeorgia and New York were contacted; neither of these States have facilities that are major source active ingredient manufacturers.

III. References

1. U.S. Environmental Protection Agency. Section Seven Tracking System, Pesticide Report-1991. Information collected on EPA Form 3540-16 for reporting year 1991.
2. U.S. Environmental Protection Agency. Development Document for Best Available Technology: Pretreatment Technology, and New Source Performance Technology for the Pesticide Chemical Industry. Washington, DC, Office of Science and Technology. EPA Publication No. EPA-821/R-92-005. March 1992.
3. Telecon. Schmidtke, K., MRI, with Harrell, C., Arkansas Department of Pollution Control and Ecology. September 13, 1995. Discussion to determine whether plants listed in Section 7 Tracking System are HAP major sources and pesticide active ingredient manufacturers.
4. Letter from Johnston, J., Georgia Department of Natural Resources, to Schmidtke, K., MRI. December 26, 1995. Information on pesticide active ingredient facilities that are HAP major sources.
5. Telecon. Schmidtke, K., MRI, with Naour, H., Illinois Environmental Protection Agency. October 18, 1995. Discussion to determine whether plants listed in Section 7 Tracking System are HAP major sources and pesticide active ingredient manufacturers.
6. Telecon. Schmidtke, K., MRI, with Gross, T., Kansas Department of Air and Radiation. October 10, 1995. Discussion to determine whether plants listed in Section 7 Tracking System are HAP major sources and pesticide active ingredient manufacturers.
7. Telecon. Randall, D., MRI, with Irons, K., Maryland Department of the Environment. August 25, 1995. Discussion to determine whether plants listed in Section 7 Tracking System are HAP major sources and pesticide active ingredient manufacturers.
8. Telecon. Banker, L., EPA/OAQPS/ESD, with Avery, J., Michigan Department of Environmental Quality. _____, 1996. Discussion to determine whether plants listed in Section 7 Tracking System are HAP major sources and pesticide active ingredient manufacturers.
9. Telecon. Schmidtke, K., MRI, with Giroir, E., Missouri Department of Natural Resources. September 14 and 27, 1995. Discussion to determine whether plants listed in Section 7 Tracking System are HAP major sources and pesticide active ingredient manufacturers.
10. Telecon. Schmidtke, K., MRI, with Horgan, T., City of St. Louis Air Pollution Control, Missouri Department of Natural Resources. September 29 and October 4, 1995. Discussion to determine whether plants listed in Section 7 Tracking System are HAP major sources and pesticide active

ingredient manufacturers.

11. Telecon. Schmidtke, K., MRI, with Wildt, C., County of St. Louis Air Pollution Control Program, Missouri Department of Natural Resources. October 2, 1995. Discussion to determine whether plants listed in Section 7 Tracking System are HAP major sources and pesticide active ingredient manufacturers.
12. Telecon. Schmidtke, K., MRI, with Carney, D., and S. Honig, Missouri Department of Natural Resources. October 3, 1995. Discussion to determine whether plants listed in Section 7 Tracking System are HAP major sources and pesticide active ingredient manufacturers.
13. Telecon. Banker, L., EPA/OAQPS/ESD, with _____, New York Department of Environmental Conservation. _____, 1996. Discussion to determine whether plants listed in Section 7 Tracking System are HAP major sources and pesticide active ingredient manufacturers.
14. Telecon. Schmidtke, K., MRI, with Menon, P., Raleigh Regional Office, North Carolina Department of Environment, Health, and Natural Resources. October 2 and 19, 1995. Discussion to determine whether plants listed in Section 7 Tracking System are HAP major sources and pesticide active ingredient manufacturers.
15. Telecon. Schmidtke, K., MRI, with Edwards, R., Wilmington Regional Office, North Carolina Department of Environment, Health, and Natural Resources. October 5, 1995. Discussion to determine whether plants listed in Section 7 Tracking System are HAP major sources and pesticide active ingredient manufacturers.
16. Telecon. Schmidtke, K., MRI, with Bulow, B., Washington Regional Office, North Carolina Department of Environment, Health, and Natural Resources. October 6, 1995. Discussion to determine whether plants listed in Section 7 Tracking System are HAP major sources and pesticide active ingredient manufacturers.
17. Telecon. Schmidtke, K., MRI, with Davey, B., Mooresville Regional Office, North Carolina Department of Environment, Health, and Natural Resources. October 6, 1995. Discussion to determine whether plants listed in Section 7 Tracking System are HAP major sources and pesticide active ingredient manufacturers.
18. Telecon. Schmidtke, K., MRI, with Revels, M., Fayetteville Regional Office, North Carolina Department of Environment, Health, and Natural Resources. October 6, 1995. Discussion to determine whether plants listed in Section 7 Tracking System are HAP major sources and pesticide active ingredient manufacturers.

19. Telecon. Schmidtke, K., MRI, with Edwards, L., and H. Varner, Winston-Salem Regional Office, North Carolina Department of Environment, Health, and Natural Resources. October 6 and 9, 1995. Discussion to determine whether plants listed in Section 7 Tracking System are HAP major sources and pesticide active ingredient manufacturers.
20. Telecon. Schmidtke, K., MRI, with Muller, P., Asheville Regional Office, North Carolina Department of Environment, Health, and Natural Resources. October 9, 1995. Discussion to determine whether plants listed in Section 7 Tracking System are HAP major sources and pesticide active ingredient manufacturers.
21. Telecon. Schmidtke, K., MRI, with Liu, J., and J. Schoenfuss, Mecklenburg County Department of Environmental Protection, North Carolina Department of Environment, Health, and Natural Resources. October 9, 1995. Discussion to determine whether plants listed in Section 7 Tracking System are HAP major sources and pesticide active ingredient manufacturers.
22. Telecon. Schmidtke, K., MRI, with Huggins, F., Davidson County Air Pollution Control, Tennessee Department of Air Pollution Control. October 24, 1995. Discussion to determine whether plants listed in Section 7 Tracking System are HAP major sources and pesticide active ingredient manufacturers.
23. Telecon. Schmidtke, K., MRI, with Reksten, E., and A. Frazier, Hamilton County Air Pollution Control Bureau, Tennessee Division of Air Pollution Control. October 24, 1995. Discussion to determine whether plants listed in Section 7 Tracking System are HAP major sources and pesticide active ingredient manufacturers.
24. Telecon. Schmidtke, K., MRI, with Sherrill, L., Shelby County Air Pollution Control, Tennessee Department of Air Pollution Control. October 24, 1995. Discussion to determine whether plants listed in Section 7 Tracking System are HAP major sources and pesticide active ingredient manufacturers.
25. Telecon. Schmidtke, K., MRI, with Ahmed, M., Tennessee Department of Air Pollution Control. October 26 and December 4, 1995. Discussion to determine whether plants listed in Section 7 Tracking System are HAP major sources and pesticide active ingredient manufacturers.
26. Letter from Nixon, S., Knox County Government, Tennessee Department of Air Pollution Control, to Schmidtke, K., MRI. November 14, 1995. Information on pesticide active ingredient facilities that are HAP major sources.
27. Telecon. Schmidtke, K., MRI, with Brochi, P., Texas Air Control Board. October 16, 1995. Discussion to determine whether plants listed in Section 7 Tracking System are HAP major sources and pesticide active ingredient manufacturers.

28. Telecon. Schmidtke, K., MRI, with Enke, S., Betz Laboratories, Inc. December 5, 1995. Discussion to determine whether the West Orange, Texas plant is a HAP major source and pesticide active ingredient manufacturer.
29. Telecon. Schmidtke, K., MRI, with Hodges, G., Ennis Agri-Tech. December 6, 1995. Discussion to determine whether the Ennis, Texas plant is a HAP major source and pesticide active ingredient manufacturer.
30. Telecon. Schmidtke, K., MRI, with Neman, D., Rohm and Haas Bayport. December 6, 1995. Discussion to determine whether the La Porte, Texas plant is a HAP major source and pesticide active ingredient manufacturer.
31. Telecon. Schmidtke, K., MRI, with Robinson, P., Schenectady International, Inc. December 8 and 15, 1995. Discussion to determine whether the Freeport, Texas plant is a HAP major source and pesticide active ingredient manufacturer.
32. Telecon. Schmidtke, K., MRI, with Buchmann, R., Griffin Corporation. December 12, 1995. Discussion to determine whether the Houston, Texas plant is a HAP major source and pesticide active ingredient manufacturer.
33. Telecon. Schmidtke, K., MRI, with Holcomb, M., Zoecon Corporation/Sandoz Agro, Inc. December 12, 1995. Discussion to determine whether the Dallas, Texas plant is a HAP major source and pesticide active ingredient manufacturer.
34. Telecon. Schmidtke, K., MRI, with Bartos, S., Chemical Specialties. December 14, 1995. Discussion to determine whether the Gilmer, Texas plant is a HAP major source and pesticide active ingredient manufacturer.
35. Telecon. Schmidtke, K., MRI, with Legg, J., West Virginia Air Pollution Control. October 20, 1995. Discussion to determine whether plants listed in Section 7 Tracking System are HAP major sources and pesticide active ingredient manufacturers.
36. Telecon. Schmidtke, K., MRI, with Gibson, T., Union Carbide Corporation. December 14, 1995. Discussion to determine whether the South Charleston, West Virginia plant is a HAP major source and pesticide active ingredient manufacturer.
37. Telecon. Schmidtke, K., MRI, with Hackney, H., FMC Corporation. December 14, 1995. Discussion to determine whether the Institute, West Virginia plant is a HAP major source and pesticide active ingredient manufacturer.
38. Telecon. Schmidtke, K., MRI, with Miller, D., Clearon Corporation. December 14, 1995. Discussion to determine whether the South Charleston, West Virginia plant is a HAP major source and pesticide active ingredient manufacturer.
39. Telecon. Schmidtke, K., MRI, with Sabatino, E., Cytec Industries. December 14, 1995. Discussion to determine whether the Willow Island, West Virginia plant is a HAP major

source and pesticide active ingredient manufacturer.

40. Telecon. Schmidtke, K., MRI, with Walborn, K., PPG Industries, Inc. December 14, 1995. Discussion to determine whether the New Martinsville, West Virginia plant is a HAP major source and pesticide active ingredient manufacturer.