

NOES QUESTIONNAIRE ITEM NO. 31
Use of Occupational Safety Consultation Services

Intent

The intent of this question was to determine whether a facility received occupational safety consulting services from an outside source during the previous year.

This item was displayed on the questionnaire as:

31. Has your facility received occupational safety services on a consulting basis during the past months?

- 1 Yes, from government sources
- 2 Yes, from non-government sources
- 3 No

Notes

Occupational safety consultation services from an outside source is defined as the provision of occupational safety advice, consultation, or service obtained from persons not employed by the facility which were provided for reasons other than enforcement of regulatory safety standards.

All consultations not conducted on behalf of the facility or corporate management, such as regulatory visits or union-initiated studies, were excluded.

Analysis

Two analyses of the responses to question 31 are presented.

- (1) Responses 31.1 and 31.2 - Occupational safety consultations received from government and non-government sources.

The estimates of the plants which have received occupational safety consultations during the preceding year from government or non-government sources, and workers in those plants (by number and proportion of the total) are displayed in Figures IV-17 and IV-18, and Tables IV-17 and IV-18.

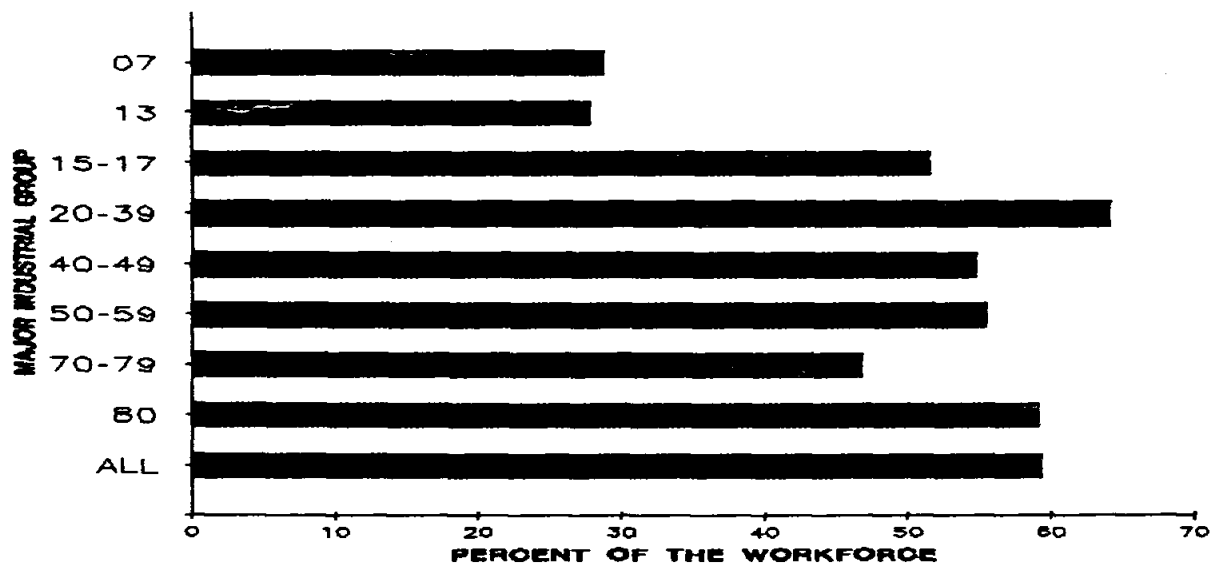
Figure IV-17	Occupational safety consultation in last year (by major industrial group)
Figure IV-18	Occupational safety consultation in the last year (by 2-digit SIC)
Table IV-17	Number and percent of plants and employees in plants which received occupational safety consultation during the past year (by major industrial group)
Table IV-18	Number and percent of plants and employees in plants which received occupational safety consultation during the past year (by 2-digit SIC)

- (2) Responses 31.1, 31.2, or 31.3 - Plants receiving occupational safety consultations in the past year from government or non-government sources, or not receiving occupational safety consultations

The estimates of the proportion of plants (by size category) which received occupational safety consultations in the past year from government sources (GOV'T), non-government sources (NON-GOV'T), or which did not receive such consultation (NONE) are displayed in Figure IV-19.

Figure IV-19 Plants receiving occupational safety consultation by source

FIGURE IV - 17
OCCUPATIONAL SAFETY CONSULTATION IN LAST YEAR
 (NOES 1981-1983)



NATIONAL OCCUPATIONAL EXPOSURE SURVEY (1981-1983) TABLE NO. IV-17

NUMBER AND PERCENT OF PLANTS AND EMPLOYEES IN PLANTS WHICH
 RECEIVED OCCUPATIONAL SAFETY CONSULTATION IN THE LAST YEAR

MAJOR GROUP	PLANTS			TOTAL	EMPLOYEES			TOTAL
	SMALL (8-99)	MEDIUM (100-499)	LARGE (≥500)		SMALL (8-99)	MEDIUM (100-499)	LARGE (≥500)	
07	1179* (563) 21.2%	70* (67) 100.0%	...	1249* (553) 22.2%	24945* (14547) 24.1%	7009* (6680) 100.0%	...	31954* (15011) 28.9%
13	3114* (1039) 36.2%	155* (78) 15.2%	...	3269* (1045) 33.8%	85404* (25550) 40.9%	30702* (15952) 17.7%	...	116106* (31252) 28.0%
15-17	37511 (2670) 39.8%	2755 (434) 66.5%	157* (107) 64.9%	40423 (2801) 40.9%	943646 (67007) 45.0%	504511 (83514) 68.4%	138887* (80536) 58.8%	1587043 (132539) 51.7%
20-39	76913 (3204) 50.2%	22645 (1894) 71.3%	4570 (308) 72.9%	104128 (3839) 54.4%	2578715 (86757) 55.9%	4614200 (377574) 72.3%	5172277 (274985) 62.6%	12365192 (388216) 64.2%
40-49	19737 (2129) 37.1%	3279 (706) 56.1%	330* (123) 70.5%	23347 (2150) 39.3%	661368 (69553) 46.1%	630899 (120045) 54.7%	442794 (95833) 77.2%	1735062 (175165) 54.9%
50-59	26762 (2933) 45.8%	1581* (467) 59.4%	...	28343 (2911) 46.4%	615227 (57936) 54.7%	237238* (68883) 58.0%	...	852465 (82874) 55.6%
70-79	27711 (2723) 37.9%	1290 (215) 55.0%	157* (76) 44.4%	29158 (2756) 38.4%	609235 (72384) 43.7%	254061 (48779) 54.7%	166679* (74981) 49.1%	1029975 (113049) 46.9%
80	1124* (490) 39.6%	1453 (279) 67.1%	1292 (193) 62.7%	3869 (477) 54.7%	49909* (17501) 49.1%	344191 (67558) 64.4%	1775407 (212910) 58.7%	2169507 (181049) 59.3%
ALL	194052 (6292) 43.2%	33228 (2151) 66.5%	6507 (405) 68.9%	233786 (6701) 46.0%	5568447 (163160) 50.3%	6622812 (419446) 67.2%	7696044 (377146) 61.7%	19887303 (502583) 59.5%

*Standard error >25% of the estimate. The estimate may be unreliable.
 ...No facilities observed.

NUMBER AND PERCENT OF PLANTS AND EMPLOYEES IN PLANTS WHICH RECEIVED OCCUPATIONAL SAFETY CONSULTATION IN THE LAST YEAR

SIC CODE	PLANTS			TOTAL	EMPLOYEES			TOTAL
	SMALL (8-99)	MEDIUM (100-499)	LARGE (>500)		SMALL (8-99)	MEDIUM (100-499)	LARGE (>500)	
07	1179* (563) 21.2%	70* (67) 100.0%	...	1249* (553) 22.2%	24945* (14547) 24.1%	7009* (6680) 100.0%	...	31954* (15011) 28.9%
13	3114* (1039) 36.2%	155* (78) 15.2%	...	3269* (1045) 33.8%	85404* (25550) 40.9%	30702* (15952) 17.7%	...	116106* (31252) 28.0%
15	9684 (1585) 38.9%	747* (256) 67.5%	103* (96) 75.9%	10534 (1646) 40.3%	243070 (40144) 43.2%	129104* (40829) 65.1%	80307* (65254) 59.6%	452481 (90105) 50.5%
16	6232 (1198) 55.2%	937 (203) 83.7%	55* (42) 51.0%	7223 (1187) 57.7%	183079 (39953) 64.4%	182156 (45064) 81.7%	58580* (43506) 57.9%	423815 (78413) 71.5%
17	21595 (1886) 37.1%	1072 (243) 55.8%	...	22667 (1939) 37.7%	517497 (48355) 41.3%	193250* (53149) 58.4%	...	710747 (77530) 44.9%
20	6666 (754) 58.4%	2522 (469) 78.4%	443* (112) 79.2%	9630 (901) 63.4%	230152 (24410) 59.3%	548660 (113644) 81.4%	372011* (101694) 75.7%	1150883 (116295) 74.1%
21	30* (43) 100.0%	...	53* (37) 66.7%	83* (50) 76.2%	1866* (2685) 100.0%	...	85457* (67004) 76.2%	87323* (66474) 76.6%
22	1147 (203) 39.1%	1152 (187) 72.6%	193* (73) 64.6%	2492 (245) 51.7%	39709 (9757) 37.5%	255692 (36346) 73.7%	177438* (78058) 68.0%	472839 (81900) 66.2%
23	4838 (1192) 38.7%	1758 (182) 56.7%	135* (68) 56.0%	6732 (1136) 42.4%	159963 (27558) 37.7%	322777 (39332) 52.9%	114010* (59566) 54.7%	596750 (64750) 48.0%
24	4196 (1022) 39.2%	987 (177) 86.0%	92* (75) 88.7%	5275 (970) 44.1%	168479 (31931) 55.5%	161292 (30001) 87.9%	64733* (51314) 70.1%	394505 (76143) 68.1%
25	2310 (514) 55.5%	694 (173) 65.4%	115* (75) 96.9%	3119 (535) 58.4%	85015 (18325) 61.1%	181905* (45644) 70.9%	102081* (64610) 83.0%	369000 (85187) 71.2%
26	2061 (509) 50.1%	1311 (221) 83.5%	111* (40) 52.0%	3483 (536) 59.1%	87150 (20962) 63.3%	240195 (44330) 85.3%	124512* (35160) 60.2%	451857 (59640) 72.2%
27	7792 (961) 43.0%	1297 (171) 69.2%	203* (94) 64.1%	9291 (916) 45.8%	245386 (27137) 51.3%	270756 (50042) 75.0%	217953* (69462) 63.0%	734095 (100657) 62.0%
28	3236 (522) 52.4%	964 (121) 83.1%	261* (87) 68.6%	4460 (492) 57.8%	107943 (12445) 59.7%	199156 (35664) 76.4%	308547* (127379) 64.8%	615646 (115688) 67.1%
29	338* (230) 33.4%	149* (123) 50.9%	66* (32) 65.5%	553* (245) 39.3%	20848* (15172) 50.9%	27486* (18436) 43.5%	62490* (30367) 53.2%	110824* (40556) 50.0%
30	4706 (994) 70.1%	953* (328) 62.0%	208* (69) 93.0%	5868 (1198) 69.3%	155899 (26805) 69.3%	203454* (73324) 69.1%	214004* (70786) 91.6%	573358 (111432) 76.1%
31	320* (207) 34.4%	419* (130) 73.6%	3* (10) 14.0%	742* (284) 48.7%	9466* (5547) 38.0%	105498* (34894) 77.9%	4015* (11440) 25.6%	118979* (36079) 67.6%
32	4773 (1031) 54.3%	574* (148) 56.8%	166* (75) 90.3%	5514 (1090) 55.2%	145068 (20647) 61.2%	122305* (32787) 58.5%	109935* (48796) 85.2%	377309 (54121) 65.6%
33	1483 (245) 35.9%	954 (145) 65.0%	153* (40) 45.4%	2590 (284) 43.6%	63162 (10318) 45.6%	218641 (32589) 70.3%	192264 (42663) 30.9%	474066 (46625) 44.3%

SIC CODE	PLANTS			TOTAL	EMPLOYEES			TOTAL
	SMALL (8-99)	MEDIUM (100-499)	LARGE (>500)		SMALL (8-99)	MEDIUM (100-499)	LARGE (>500)	
34	10429 (984) 56.3%	2262 (223) 72.5%	261 (61) 75.3%	12951 (1053) 58.9%	360474 (21803) 65.0%	446385 (35517) 74.8%	237824* (63745) 67.7%	1044683 (81401) 69.5%
35	13385 (1084) 59.1%	2521 (184) 74.0%	605 (80) 77.1%	16511 (1101) 61.5%	385668 (22552) 63.6%	489401 (29553) 74.0%	821593 (131104) 73.8%	1696662 (137159) 71.3%
36	2942 (567) 41.4%	1939 (220) 72.2%	612* (153) 77.7%	5492 (578) 51.9%	101775 (16610) 44.2%	397947 (53822) 72.0%	826314 (151352) 69.9%	1326035 (160153) 67.5%
37	1967* (537) 49.5%	901 (157) 75.7%	224* (69) 53.8%	3092 (599) 55.4%	74814* (21666) 58.9%	185174 (34521) 77.4%	558105 (121132) 36.9%	818093 (121702) 43.5%
38	881 (212) 32.8%	677 (136) 70.7%	339* (132) 81.5%	1897 (274) 46.7%	44472 (10530) 42.5%	125410* (31618) 64.5%	389026* (123466) 84.5%	558909 (126643) 73.6%
39	3412 (812) 52.1%	611* (1282) 76.6%	328* (217) 97.0%	4351* (1556) 56.6%	91405 (19815) 55.1%	112066* (240307) 75.0%	189904* (119941) 90.7%	393375* (236863) 75.0%
41	1393* (362) 31.5%	272* (116) 53.3%	...	1664* (416) 33.8%	63379* (17184) 53.9%	49851* (31957) 61.1%	...	113229* (36914) 56.8%
42	7022 (1487) 35.1%	529* (168) 35.7%	63* (44) 76.3%	7613 (1555) 35.3%	213341 (35470) 43.7%	112345* (36565) 43.4%	44021* (26070) 58.8%	369707 (61504) 45.0%
45	1166* (470) 36.0%	416* (326) 70.5%	134* (57) 91.2%	1716* (549) 43.1%	34101* (9937) 44.0%	53756* (43152) 49.2%	228417* (86543) 86.4%	316275* (91890) 70.1%
48	3083* (1227) 21.0%	779 (186) 86.4%	34* (21) 99.0%	3895* (1237) 24.9%	143055* (57370) 33.6%	148818* (41190) 84.4%	70083* (43687) 100.0%	361957 (77733) 53.8%
49	4895* (1239) 59.6%	1054* (390) 56.6%	100* (90) 57.7%	6049 (1407) 59.0%	157675* (47028) 58.5%	220707* (77633) 51.9%	100272* (60205) 68.4%	478654* (130748) 56.9%
50	13120 (1642) 43.2%	1252* (372) 69.5%	...	14373 (1655) 44.7%	332574 (54095) 52.8%	198812* (63129) 70.2%	...	531387 (83327) 58.2%
51	4327* (1099) 47.5%	237* (237) 100.0%	...	4564* (1209) 48.8%	93712* (25244) 50.6%	27013* (27013) 100.0%	...	120725* (45120) 56.9%
55	9315 (2265) 49.2%	91* (84) 14.7%	...	9406 (2283) 48.1%	188940* (49215) 61.1%	11413* (10448) 11.6%	...	200353* (52183) 49.2%
72	6891 (1279) 33.4%	434* (151) 64.3%	13* (19) 100.0%	7338 (1271) 34.4%	169279 (32994) 44.5%	53462* (19694) 65.0%	10670* (15114) 100.0%	233412 (46262) 49.4%
73	4282 (980) 25.8%	820 (172) 55.1%	144* (66) 42.2%	5246 (1019) 28.5%	138107 (33431) 32.8%	187926 (44064) 53.7%	156008* (68653) 47.4%	482041 (74555) 43.8%
75	11571 (2388) 44.2%	...	...	11571 (2388) 44.1%	202980 (40666) 49.1%	...	...	202980 (40666) 48.2%
76	4966 (1233) 50.9%	36* (45) 29.4%	...	5003 (1243) 50.7%	98869 (21815) 55.4%	12672* (15755) 52.1%	...	111541* (29480) 55.0%
80	1124* (490) 39.6%	1453 (279) 67.1%	1292 (193) 62.7%	3869 (477) 54.7%	49909* (17501) 49.1%	344191 (67558) 64.4%	1775407 (212910) 58.7%	2169507 (181049) 59.3%
A11	191872 (6854) 43.0%	32999 (1415) 66.6%	6507 (260) 69.0%	231378 (7499) 45.8%	5518630 (156381) 50.1%	6577389 (308158) 67.3%	7696044 (319750) 61.8%	19792063 (488891) 59.5%

*Standard error >25% of the estimate. The estimate may be unreliable.
...No facilities observed.

FIGURE IV - 18
OCCUPATIONAL SAFETY CONSULTATION IN THE LAST YEAR
(NOES 1981-1983)

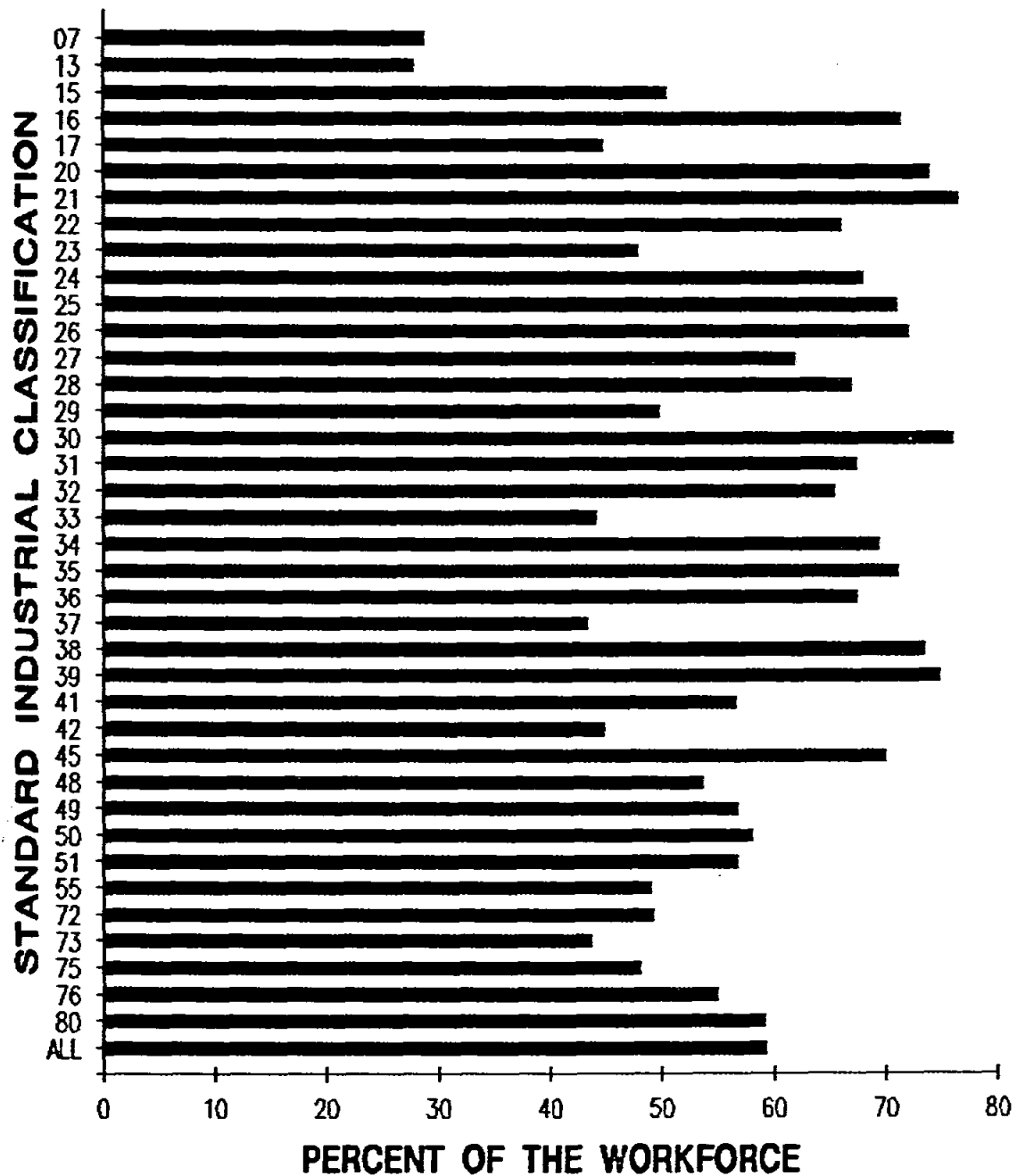
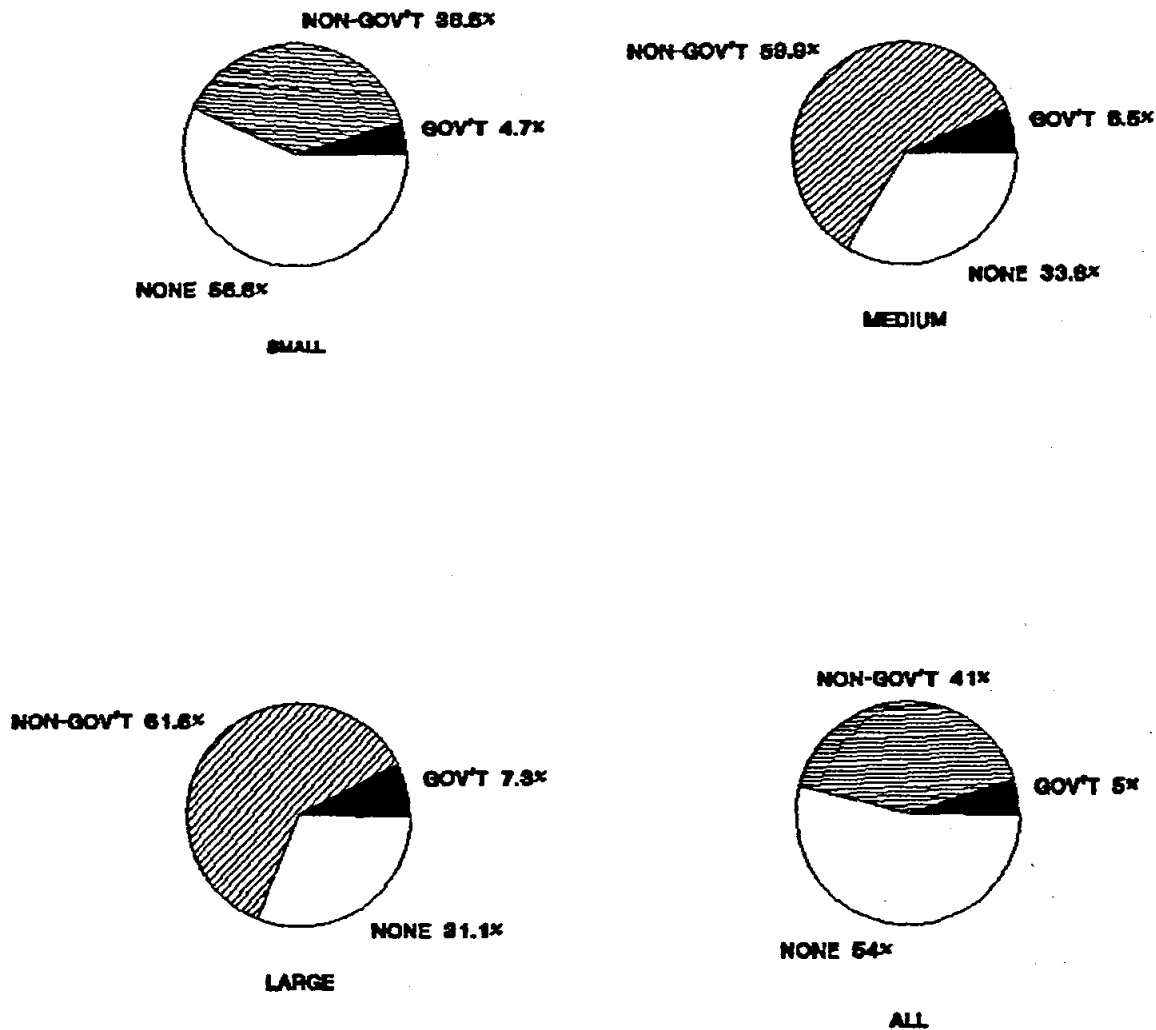


FIGURE IV - 19
PLANTS RECEIVING OCCUPATIONAL SAFETY
CONSULTATION BY SOURCE
(NOES 1981-1983)



NOES QUESTIONNAIRE ITEM NO. 32
Existence of a Program to Regularly Monitor Physical Agents

Intent

The intent of this question was to determine if the facility had a program to regularly or periodically monitor the presence of such physical agents as heat, vibration, radiation, noise and magnetic fields.

This item was displayed on the questionnaire as:

32. Do you have a program under which you regularly or periodically monitor the presence of physical agents such as heat, vibration, radiation, noise, and magnetic fields?

1 No (Skip to Question 34)

2 Yes (Circle yes or no for each physical agent listed below:)

	<u>Yes</u>	<u>No</u>
1. Heat	1	2
2. Vibration	1	2
3. Radiation	1	2
4. Noise	1	2
5. Magnetic fields	1	2
6. Other	1	2

Notes

"To regularly or periodically monitor" refers to programs within the facility which were established to monitor environmental levels of physical agents on a planned or predictable basis.

Tests using instrumentation or monitoring by outside sources are included if the intent was to determine if employee health was at risk and the monitoring was performed at the request of management.

Monitoring of process conditions or of areas where no employee exposure could take place (e.g., inside a closed vessel) or any monitoring not performed under an industrial hygiene/occupational health rationale was not included as a positive response.

Analysis

Two analyses of the responses to question 32 are presented.

(1) Response 32.2 - regular or periodic monitoring of physical agents

The estimates of the plants which have established programs to regularly or periodically monitor the occupational environmental levels of one or

more physical agents, and workers in those plants (by number and proportion of the total) are displayed in Figures IV-20, IV-21, IV-22, and IV-23, and Tables IV-19, and IV-20.

Figure IV-20	Plants monitoring physical agents (by major industrial group)
Figure IV-21	Plants monitoring physical agents (by 2-digit SIC)
Figure IV-22	Workers in plants monitoring physical agents (by major industrial group)
Figure IV-23	Workers in plants monitoring physical agents (by 2-digit SIC)
Table IV-19	Number and percent of plants and employees in plants which regularly monitor physical agents (by major industrial group)
Table IV-20	Number and percent of plants and employees in plants which regularly monitor physical agents (by 2-digit SIC)

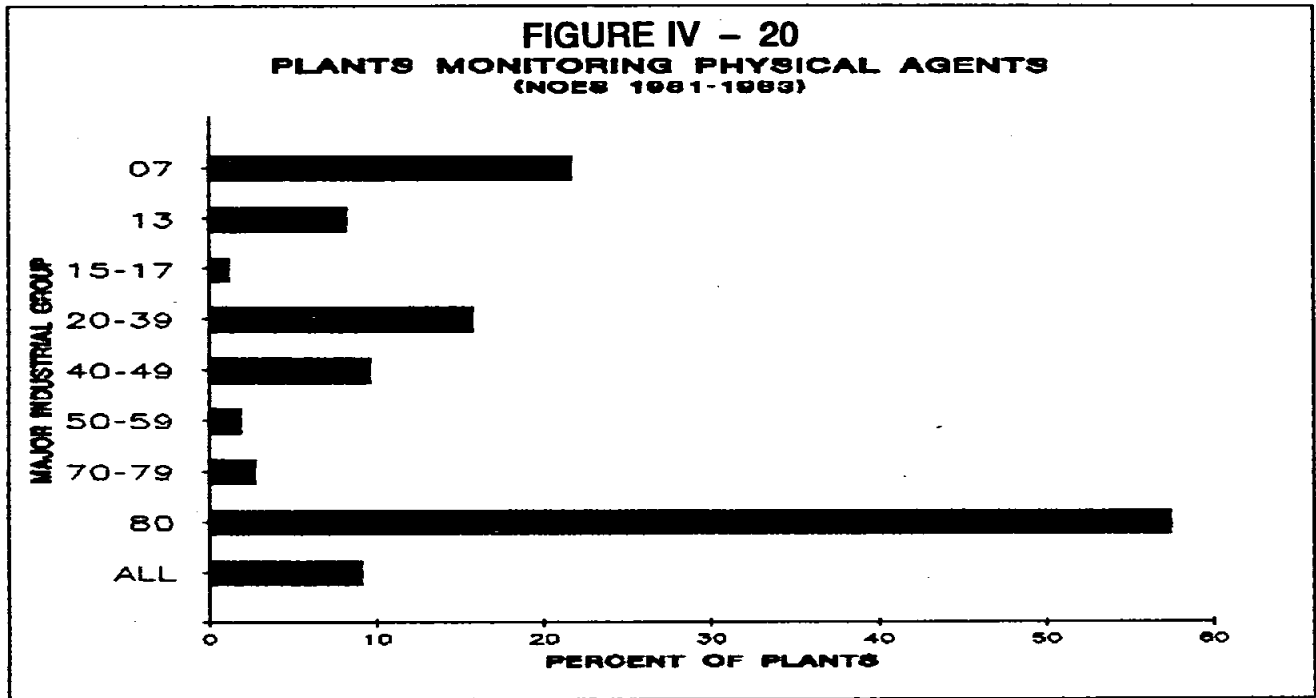
(2) Response 32.2, sub-items 1 to 6 - regular monitoring of specific physical agents

The estimates of the number and proportion of plants and workers in plants which regularly or periodically monitor specific physical agents are displayed in Figure IV-24 and Tables IV-21, IV-22, IV-23 and IV-24.

Figure IV-24	Proportions of physical agent monitoring by plants and workers in plants
Table IV-21	Number and percent of plants by physical agent monitored (by major industrial group)
Table IV-22	Number and percent of plants by physical agent monitored (by 2-digit SIC)
Table IV-23	Number and percent of workers in plants by physical agent monitored (by major industrial group)
Table IV-24	Number and percent of workers in plants by physical agent monitored (by 2-digit SIC)

Note: The estimates of plants and workers in plants which monitor specific physical agents shown in Tables 21-24 are not mutually self-exclusive. No attempt should be made to total numbers across the six columns of data provided.

This is because multiple responses to question 32 are possible. Therefore, the effect of adding across columns is to multiply count a single original observation, inflating the estimate(s).



NATIONAL OCCUPATIONAL EXPOSURE SURVEY (1981-1983) TABLE NO. IV-19

NUMBER AND PERCENT OF PLANTS AND EMPLOYEES IN PLANTS WHICH REGULARLY MONITOR PHYSICAL AGENTS

MAJOR GROUP	PLANTS				EMPLOYEES			
	SMALL (8-99)	MEDIUM (100-499)	LARGE (≥500)	TOTAL	SMALL (8-99)	MEDIUM (100-499)	LARGE (≥500)	TOTAL
07	1230* (637) 22.1%	...	...	1230* (637) 21.8%	17423* (9111) 16.8%	...	...	17423* (9111) 15.7%
13	533* (230) 6.2%	272* (180) 26.7%	...	805* (242) 8.3%	13334* (5769) 6.4%	44654* (22314) 25.7%	...	57988* (22246) 14.0%
15-17	755* (245) .8%	501* (169) 12.1%	12* (6) 4.9%	1268 (287) 1.3%	25461* (8711) 1.2%	79721* (28017) 10.8%	38023* (20661) 16.1%	143205* (37243) 4.7%
20-39	12748 (1205) 8.3%	12942 (1253) 40.8%	4692 (243) 74.8%	30383 (1911) 15.9%	610678 (54972) 13.2%	2896196 (278566) 45.4%	7055282 (232503) 85.4%	10562156 (419240) 54.8%
40-49	4472* (1168) 8.4%	1045* (370) 17.9%	237* (85) 50.7%	5753 (1237) 9.7%	176385 (43423) 12.3%	205352* (71859) 17.8%	318737* (82133) 55.6%	700475 (125616) 22.2%
50-59	806* (601) 1.4%	443* (242) 16.7%	...	1249* (662) 2.0%	15068* (11463) 1.3%	86821* (52841) 21.2%	...	101889* (54924) 6.6%
70-79	1590* (676) 2.2%	418* (133) 17.8%	165* (110) 46.5%	2172* (726) 2.9%	34845* (15225) 2.5%	100390* (28697) 21.6%	184220* (98797) 54.3%	319454* (102148) 14.5%
80	665* (273) 23.4%	1633 (251) 75.4%	1775 (225) 86.1%	4073 (376) 57.6%	36799* (13503) 36.2%	435211 (69982) 81.4%	2612026 (295366) 86.4%	3084035 (287954) 84.3%
ALL	22799 (2056) 5.1%	17254 (1381) 34.5%	6880 (359) 72.9%	46933 (2615) 9.2%	929992 (75135) 8.4%	3848344 (304234) 39.0%	10208288 (397784) 81.9%	14986624 (538400) 44.9%

*Standard error >25% of the estimate. The estimate may be unreliable.
...No facilities observed.

FIGURE IV - 21
PLANTS MONITORING PHYSICAL AGENTS
 (NOES 1981-1983)

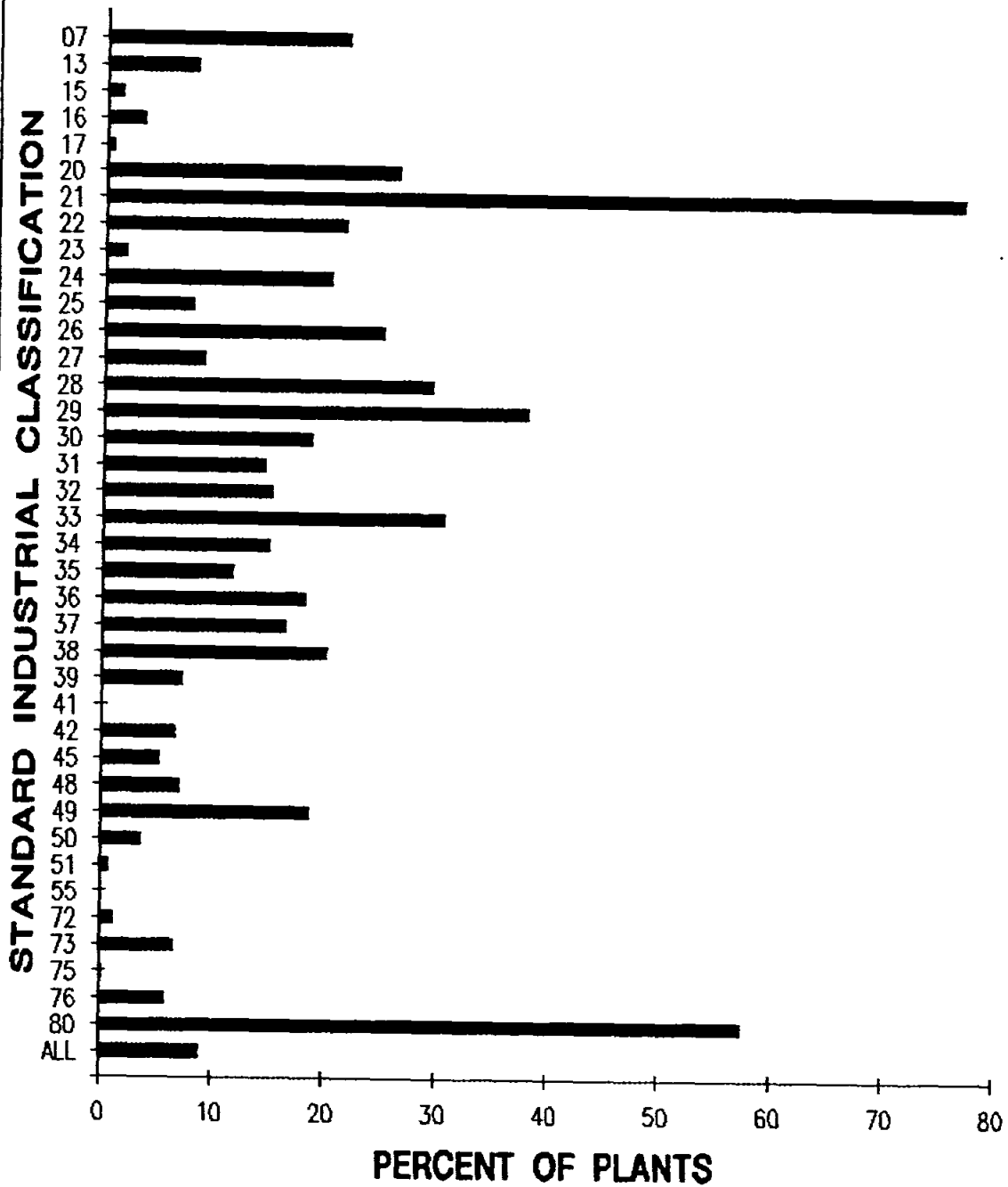


FIGURE IV - 22
WORKERS IN PLANTS MONITORING PHYSICAL AGENTS
(NOES 1981-1988)

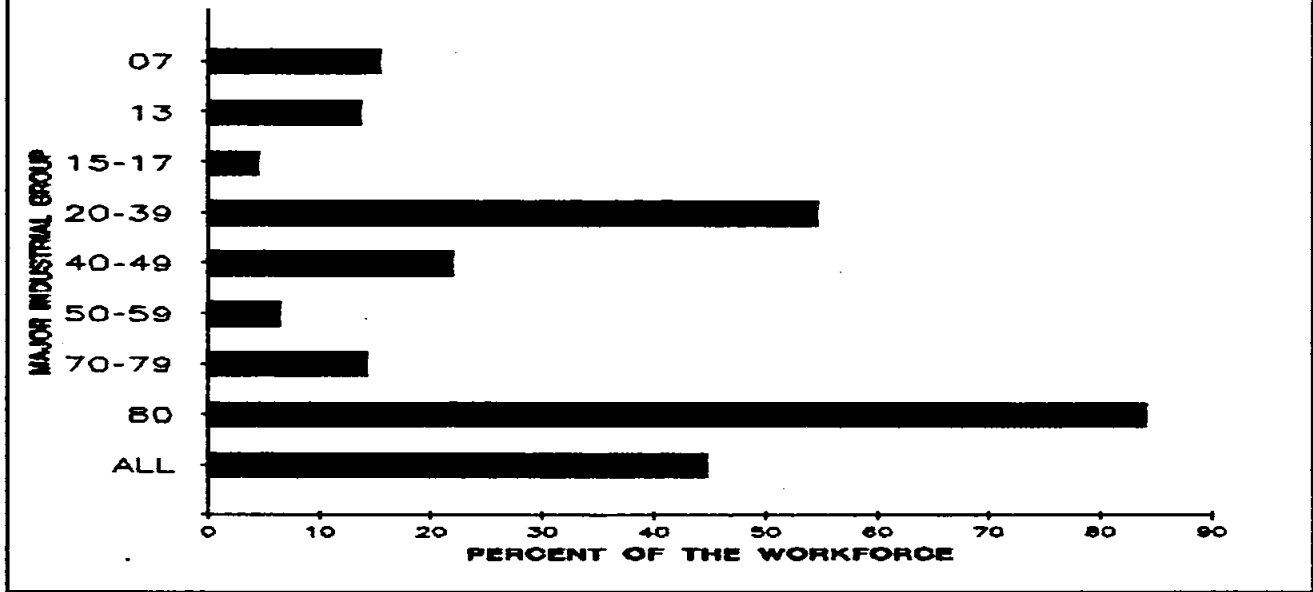
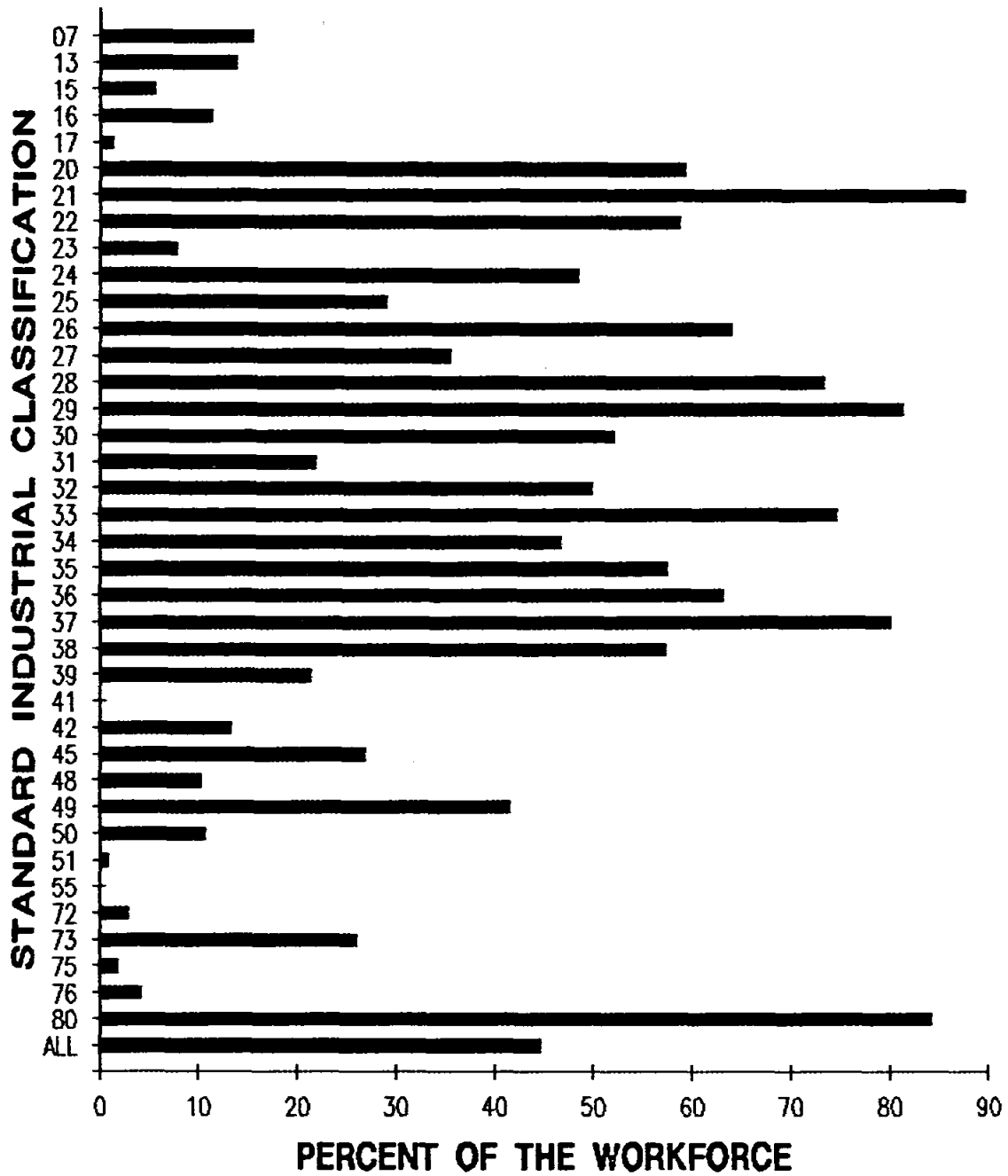


FIGURE IV - 23
WORKERS IN PLANTS MONITORING PHYSICAL AGENTS
 (NOES 1981-1983)



NUMBER AND PERCENT OF PLANTS AND EMPLOYEES IN PLANTS WHICH
REGULARLY MONITOR PHYSICAL AGENTS

SIC CODE	PLANTS			TOTAL	EMPLOYEES			TOTAL
	SMALL (8-99)	MEDIUM (100-499)	LARGE (≥500)		SMALL (8-99)	MEDIUM (100-499)	LARGE (≥500)	
07	1230* (637) 22.1%	...	...	1230* (637) 21.8%	17423* (9111) 16.8%	...	...	17423* (9111) 15.7%
13	533* (230) 6.2%	272* (180) 26.7%	...	805* (242) 8.3%	13334* (5769) 6.4%	44654* (22314) 25.7%	...	57988* (22466) 14.0%
15	337* (237) 1.4%	77* (59) 6.9%	8* (5) 6.2%	422* (239) 1.6%	9432* (7133) 1.7%	9206* (6490) 4.6%	32925* (20856) 24.4%	51562* (23568) 5.8%
16	64* (68) .6%	370* (160) 33.1%	3* (4) 3.2%	438* (166) 3.5%	4889* (5177) 1.7%	58216* (26197) 28.0%	5099* (5479) 5.0%	68203* (25781) 11.5%
17	354* (415) .6%	54* (45) 2.8%	...	408* (414) .7%	11140* (13187) .9%	12299* (10031) 3.7%	...	23439* (16160) 1.5%
20	1713* (471) 15.0%	1838 (304) 57.2%	453* (141) 81.1%	4005 (581) 26.4%	81439 (18290) 21.0%	414152 (72394) 61.5%	427416* (117583) 86.9%	923007 (124946) 59.4%
21	30* (43) 100.0%	...	54* (34) 68.0%	84* (48) 77.1%	1866* (2685) 100.0%	...	98088* (66468) 87.5%	99954* (65783) 87.7%
22	157* (122) 5.3%	629 (155) 39.6%	259* (78) 86.7%	1045 (231) 21.7%	9167* (6536) 8.6%	172759* (43419) 49.8%	239295* (88979) 91.7%	421221* (105340) 59.0%
23	49* (59) .4%	222* (94) 7.2%	47* (41) 19.4%	318* (109) 2.0%	2433* (2928) .6%	49636* (28634) 8.1%	47062* (40984) 22.6%	99131* (45184) 8.0%
24	1598 (343) 14.9%	735* (184) 64.0%	104* (74) 100.0%	2437 (379) 20.4%	72080 (15120) 23.7%	117827* (31055) 64.2%	92355* (52501) 100.0%	282261 (60627) 48.7%
25	220* (193) 5.3%	109* (95) 10.2%	101* (74) 84.9%	430* (248) 8.0%	9822* (10054) 7.1%	34448* (30995) 13.4%	107692* (61537) 87.6%	151962* (67386) 29.3%
26	404* (182) 9.8%	910* (252) 58.0%	170* (83) 79.4%	1484 (305) 25.2%	33454* (14568) 24.3%	183630* (51136) 65.2%	184036* (67815) 89.0%	401119 (90347) 64.1%
27	1087 (223) 6.0%	530* (148) 28.3%	233* (81) 73.7%	1849 (255) 9.1%	44575* (14088) 9.3%	100167* (30895) 27.8%	279162 (65076) 80.7%	423904 (71725) 35.8%
28	1180* (390) 19.1%	742 (119) 64.0%	357 (67) 94.0%	2279 (458) 29.6%	45492* (14398) 25.2%	172164 (32043) 66.0%	457262 (101384) 96.0%	674919 (117708) 73.5%
29	176* (181) 17.4%	259* (122) 88.3%	101* (42) 100.0%	536* (219) 38.1%	11069* (11377) 27.0%	52186* (19475) 82.5%	117545* (70259) 100.0%	180800* (79056) 81.5%
30	827* (330) 12.3%	574* (167) 37.4%	193* (74) 86.0%	1594* (412) 18.8%	42709* (15044) 19.0%	134824* (38752) 45.8%	216359* (74266) 92.6%	393892 (82207) 52.3%
31	88* (61) 9.5%	134* (69) 23.5%	...	222* (100) 14.6%	5104* (3905) 20.5%	33560* (17672) 24.8%	...	38665* (18745) 22.0%
32	740* (273) 8.4%	601 (137) 59.4%	184* (71) 99.9%	1525 (318) 15.3%	32412* (11294) 13.7%	126747* (32655) 60.6%	128993* (49687) 100.0%	288152 (60999) 50.1%
33	691* (222) 16.7%	832 (195) 56.7%	300 (60) 88.9%	1824 (351) 30.7%	39054* (12894) 28.2%	177413 (43558) 57.0%	584482 (91454) 94.0%	800949 (102656) 74.8%

SIC CODE	PLANTS				EMPLOYEES			
	SMALL (8-99)	MEDIUM (100-499)	LARGE (>500)	TOTAL	SMALL (8-99)	MEDIUM (100-499)	LARGE (>500)	TOTAL
34	1521 (297) 8.2%	1501 (182) 48.1%	288* (92) 83.1%	3310 (344) 15.1%	78995 (15676) 14.2%	336822 (35362) 56.4%	290079* (117511) 82.6%	705896 (129176) 47.0%
35	1168* (320) 5.2%	1389 (150) 40.8%	632 (93) 80.6%	3189 (356) 11.9%	46710 (10669) 7.7%	332411 (31817) 50.3%	991388 (160523) 89.1%	1370509 (166245) 57.6%
36	445* (201) 6.3%	941 (152) 35.1%	552 (101) 70.1%	1938 (260) 18.3%	22650* (10101) 9.8%	245478 (38335) 44.4%	977439 (150914) 82.7%	1245567 (159873) 63.4%
37	142* (118) 3.6%	454* (117) 38.1%	331 (80) 79.7%	927 (215) 16.6%	8955* (7379) 7.1%	87639* (24812) 36.6%	1413134 (231121) 93.3%	1509728 (234493) 80.3%
38	296* (165) 11.0%	212* (101) 22.2%	314* (119) 75.5%	823 (187) 20.3%	11311* (6085) 10.8%	47591* (25906) 24.5%	378030* (126472) 82.1%	436932* (126191) 57.5%
39	218* (155) 3.3%	328* (679) 41.1%	20* (17) 6.0%	566* (695) 7.4%	11380* (8305) 6.9%	76742* (162766) 51.4%	25466* (19911) 12.2%	113588* (159081) 21.6%
41	...	...	...	...	...	...	...	...
42	1373* (519) 6.9%	55* (43) 3.7%	47* (36) 56.9%	1475* (512) 6.8%	48378* (15735) 9.9%	10205* (7195) 3.9%	52349* (44163) 70.0%	110932* (42839) 13.5%
45	86* (129) 2.7%	75* (75) 12.8%	51* (27) 35.0%	213* (152) 5.4%	4833* (7238) 6.2%	7769* (7769) 7.1%	109226* (58968) 41.3%	121828* (58401) 27.0%
48	1101* (773) 7.5%	5* (5) .6%	19* (16) 56.8%	1125* (771) 7.2%	32454* (19013) 7.6%	1043* (945) .6%	37029* (29526) 52.8%	70527* (35024) 10.5%
49	965* (477) 11.8%	838* (314) 45.0%	120* (90) 69.2%	1923* (636) 18.8%	64914* (36237) 24.1%	165669* (60478) 38.9%	120133* (61318) 82.0%	350716* (102759) 41.7%
50	733* (594) 2.4%	443* (242) 24.6%	...	1176* (654) 3.7%	13172* (11292) 2.1%	86821* (52841) 30.7%	...	99993* (54801) 10.9%
51	73* (66) .8%	...	...	73* (66) .8%	1896* (1708) 1.0%	...	...	1896* (1708) .9%
55	...	...	...	...	...	...	...	...
72	188* (220) .9%	80* (80) 11.9%	...	268* (235) 1.3%	5259* (6173) 1.4%	8821* (8829) 10.7%	...	14080* (10828) 3.0%
73	805* (370) 4.9%	279* (102) 18.7%	165* (110) 48.3%	1249* (409) 6.8%	20913* (8150) 5.0%	83331* (27890) 23.8%	184220* (98797) 56.0%	288464* (98713) 26.2%
75	...	59* (60) 99.7%	...	59* (60) .2%	...	8238* (8380) 100.0%	...	8238* (8380) 2.0%
76	597* (523) 6.1%	...	...	597* (523) 6.0%	8672* (8395) 4.9%	...	...	8672* (8395) 4.3%
80	665* (273) 23.4%	1633 (251) 75.4%	1775 (225) 86.1%	4073 (376) 57.6%	36799* (13503) 36.2%	435211 (69982) 81.4%	2612026 (295366) 86.4%	3084035 (287954) 84.3%
A11	21854 (1861) 4.9%	17205 (1103) 34.7%	6880 (362) 73.0%	45939 (2229) 9.1%	904186 (73514) 8.2%	3834196 (257242) 39.2%	10208288 (386111) 81.9%	14946670 (472785) 44.9%

*Standard error >25% of the estimate. The estimate may be unreliable.
...No facilities observed.

NATIONAL OCCUPATIONAL EXPOSURE SURVEY (1981-1983) TABLE NO. IV-21

NUMBER AND PERCENT OF PLANTS BY PHYSICAL AGENT MONITORED

MAJOR GROUP	HEAT	VIBRATION	RADIATION	NOISE	MAGNETIC FIELDS	OTHER AGENTS
07	...	...	1230* (637) 21.8%	...	...	...
13	174* (173) 1.8%	...	533* (230) 5.5%	272* (180) 2.8%	...	...
15-17	272* (222) .3%	88* (65) .1%	316* (409) .3%	1185 (276) 1.2%	...	64* (68) .1%
20-39	4255 (563) 2.2%	1443 (326) .8%	3514 (383) 1.8%	28414 (1896) 14.9%	292* (90) .2%	753 (162) .4%
40-49	1131* (421) 1.9%	737* (419) 1.2%	941* (444) 1.6%	4816 (1152) 8.1%	726* (275) 1.2%	64* (46) .1%
50-59	405* (406) .7%	20* (19) .0%	101* (90) .2%	1249* (662) 2.0%	...	...
70-79	683* (515) .9%	3* (3) .0%	1127* (392) 1.5%	1064* (439) 1.4%	10* (8) .0%	157* (110) .2%
80	671 (140) 9.5%	214* (100) 3.0%	3999 (374) 56.6%	506 (125) 7.2%	191* (91) 2.7%	263* (96) 3.7%
ALL	7590 (1012) 1.5%	2505 (545) .5%	11761 (1128) 2.3%	37506 (2382) 7.4%	1219 (304) .2%	1302 (233) .3%

*Standard error >25% of the estimate. The estimate may be unreliable.
 ...No facilities observed.

NUMBER AND PERCENT OF PLANTS BY PHYSICAL AGENT MONITORED

SIC CODE	HEAT	VIBRATION	RADIATION	NOISE	MAGNETIC FIELDS	OTHER AGENTS
07	...	...	1230* (637) 21.8%	...	...	...
13	174* (173) 1.8%	...	533* (230) 5.5%	272* (180) 2.8%	...	...
15	233* (215) .9%	...	19* (14) .1%	403* (237) 1.5%	...	...
16	39* (39) .3%	39* (39) .3%	...	374* (159) 3.0%	...	64* (68) .5%
17	...	48* (59) .1%	298* (410) .5%	408* (414) .7%	...	...
20	934* (361) 6.1%	148* (99) 1.0%	143 (33) .9%	3666 (581) 24.1%	...	98* (54) .6%
21	7* (11) 6.8%	7* (11) 6.8%	11* (11) 9.8%	84* (48) 77.1%	7* (11) 6.8%	...
22	248* (80) 5.2%	54* (47) 1.1%	46* (44) 1.0%	1045 (231) 21.7%	54* (47) 1.1%	126* (58) 2.6%
23	32* (34) .2%	...	...	318* (109) 2.0%	...	...
24	70* (72) .6%	119* (102) 1.0%	111* (72) .9%	2437 (379) 20.4%	...	9* (8) .1%
25	15* (29) .3%	15* (29) .3%	...	430* (248) 8.0%	...	...
26	115* (91) 2.0%	92* (66) 1.6%	101* (68) 1.7%	1451 (298) 24.6%	...	67* (55) 1.1%
27	389* (230) 1.9%	15* (26) .1%	80* (49) .4%	1528 (321) 7.5%	...	26* (25) .1%
28	214* (93) 2.8%	58* (42) .8%	378 (85) 4.9%	2266 (459) 29.4%	59* (42) .8%	7* (8) .1%
29	159* (53) 11.3%	130* (50) 9.3%	168* (58) 12.0%	506* (222) 36.0%	...	...
30	106* (62) 1.2%	50* (60) .6%	262* (111) 3.1%	1533* (395) 18.1%	3* (2) .0%	...
31	38* (46) 2.5%	...	...	184* (85) 12.0%	...	...
32	217* (111) 2.2%	60* (37) .6%	148* (108) 1.5%	1474 (298) 14.7%	...	6* (12) .1%
33	315* (136) 5.3%	76* (48) 1.3%	281* (95) 4.7%	1824 (351) 30.7%	28* (28) .5%	31 (8) .5%

SIC CODE	HEAT	VIBRATION	RADIATION	NOISE	MAGNETIC FIELDS	OTHER AGENTS
34	372* (172) 1.7%	285* (142) 1.3%	383* (141) 1.7%	3089 (332) 14.1%	47* (42) .2%	60* (44) .3%
35	346* (131) 1.3%	104* (61) .4%	334* (173) 1.2%	2764 (371) 10.3%	13* (11) .0%	205* (83) .8%
36	433* (224) 4.1%	179* (96) 1.7%	520* (165) 4.9%	1699 (264) 16.1%	53* (31) .5%	75* (103) .7%
37	34* (10) .6%	20* (7) .4%	259* (85) 4.6%	876 (209) 15.7%	24* (14) .4%	23* (6) .4%
38	188* (104) 4.6%	...	272* (120) 6.7%	693 (167) 17.1%	3* (3) .1%	10* (12) .2%
39	22* (58) .3%	32* (56) .4%	17* (47) .2%	549* (681) 7.1%	...	10* (10) .1%
41	...	...	...	...	...	...
42	164* (140) .8%	...	...	1192* (578) 5.5%	144* (149) .7%	25* (26) .1%
45	...	...	213* (152) 5.4%	127* (82) 3.2%	...	...
48	366* (280) 2.3%	350* (279) 2.2%	110* (105) .7%	1125* (771) 7.2%	90* (99) .6%	...
49	492* (393) 4.8%	155* (112) 1.5%	618* (387) 6.0%	1394* (453) 13.6%	492* (393) 4.8%	38* (35) .4%
50	405* (406) 1.3%	20* (19) .1%	101* (90) .3%	1176* (654) 3.7%	...	...
51	...	...	...	73* (66) .8%	...	...
55	...	...	...	...	...	...
72	188* (220) .9%	...	...	80* (80) .4%	...	...
73	205* (90) 1.1%	3* (3) .0%	829* (241) 4.5%	916* (425) 5.0%	10* (8) .1%	157* (110) .9%
75	...	...	...	59* (60) .2%	...	...
76	290* (417) 2.9%	...	298* (298) 3.0%	9* (8) .1%	...	...
80	671 (140) 9.5%	214* (100) 3.0%	3999 (374) 56.6%	506 (125) 7.2%	191* (91) 2.7%	263* (96) 3.7%
ALL	7503 (1063) 1.5%	2273 (436) .4%	11761 (962) 2.3%	36550 (2255) 7.2%	1219* (328) .2%	1302 (242) .3%

*Standard error >25% of the estimate. The estimate may be unreliable.
 ...No facilities observed.

NATIONAL OCCUPATIONAL EXPOSURE SURVEY (1981-1983) TABLE NO. IV-23

NUMBER AND PERCENT OF WORKERS IN PLANTS BY PHYSICAL AGENT MONITORED

MAJOR GROUP	HEAT	VIBRATION	RADIATION	NOISE	MAGNETIC FIELDS	OTHER AGENTS
07	...	...	17423* (9111) 15.7%	...	...	...
13	19817* (19716) 4.8%	...	13334* (5769) 3.2%	44654* (22314) 10.8%	...	...
15-17	12938* (9230) .4%	6555* (5439) .2%	25394* (16817) .8%	122443* (38484) 4.0%	...	4889* (5177) .2%
20-39	2076687 (265252) 10.8%	697046 (119565) 3.6%	3933971 (305293) 20.4%	10008059 (356855) 52.0%	565780 (56950) 2.9%	1061273 (154132) 5.5%
40-49	140058* (39247) 4.4%	77554* (53108) 2.5%	323430* (91666) 10.2%	582555 (110445) 18.4%	64190* (30510) 2.0%	36637* (26733) 1.2%
50-59	10997* (7613) .7%	6376* (6191) .4%	15106* (13472) 1.0%	101889* (54924) 6.6%	...	...
70-79	114972* (43239) 5.2%	21638* (23154) 1.0%	265771* (98801) 12.1%	240170* (88301) 10.9%	49798* (35972) 2.3%	107287* (75884) 4.9%
80	609573 (103949) 16.7%	205527* (83188) 5.6%	3056437 (292369) 83.5%	648505 (143105) 17.7%	195951* (83851) 5.4%	192331* (73661) 5.3%
ALL	2985041 (310026) 8.9%	1014696 (156973) 3.0%	7650865 (444329) 22.9%	11748275 (415711) 35.2%	875719 (111800) 2.6%	1402417 (188898) 4.2%

*Standard error >25% of the estimate. The estimate may be unreliable.
 ...No facilities observed.

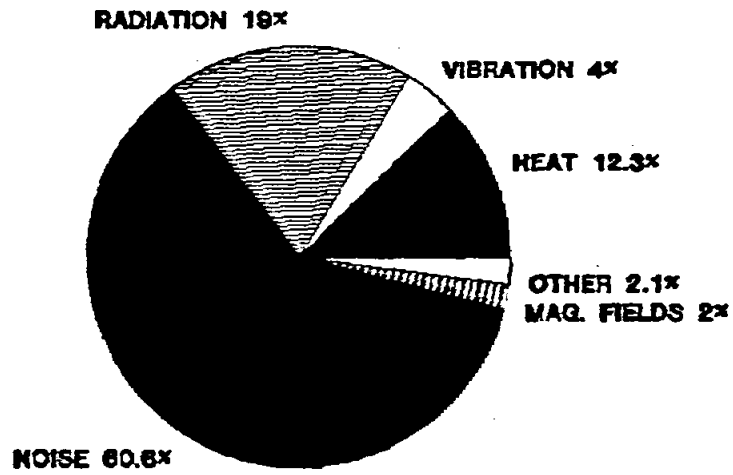
NUMBER AND PERCENT OF WORKERS IN PLANTS BY PHYSICAL AGENT MONITORED

SIC CODE	HEAT	VIBRATION	RADIATION	NOISE	MAGNETIC FIELDS	OTHER AGENTS
07	---	---	17423* (9111) 15.7%	---	---	---
13	19817* (19716) 4.8%	---	13334* (5769) 3.2%	44654* (22314) 10.8%	---	---
15	7445* (6875) .8%	---	15873* (11634) 1.8%	35689* (23673) 4.0%	---	---
16	5493* (5493) .9%	5493* (5493) .9%	---	63314* (25893) 10.7%	---	4889* (5177) .8%
17	---	1062* (1293) .1%	9520* (13128) .6%	23439* (16160) 1.5%	---	---
20	133130* (43714) 8.6%	31005* (19299) 2.0%	82296* (31061) 5.3%	907424* (128294) 58.4%	---	43836* (24254) 2.8%
21	16019* (23625) 14.1%	16019* (23625) 14.1%	41763* (36135) 36.6%	99954* (65783) 87.7%	16019* (23625) 14.1%	---
22	108401* (37867) 15.2%	33112* (28660) 4.6%	11037* (9274) 1.5%	421221* (105340) 59.0%	33112* (28660) 4.6%	109455* (55815) 15.3%
23	10334* (11130) .8%	---	---	99131* (45184) 8.0%	---	---
24	35932* (25468) 6.2%	15000* (12132) 2.6%	9413* (5384) 1.6%	282261 (60627) 48.7%	---	2141* (1963) .4%
25	4952* (9618) 1.0%	4952* (9618) 1.0%	---	151962* (67386) 29.3%	---	---
26	106574* (41935) 17.0%	25087* (23507) 4.0%	86424* (61434) 13.8%	396162 (89360) 63.3%	---	81466* (61087) 13.0%
27	40074* (20207) 3.4%	7994* (14102) .7%	80861* (45220) 6.8%	400070 (68249) 33.8%	---	39323* (23208) 3.3%
28	176513* (60276) 19.2%	34640* (21465) 3.8%	331510* (62749) 36.1%	674763 (117689) 73.5%	43515* (40467) 4.7%	13295* (16230) 1.4%
29	53422* (22484) 24.1%	50379* (22450) 22.7%	110008* (69038) 49.6%	177757* (80033) 80.1%	---	---
30	126817* (63999) 16.8%	32576* (26261) 4.3%	184025* (73088) 24.4%	379954 (83543) 50.4%	11738* (10209) 1.6%	---
31	2917* (3488) 1.7%	---	---	35748* (18089) 20.3%	---	---
32	68887* (33510) 12.0%	33001* (22291) 5.7%	53446* (35620) 9.3%	286305 (60852) 49.8%	---	1581* (3185) .3%
33	242634* (86110) 22.7%	70377* (51024) 6.6%	448612 (65032) 41.9%	800949 (102656) 74.8%	5581* (5581) .5%	132292* (55435) 12.4%

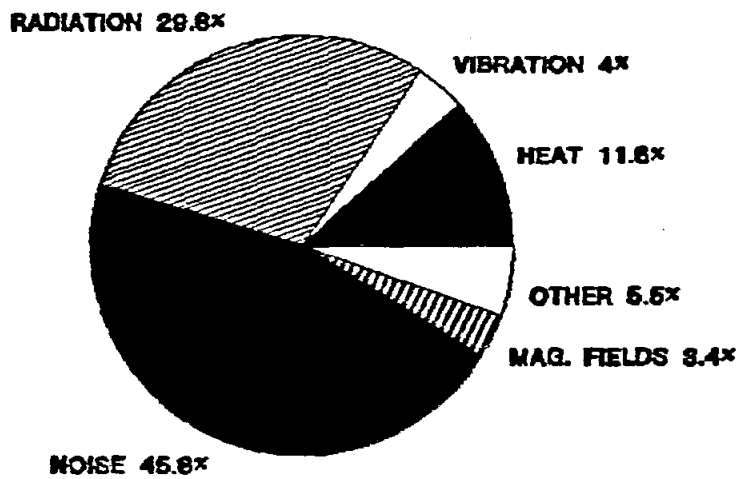
SIC CODE	HEAT	VIBRATION	RADIATION	NOISE	MAGNETIC FIELDS	OTHER AGENTS
34	71388* (43093) 4.8%	52332* (29921) 3.5%	170464* (85366) 11.3%	661723* (128236) 44.0%	11825* (10380) .8%	29915* (26619) 2.0%
35	211289* (58223) 8.9%	39813* (21867) 1.7%	307294 (58102) 12.9%	1305127 (153257) 54.8%	78209* (62789) 3.3%	228500 (40801) 9.6%
36	299047* (163161) 15.2%	128854* (52001) 6.6%	733270 (154977) 37.3%	1114163 (160893) 56.7%	140019* (60530) 7.1%	190136* (105118) 9.7%
37	191376* (56365) 10.2%	96819* (48782) 5.1%	1032185 (225368) 54.9%	1299066 (184904) 69.1%	189476* (75279) 10.1%	160759* (64621) 8.6%
38	171359* (119789) 22.6%	...	246571* (108497) 32.5%	405526* (123186) 53.4%	36287* (40569) 4.8%	9107* (11012) 1.2%
39	5623* (14998) 1.1%	25089* (20178) 4.8%	4792* (13146) .9%	108795* (153546) 20.7%	...	19466* (18968) 3.7%
41	...	...	...	...	...	...
42	24555* (21241) 3.0%	...	...	102314* (42788) 12.5%	4175* (4321) .5%	20111* (20857) 2.4%
45	...	...	121828* (58401) 27.0%	116995* (58997) 25.9%	...	...
48	40115* (26080) 6.0%	16312* (12249) 2.4%	44257* (32451) 6.6%	70527* (35024) 10.5%	7228* (7928) 1.1%	...
49	52788* (33287) 6.3%	53117* (47936) 6.3%	157345* (58658) 18.7%	248182* (84667) 29.5%	52788* (33287) 6.3%	16526* (15205) 2.0%
50	10997* (7613) 1.2%	6376* (6191) .7%	15106* (13472) 1.7%	99993* (54801) 10.9%	...	...
51	...	...	...	1896* (1708) .9%	...	...
55	...	...	...	...	...	...
72	5259* (6173) 1.1%	...	...	8821* (8829) 1.9%	...	...
73	104202* (40325) 9.5%	21638* (23154) 2.0%	263093* (98520) 23.9%	222628* (86248) 20.2%	49798* (35972) 4.5%	107287* (75884) 9.8%
75	...	...	...	8238* (8380) 2.0%	...	...
76	5511* (7915) 2.7%	...	2678* (2679) 1.3%	483* (423) .2%	...	...
80	609573 (103949) 16.7%	205527* (83188) 5.6%	3056437 (292369) 83.5%	648505 (143105) 17.7%	195951* (83851) 5.4%	192331* (73661) 5.3%
ALL	2968959 (308765) 8.9%	1006571 (134964) 3.0%	7650865 (381193) 23.0%	11710255 (475091) 35.2%	875719 (141190) 2.6%	1402417 (207451) 4.2%

*Standard error >25% of the estimate. The estimate may be unreliable.
 ...No facilities observed.

FIGURE IV - 24
PROPORTIONS OF PHYSICAL AGENT
MONITORING BY PLANTS AND WORKERS IN PLANTS
(NOES 1981-1983)



PLANTS



WORKERS

NOES QUESTIONNAIRE ITEM NO. 33
Retention of Records From a Physical Agent Monitoring Program

Intent

The intent of this question was to determine the length of time that facilities retain the records from programs to monitor physical agents in the workplace.

This item was displayed on the questionnaire as:

33. How long do you retain the records of the monitoring program?

-- Years (If "forever" code "99")
(If "unknown" code "UK")

Notes

This question was asked only of those respondents who indicated that a program to monitor physical agents was in existence in the surveyed facility.

Definitions, inclusions, and exclusions pertaining to physical agent monitoring are found in the Notes text of questionnaire item 32.

Three classes of responses to question 33 were possible. In analyzing these responses, it was decided that an unknown (coded UK) duration was of no analytical value. Therefore, analysis of the two remaining classes of responses was performed. A "99" or "forever" response did not allow for specificity, so analysis was performed to estimate the number of plants, and workers in those plants, where the records of physical agent monitoring were kept "forever". Approximately 6% of all plants, employing about 32% of the workforce, fall into this category.

The remaining respondents gave a specific ("non-forever") value which could be analyzed. These responses were averaged across the estimated population of plants and workers.

Analysis

Two analyses of the responses to question 33 are presented.

- (1) Response 33 - "Non-forever" or average years of retention for the records from physical agent monitoring programs

The estimated average ("non-forever") length of time that records from physical agent monitoring programs are retained are displayed in Figures IV-25 and IV-26, and Tables IV-25 and IV-26.

Figure IV-25	Average number of "non-forever" years plants keep physical agent monitoring records (by major industrial group)
Figure IV-26	Average number of "non-forever" years plants keep physical agent monitoring records (by 2-digit SIC)

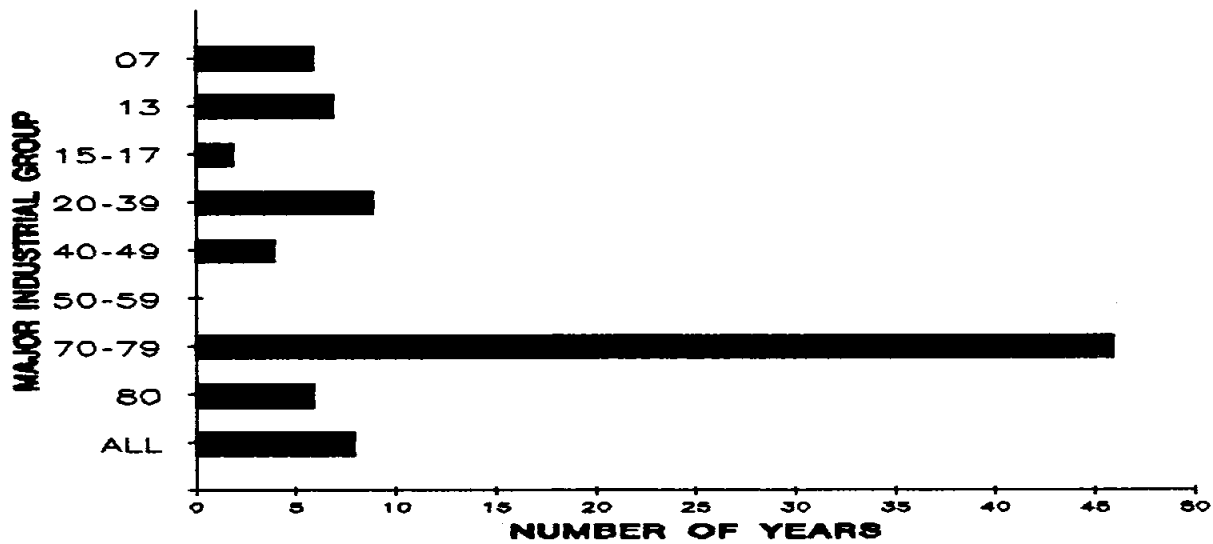
Table IV-25	Average number of years facilities keep physical agent monitoring records among plants not reporting "forever" (by major industrial group)
Table IV-26	Average number of years facilities keep physical agent monitoring records among plants not reporting "forever" (by 2-digit SIC)

(2) Response 33 - Physical agent monitoring records kept "forever"

The estimates of the plants which keep physical agent monitoring records "forever", and workers in those plants (by number and proportion of the total) are displayed in Figure IV-27 and IV-28, and Tables IV-27 and IV-28.

Figure IV-27	Proportion of plants which keep physical agent monitoring records "forever" (by major industrial group)
Figure IV-28	Proportion of plants which keep physical agent monitoring records "forever" (by 2-digit SIC)
Table IV-27	Number and percent of plants and employees in plants which keep physical agent monitoring records "forever" (by major industrial group)
Table IV-28	Number and percent of plants and employees in plants which keep physical agent monitoring records "forever" (by 2-digit SIC)

FIGURE IV - 25
AVERAGE NUMBER OF "NON-FOREVER" YEARS PLANTS
KEEP PHYSICAL AGENT MONITORING RECORDS
(NOES 1981-1983)



NATIONAL OCCUPATIONAL EXPOSURE SURVEY (1981-1983) TABLE NO. IV-25

AVERAGE NUMBER OF YEARS FACILITIES KEEP PHYSICAL AGENT MONITORING RECORDS AMONG PLANTS NOT REPORTING "FOREVER"

MAJOR GROUP	PLANT SIZE			ALL
	SMALL (8-99)	MEDIUM (100-499)	LARGE (>500)	
07	6* (4)	...	...	6* (4)
13	7* (3)	...	...	7* (3)
15-17	4* (3)	<1	...	2* (2)
20-39	6* (2)	8 (2)	19 (3)	9 (1)
40-49	2* (1)	6* (4)	21* (13)	4* (3)
50-59	...	5* (3)	...	<1
70-79	...	46* (35)	...	46* (35)
80	3* (2)	4 (1)	9 (2)	6 (1)
ALL	5 (1)	8 (2)	15 (2)	8 (1)

*Standard error >25% of the estimate. The estimate may be unreliable.
 ...No facilities observed.

AVERAGE NUMBER OF YEARS FACILITIES KEEP PHYSICAL AGENT MONITORING RECORDS AMONG PLANTS NOT REPORTING "FOREVER"

SIC CODE	PLANT SIZE			ALL
	SMALL (8-99)	MEDIUM (100-499)	LARGE (≥500)	
07	6* (4)	...	...	6* (4)
13	7* (3)	...	...	7* (3)
15	...	1* (2)	...	<1
16	...	...	...	...
17	5* (4)	...	...	4* (3)
20	13* (7)	8* (2)	19* (14)	10* (3)
21	...	...	...	...
22	30* (22)	11* (9)	28 (4)	19* (8)
23	...	...	...	...
24	1* (≥.25)	2* (2)	...	1* (2)
25	...	...	10* (7)	10* (7)
26	...	3* (1)	2* (1)	3* (1)
27	...	3* (2)	15* (9)	7* (6)
28	...	5* (3)	42* (19)	21* (7)
29	...	14* (13)	5 (<.5)	13* (9)
30	3* (8)	8* (9)	15* (8)	6* (6)
31	4* (3)	...	...	4* (3)
32	2* (1)	7* (4)	...	4* (2)
33	37* (18)	12* (9)	11* (16)	27* (11)

SIC CODE	PLANT SIZE			
	SMALL (8-99)	MEDIUM (100-499)	LARGE (≥500)	ALL
34	1* (1)	8* (5)	5* (2)	4* (1)
35	5* (3)	5* (3)	17* (6)	6* (2)
36	6* (7)	20* (11)	16* (9)	13* (6)
37	...	6* (8)	24 (5)	12* (7)
38	7* (5)	29* (18)	7* (3)	10* (5)
39	...	2* (1)	30* (21)	5* (4)
41	...	...	...	...
42	3* (2)	...	10* (7)	3* (4)
45	...	...	...	...
48	1* (1)	...	5* (4)	2* (2)
49	5* (4)	...	30* (21)	10* (12)
50	...	5* (3)	...	<1
51	...	...	...	...
55	...	...	...	...
72	...	...	...	...
73	...	46* (35)	...	46* (35)
75	...	...	...	...
76	...	...	...	...
80	3* (2)	4 (1)	9 (2)	6 (1)
ALL	5 (1)	8 (2)	15 (2)	8 (1)

*Standard error >25% of the estimate. The estimate may be unreliable.
 ...No facilities observed.

FIGURE IV - 26

AVERAGE NUMBER OF "NON-FOREVER" YEARS PLANTS
KEEP PHYSICAL AGENT MONITORING RECORDS

(NOES 1981-1983)

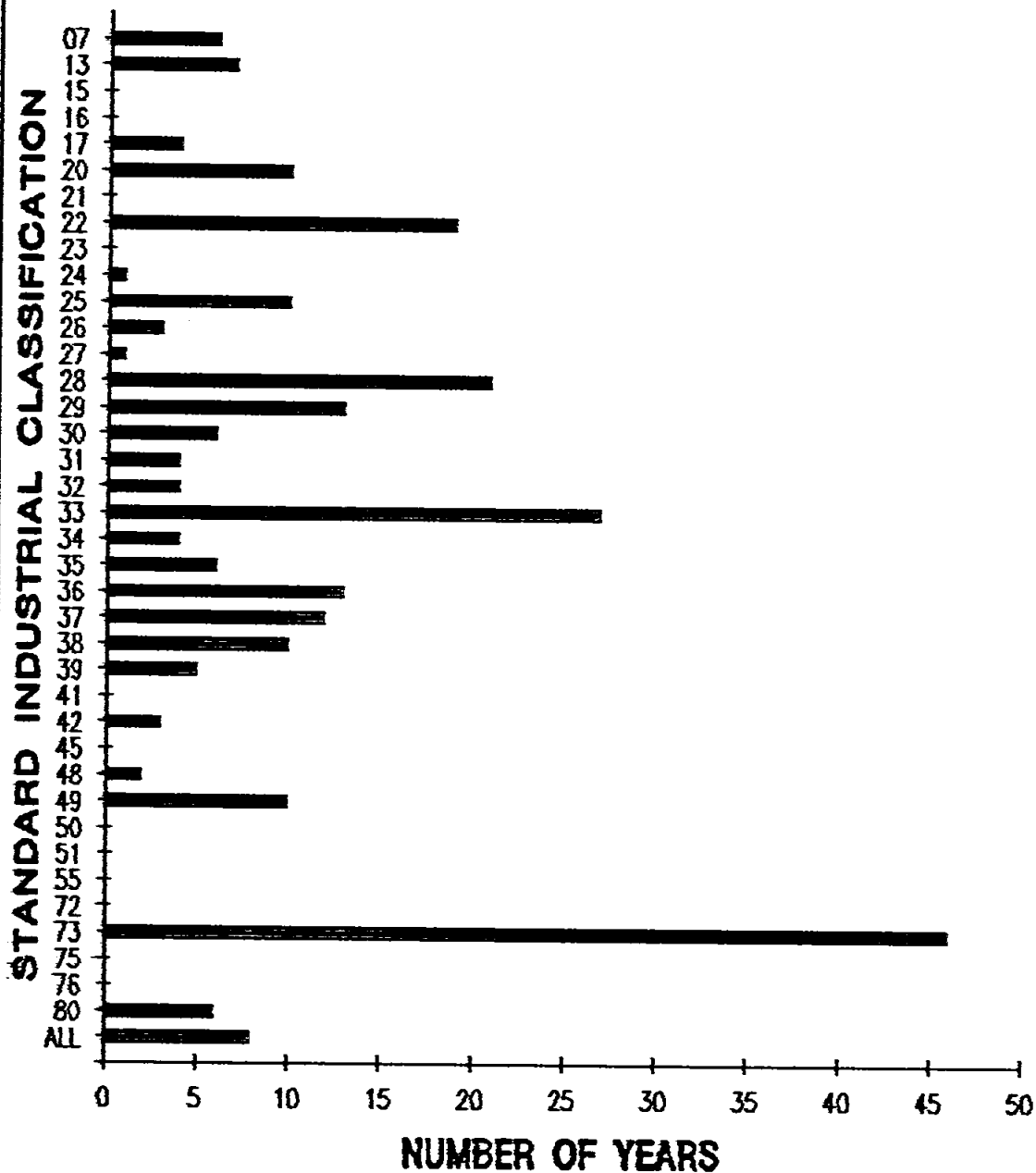
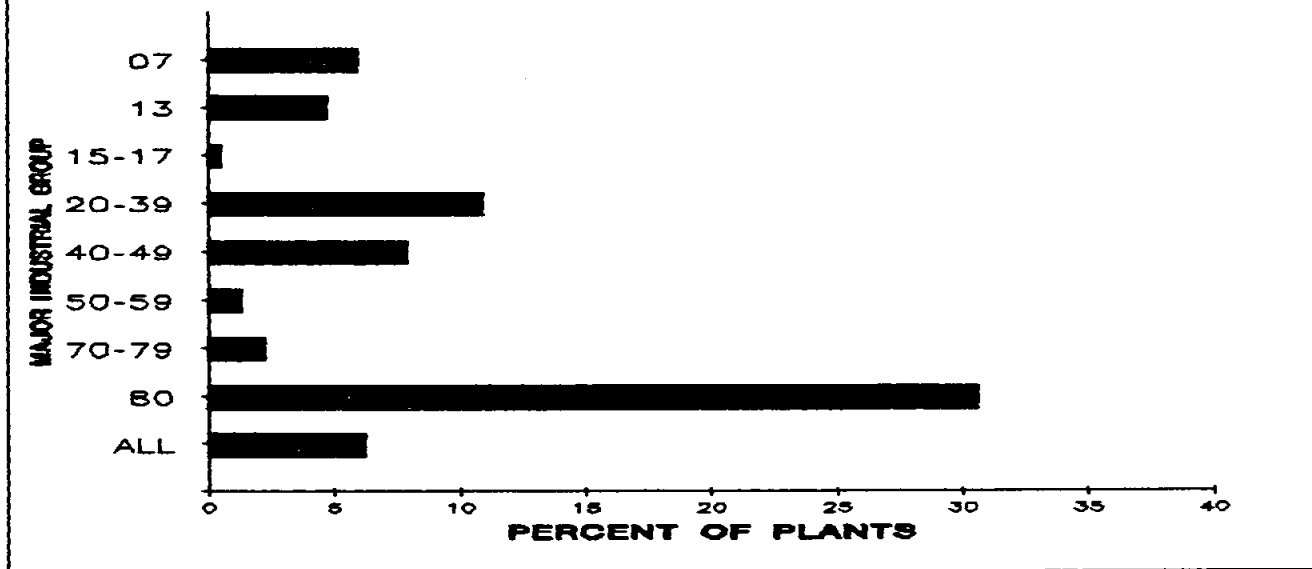


FIGURE IV - 27
PROPORTION OF PLANTS WHICH KEEP PHYSICAL
AGENT MONITORING RECORDS "FOREVER"
(NOES 1981-1983)



NATIONAL OCCUPATIONAL EXPOSURE SURVEY (1981-1983) TABLE NO. IV-27

NUMBER AND PERCENT OF PLANTS AND EMPLOYEES IN PLANTS WHICH
 KEEP PHYSICAL AGENT MONITORING RECORDS "FOREVER"

MAJOR GROUP	PLANTS				EMPLOYEES			
	SMALL (8-99)	MEDIUM (100-499)	LARGE (≥500)	TOTAL	SMALL (8-99)	MEDIUM (100-499)	LARGE (≥500)	TOTAL
07	339* (336) 6.1%	...	...	339* (336) 6.0%	5763* (5713) 5.6%	...	...	5763* (5713) 5.2%
13	187* (189) 2.2%	272* (180) 26.7%	...	459* (231) 4.8%	2622* (2651) 1.3%	44654* (22314) 25.7%	...	47275* (21944) 11.4%
15-17	353* (234) .4%	203* (125) 4.9%	12* (6) 4.9%	568* (260) .6%	13953* (8855) .7%	24577* (13747) 3.3%	38023* (20661) 16.1%	76554* (23382) 2.5%
20-39	8475 (1161) 5.5%	8827 (887) 27.8%	3669 (242) 58.5%	20971 (1574) 11.0%	390548 (49761) 8.5%	2038763 (216204) 32.0%	5434926 (258781) 65.8%	7864237 (403672) 40.8%
40-49	3866* (1130) 7.3%	681* (269) 11.7%	188* (77) 40.2%	4735 (1167) 8.0%	148613* (42478) 10.4%	137715* (53173) 11.9%	278176* (82455) 48.5%	564504 (105023) 17.9%
50-59	421* (420) .7%	423* (242) 8.9%	...	844* (508) 1.4%	10447* (10095) .9%	80445* (52522) 19.7%	...	90892* (54775) 5.9%
70-79	1402* (597) 1.9%	215* (89) 9.2%	141* (108) 39.9%	1758* (605) 2.3%	29585* (12208) 2.1%	62030* (20770) 13.4%	170403* (97285) 50.2%	262018* (100357) 11.9%
80	251* (135) 8.8%	918 (220) 42.4%	998 (121) 48.4%	2167 (251) 30.7%	9581* (5578) 9.4%	242844 (59590) 45.4%	1530113 (202790) 50.6%	1782538 (199784) 48.7%
ALL	15294 (1838) 3.4%	11540 (1011) 23.1%	5007 (301) 53.0%	31841 (2182) 6.3%	611112 (68415) 5.5%	2631027 (238746) 26.7%	7451642 (353245) 59.8%	10693781 (477522) 32.0%

*Standard error >25% of the estimate. The estimate may be unreliable.
 ...No facilities observed.

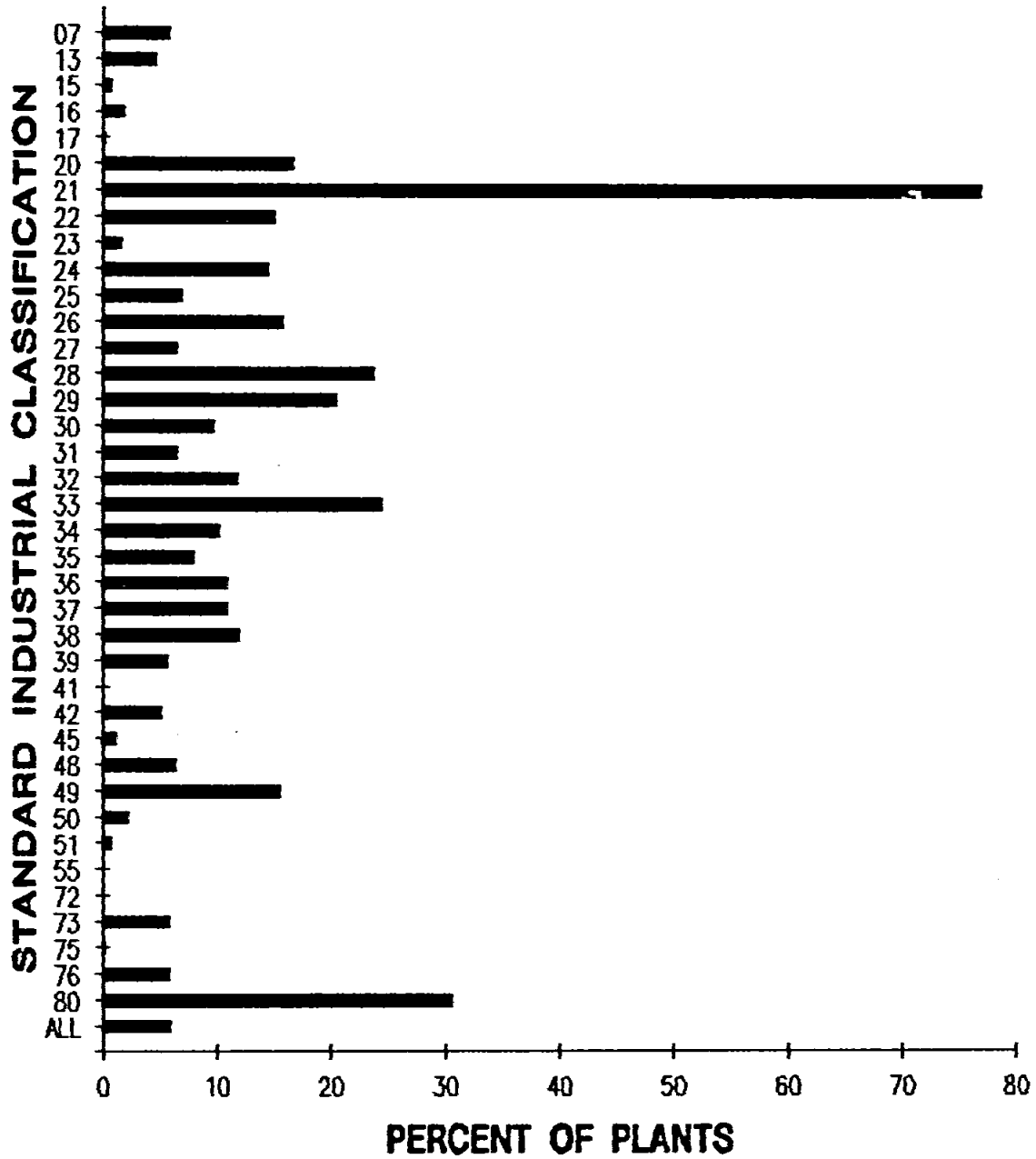
NUMBER AND PERCENT OF PLANTS AND EMPLOYEES IN PLANTS WHICH KEEP PHYSICAL AGENT MONITORING RECORDS "FOREVER"

SIC CODE	PLANTS				EMPLOYEES			
	SMALL (8-99)	MEDIUM (100-499)	LARGE (>500)	TOTAL	SMALL (8-99)	MEDIUM (100-499)	LARGE (>500)	TOTAL
07	339* (336) 6.1%	...	...	339* (336) 6.0%	5763* (5713) 5.6%	...	...	5763* (5713) 5.2%
13	187* (189) 2.2%	272* (180) 26.7%	...	459* (231) 4.8%	2622* (2651) 1.3%	44654* (22314) 25.7%	...	47275* (21944) 11.4%
15	233* (215) .9%	...	8* (5) 6.2%	241* (215) .9%	7445* (6875) 1.3%	...	32925* (20856) 24.4%	40370* (22044) 4.5%
16	64* (68) .6%	185* (126) 16.5%	3* (4) 3.2%	253* (134) 2.0%	4889* (5177) 1.7%	21339* (13700) 10.3%	5099* (5479) 5.0%	31326* (12864) 5.3%
17	56* (62) .1%	18* (26) .9%	...	74* (68) .1%	1619* (1619) .1%	3238* (4637) 1.0%	...	4857* (5083) .3%
20	1083* (389) 9.5%	1085 (201) 33.7%	379* (131) 67.8%	2547 (470) 16.8%	44599* (14212) 11.5%	259701 (58005) 38.5%	356988* (107090) 72.6%	661289 (120104) 42.6%
21	30* (43) 100.0%	...	54* (34) 68.0%	84* (48) 77.1%	1866* (2685) 100.0%	...	98088* (66468) 87.5%	99954* (65783) 87.7%
22	69* (64) 2.4%	492* (170) 31.0%	173* (80) 57.7%	734* (223) 15.2%	4952* (4303) 4.7%	143679* (49648) 41.4%	140403* (79991) 53.8%	289034* (104521) 40.5%
23	49* (59) .4%	184* (85) 5.9%	47* (41) 19.4%	280* (100) 1.8%	2433* (2928) .6%	43542* (28416) 7.1%	47062* (40984) 22.6%	93037* (43973) 7.5%
24	1078* (408) 10.1%	567* (155) 49.4%	104* (74) 100.0%	1749 (398) 14.6%	43077* (14111) 14.2%	95774* (26840) 52.2%	92355* (52501) 100.0%	231205* (63582) 39.9%
25	195* (154) 4.7%	97* (84) 9.1%	85* (74) 71.7%	317* (201) 7.1%	7554* (6683) 5.4%	30322* (26175) 11.8%	90475* (62473) 73.6%	128352* (65236) 24.8%
26	319* (153) 7.7%	458* (149) 29.2%	163* (81) 76.2%	940 (222) 15.9%	26051* (12080) 18.9%	102317* (36529) 36.4%	176090* (64679) 85.1%	304458 (73908) 48.6%
27	709* (234) 3.9%	441* (128) 23.5%	191* (73) 60.4%	1341 (320) 6.6%	26200* (11083) 5.5%	82646* (25634) 22.9%	231142* (57925) 66.9%	339987 (63951) 28.7%
28	1105* (365) 17.9%	519 (107) 44.7%	221* (65) 58.1%	1845 (444) 23.9%	41582* (13169) 23.0%	132889 (30622) 50.9%	310950* (116079) 65.3%	485421* (124801) 52.9%
29	...	203* (115) 69.3%	87* (38) 86.5%	291* (129) 20.7%	...	44393* (16813) 70.2%	77880* (33613) 66.3%	122273* (42064) 55.1%
30	370* (177) 5.5%	369* (213) 24.0%	98* (75) 43.6%	837* (297) 9.9%	19930* (9545) 8.9%	92887* (46784) 31.5%	98363* (70009) 42.1%	211180* (87230) 28.0%
31	...	101* (57) 17.8%	...	101* (57) 6.6%	...	23806* (13298) 17.6%	...	23806* (13298) 13.5%
32	501* (315) 5.7%	515* (139) 50.9%	184* (71) 99.9%	1199* (340) 12.0%	21211* (11403) 8.9%	95738 (23045) 45.8%	128993* (49687) 100.0%	245943 (51735) 42.8%
33	542* (183) 13.1%	672* (189) 45.7%	248 (60) 73.5%	1461 (314) 24.6%	31471* (12497) 22.7%	140365* (41731) 45.1%	441631 (59494) 71.1%	613467 (71440) 57.3%

SIC CODE	PLANTS				EMPLOYEES			
	SMALL (8-99)	MEDIUM (100-499)	LARGE (≥500)	TOTAL	SMALL (8-99)	MEDIUM (100-499)	LARGE (≥500)	TOTAL
34	1012 (228) 5.5%	1066 (168) 34.2%	189* (66) 54.6%	2268 (288) 10.3%	53994* (13679) 9.7%	251810 (35979) 42.2%	208113* (97850) 59.3%	513917 (103507) 34.2%
35	777* (353) 3.4%	890 (177) 26.1%	525 (92) 66.9%	2191 (366) 8.2%	29944* (10400) 4.9%	242914 (38982) 36.7%	708178 (97490) 63.6%	981036 (108290) 41.2%
36	143* (106) 2.0%	553* (153) 20.6%	474 (93) 60.2%	1169 (216) 11.1%	11622* (8727) 5.0%	128075* (36877) 23.2%	872313 (150236) 73.8%	1012010 (165028) 51.5%
37	142* (118) 3.6%	226* (96) 19.0%	248* (77) 59.6%	616* (201) 11.0%	8955* (7379) 7.1%	40808* (21197) 17.1%	1064852 (180812) 70.3%	1114616 (190738) 59.3%
38	135* (85) 5.0%	167* (98) 17.4%	190* (86) 45.7%	492* (183) 12.1%	3724* (2473) 3.6%	35721* (23650) 18.4%	271586* (106384) 59.0%	311031* (107659) 41.0%
39	218* (155) 3.3%	222* (519) 27.8%	10* (10) 3.0%	450* (533) 5.8%	11380* (8305) 6.9%	51378* (126887) 34.4%	19466* (18968) 9.3%	82223* (122438) 15.7%
41	...	...	...	...	...	...	...	...
42	1108* (497) 5.5%	...	44* (36) 53.9%	1153* (490) 5.3%	37236* (13976) 7.6%	...	50920* (44164) 68.0%	88155* (40400) 10.7%
45	...	...	51* (27) 35.0%	51* (27) 1.3%	...	...	109226* (58968) 41.3%	109226* (58968) 24.2%
48	1011* (777) 6.9%	5* (5) .6%	3* (4) 10.1%	1019* (776) 6.5%	25227* (17661) 5.9%	1043* (945) .6%	13226* (14092) 18.9%	39496* (21913) 5.9%
49	840* (465) 10.2%	676* (269) 36.3%	89* (74) 51.5%	1605* (591) 15.7%	62279* (36473) 23.1%	136672* (53007) 32.1%	104805* (55062) 71.5%	303755* (94876) 36.1%
50	348* (416) 1.1%	423* (242) 23.5%	...	771* (504) 2.4%	8552* (9990) 1.4%	80445* (52522) 28.4%	...	88996* (54640) 9.7%
51	73* (66) .8%	...	...	73* (66) .8%	1896* (1708) 1.0%	...	...	1896* (1708) .9%
55	...	...	...	...	...	...	...	...
72	...	...	...	...	...	...	...	...
73	805* (370) 4.9%	156* (62) 10.5%	141* (108) 41.4%	1103* (394) 6.0%	20913* (8150) 5.0%	53792* (18790) 15.4%	170403* (97285) 51.8%	245108* (97603) 22.3%
75	...	59* (60) 99.7%	...	59* (60) .2%	...	8238* (8380) 100.0%	...	8238* (8380) 2.0%
76	597* (523) 6.1%	...	...	597* (523) 6.0%	8672* (8395) 4.9%	...	...	8672* (8395) 4.3%
80	251* (135) 8.8%	918 (220) 42.4%	998 (121) 48.4%	2167 (251) 30.7%	9581* (5578) 9.4%	242844 (59590) 45.4%	1530113 (202790) 50.6%	1782538 (199784) 48.7%
ALL	14387 (1546) 3.2%	11540 (810) 23.3%	5007 (270) 53.1%	30934 (1739) 6.1%	587241 (61497) 5.3%	2631027 (195342) 26.9%	7451642 (312732) 59.8%	10669910 (409507) 32.1%

*Standard error >25% of the estimate. The estimate may be unreliable.
 ...No facilities observed.

FIGURE IV - 28
PROPORTION OF PLANTS WHICH KEEP PHYSICAL
AGENT MONITORING RECORDS "FOREVER"
(NOES 1981-1983)



NOES QUESTIONNAIRE ITEM NO. 34
Existence of a Program to Regularly Monitor Fumes and Gases

Intent

The intent of this question was to determine if the facility had a program to regularly or periodically monitor the environmental levels of chemical materials in fume, gas, mist, vapor or dust form.

This item was displayed on the questionnaire as:

34. Do you have a program under which you regularly or periodically monitor the presence of fumes, gases, mists, dusts, or vapors?

- 1 Yes
2 No (Skip to Question 38)

Notes

"To regularly or periodically monitor" refers to programs within the facility which were established to monitor environmental levels of chemical materials on a planned or predictable basis.

Tests using instrumentation or monitoring by outside sources are included if the intent was to protect worker health and the monitoring was performed at the request of management.

Monitoring of process conditions, irregular or one-time monitoring, or any monitoring not performed under an occupational health rationale was not included as a positive response.

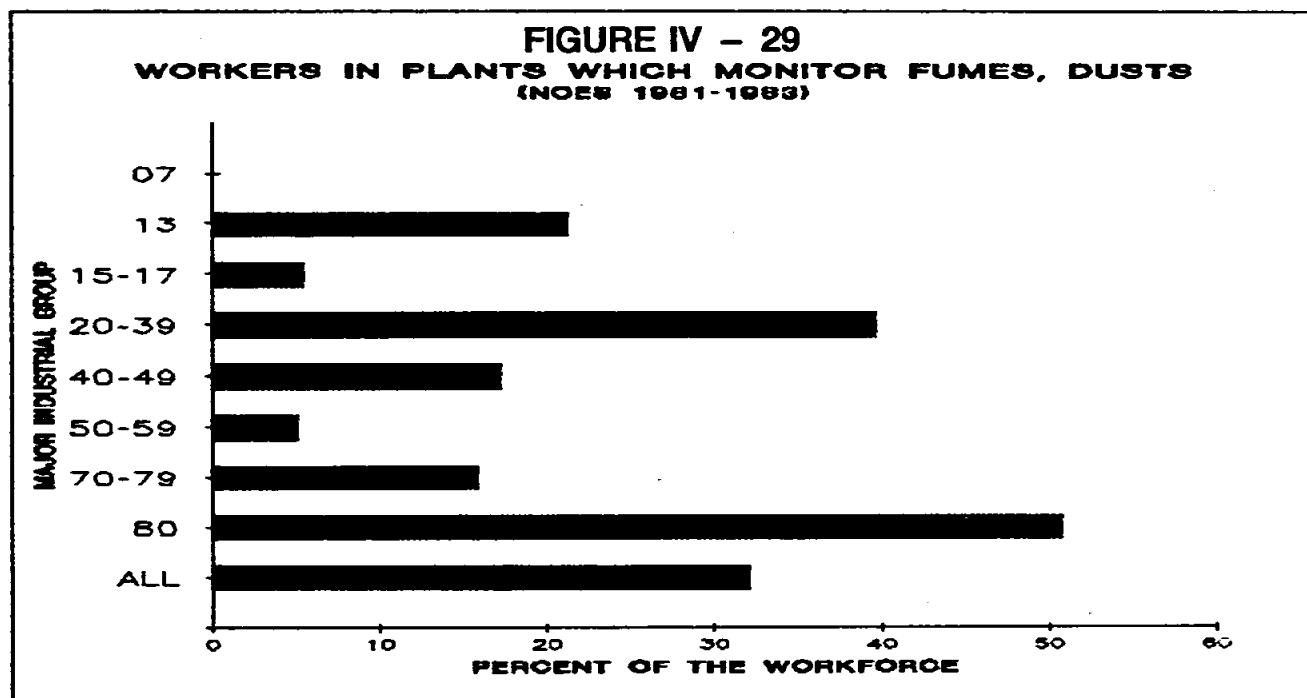
Analysis

One analysis of the responses to question 34 is presented.

Response 34.1 - Regular or periodic monitoring of chemical materials

The estimates of the plants which have established programs for the regular or periodic monitoring of the environmental levels of chemical materials in fume, gas, mist, dust or vapor form, and workers in those plants (by number and proportion of the total) are displayed in Figures IV-29, IV-30, and IV-31, and Tables IV-29 and IV-30.

Figure IV-29	Workers in plants which monitor fumes, dusts (by major industrial group)
Figure IV-30	Workers in plants which monitor fumes, dusts (by 2-digit SIC)
Figure IV-31	Plants which monitor fumes, gases, mists, dusts or vapors
Table IV-29	Number and percent of plants and employees in plants which regularly monitor fumes, gases, mists, dusts, or vapors (by major industrial group)
Table IV-30	Number and percent of plants and employees in plants which regularly monitor fumes, gases, mists, dusts, or vapors (by 2-digit SIC)



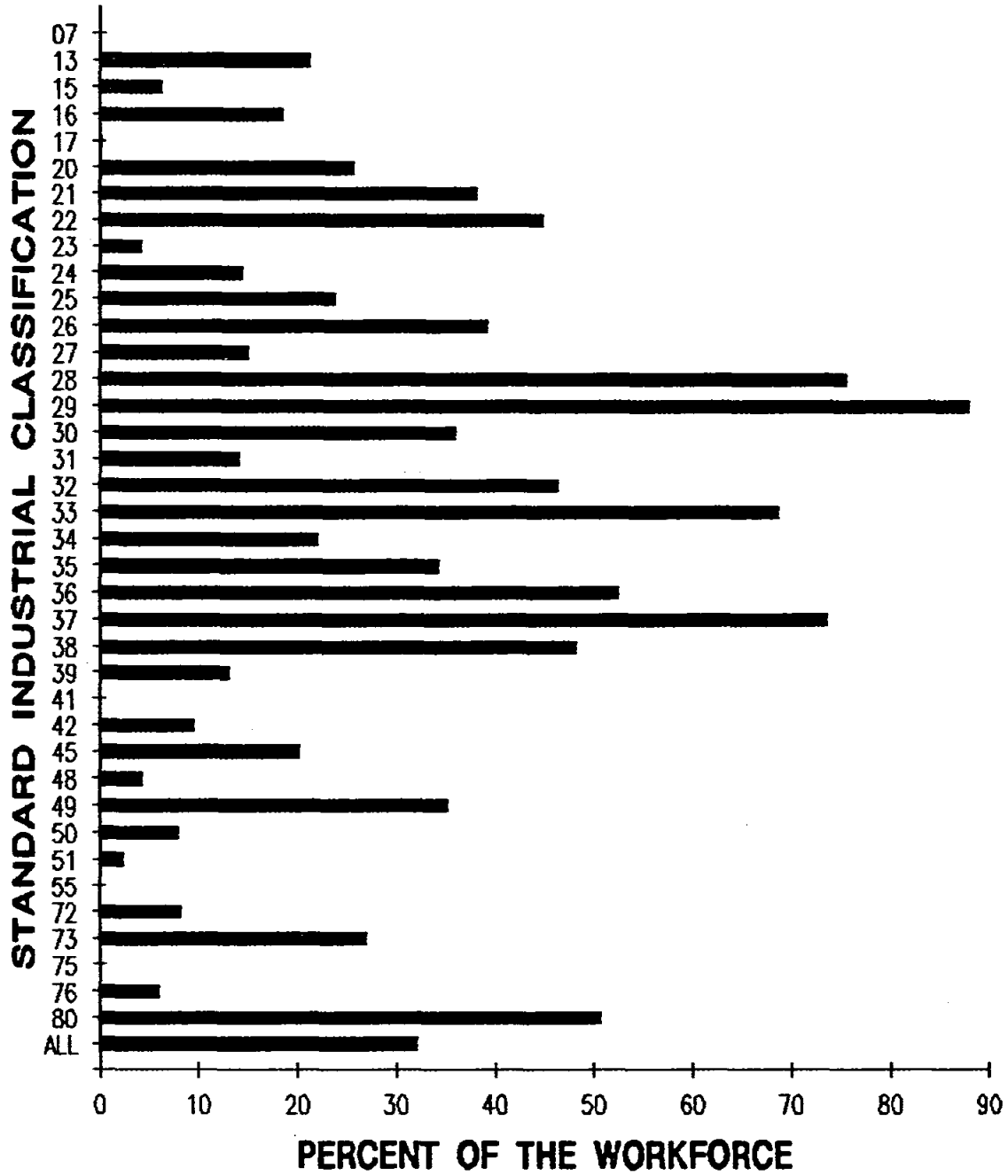
NATIONAL OCCUPATIONAL EXPOSURE SURVEY (1981-1983) TABLE NO. IV-29

NUMBER AND PERCENT OF PLANTS AND EMPLOYEES IN PLANTS WHICH REGULARLY MONITOR FUMES, GASES, MISTS, DUSTS, OR VAPORS

MAJOR GROUP	PLANTS				EMPLOYEES			
	SMALL (8-99)	MEDIUM (100-499)	LARGE (≥500)	TOTAL	SMALL (8-99)	MEDIUM (100-499)	LARGE (≥500)	TOTAL
07	...	...	...	...	...	...	...	...
13	474* (253) 5.5%	356* (199) 34.9%	...	830* (316) 8.6%	13091* (5054) 6.3%	75739* (41099) 43.5%	...	88830* (41502) 21.4%
15-17	1042* (533) 1.1%	380* (215) 9.2%	59* (49) 24.3%	1481* (587) 1.5%	28627* (14485) 1.4%	69013* (42473) 9.4%	75730* (40749) 32.1%	173369* (59848) 5.6%
20-39	6327 (736) 4.1%	6607 (637) 20.8%	3605 (237) 57.5%	16539 (1038) 8.6%	289311 (35243) 6.3%	1487543 (157330) 23.3%	5891358 (265747) 71.3%	7668212 (335770) 39.8%
40-49	4495* (1251) 8.5%	898* (298) 15.4%	180* (71) 38.4%	5573 (1329) 9.4%	156389* (47737) 10.9%	182189* (60336) 15.8%	211945* (78791) 36.9%	550522 (114456) 17.4%
50-59	740* (499) 1.3%	244* (174) 9.2%	...	984* (518) 1.6%	20942* (14492) 1.9%	58583* (46012) 14.3%	...	79525* (47653) 5.2%
70-79	3150* (1251) 4.3%	363 (89) 15.5%	159* (110) 44.8%	3672* (1259) 4.8%	77942* (33209) 5.6%	96222* (26720) 20.7%	176712* (98820) 52.0%	350876* (98594) 16.0%
80	228* (234) 8.0%	629* (177) 29.0%	1095 (193) 53.1%	1952 (370) 27.6%	10924* (11242) 10.7%	156491* (43831) 29.3%	1693115 (303657) 56.0%	1860530 (304263) 50.9%
ALL	16456 (2080) 3.7%	9478 (806) 19.0%	5097 (336) 54.0%	31031 (2297) 6.1%	597225 (72080) 5.4%	2125780 (191412) 21.6%	8048860 (424809) 64.6%	10771866 (485503) 32.2%

*Standard error >25% of the estimate. The estimate may be unreliable.
...No facilities observed.

FIGURE IV - 30
WORKERS IN PLANTS WHICH MONITOR FUMES, DUSTS
(NOES 1981-1983)



NUMBER AND PERCENT OF PLANTS AND EMPLOYEES IN PLANTS WHICH REGULARLY MONITOR FUMES, GASES, MISTS, DUSTS, OR VAPORS

SIC CODE	PLANTS				EMPLOYEES			
	SMALL (8-99)	MEDIUM (100-499)	LARGE (>500)	TOTAL	SMALL (8-99)	MEDIUM (100-499)	LARGE (>500)	TOTAL
07	...	...	...	...	...	...	...	...
13	474* (253) 5.5%	356* (199) 34.9%	...	830* (316) 8.6%	13091* (5054) 6.3%	75739* (41099) 43.5%	...	88830* (41502) 21.4%
15	233* (215) .9%	23* (17) 2.0%	24* (17) 17.4%	279* (216) 1.1%	7445* (6875) 1.3%	5446* (4078) 2.7%	45022* (22458) 33.4%	57912* (25728) 6.5%
16	478* (290) 4.2%	357* (211) 31.9%	35* (46) 33.0%	870* (386) 7.0%	16735* (10238) 5.9%	63567* (41390) 30.6%	30708* (28882) 30.3%	111010* (46280) 18.7%
17	332* (326) .6%	...	...	332* (326) .6%	4446* (4058) .4%	...	...	4446* (4058) .3%
20	257* (115) 2.3%	635 (149) 19.7%	255* (85) 45.6%	1147 (232) 7.6%	9976* (5285) 2.6%	144175 (32987) 21.4%	248011* (76953) 50.4%	402162 (91418) 25.9%
21	30* (43) 100.0%	...	11* (11) 13.5%	41* (42) 37.6%	1866* (2685) 100.0%	...	41763* (36135) 37.2%	43629* (35411) 38.3%
22	...	452* (149) 28.4%	217* (80) 72.5%	669 (130) 13.9%	...	114860* (39679) 33.1%	206738* (93673) 79.2%	321597* (90486) 45.0%
23	...	68* (52) 2.2%	47* (41) 19.4%	115* (72) .7%	...	7223* (5471) 1.2%	47062* (40984) 22.6%	54285* (42381) 4.4%
24	175* (182) 1.6%	267* (137) 23.2%	19* (8) 18.1%	461* (200) 3.9%	8023* (7237) 2.6%	40970* (20506) 22.3%	35767* (18789) 38.7%	84760* (29875) 14.6%
25	48* (74) 1.1%	41* (47) 3.9%	103* (74) 86.4%	192* (110) 3.6%	3348* (5195) 2.4%	15227* (17916) 5.9%	105781* (63252) 86.0%	124356* (64943) 24.0%
26	184* (136) 4.5%	322* (142) 20.5%	144* (81) 67.1%	650* (255) 11.0%	15793* (11419) 11.5%	73044* (36627) 26.0%	157510* (70364) 76.1%	246346* (94993) 39.4%
27	384* (230) 2.1%	166* (84) 8.8%	95* (51) 30.1%	645* (281) 3.2%	19205* (12304) 4.0%	36029* (18723) 10.0%	125146* (54341) 36.2%	180379* (60542) 15.2%
28	1517* (406) 24.6%	748 (107) 64.5%	362 (68) 95.2%	2627 (476) 34.1%	56079* (14265) 31.0%	176339 (31301) 67.6%	463536 (103708) 97.3%	695953 (116614) 75.8%
29	249* (178) 24.6%	264* (124) 90.1%	101* (42) 100.0%	614* (242) 43.7%	17737* (11943) 43.3%	60212* (21521) 95.2%	117545* (70259) 100.0%	195494* (80191) 88.1%
30	348* (160) 5.2%	310* (169) 20.2%	170* (76) 75.8%	828* (226) 9.8%	19456* (8708) 8.6%	69230* (38315) 23.5%	183349* (74106) 78.5%	272036* (72611) 36.1%
31	...	100* (67) 17.6%	...	100* (67) 6.6%	...	24942* (17459) 18.4%	...	24942* (17459) 14.2%
32	354* (188) 4.0%	540* (147) 53.4%	184* (71) 99.9%	1078 (246) 10.8%	17707* (9932) 7.5%	121519* (35669) 58.1%	128993* (49687) 100.0%	268218 (59619) 46.6%
33	623* (204) 15.1%	531* (145) 36.2%	288 (59) 85.5%	1441 (301) 24.3%	39863* (12365) 28.8%	120308* (34403) 38.7%	577009 (83620) 92.8%	737179 (95171) 68.8%

SIC CODE	PLANTS				EMPLOYEES			
	SMALL (8-99)	MEDIUM (100-499)	LARGE (>500)	TOTAL	SMALL (8-99)	MEDIUM (100-499)	LARGE (>500)	TOTAL
34	995* (423) 5.4%	725 (153) 23.2%	173* (58) 49.9%	1893* (584) 8.6%	33117* (13342) 6.0%	137249 (31726) 23.0%	163430* (72591) 46.6%	333796 (82466) 22.2%
35	100* (79) .4%	454* (165) 13.3%	349 (61) 44.5%	903 (193) 3.4%	6753* (5105) 1.1%	122833* (43560) 18.6%	692370 (108541) 62.2%	821956 (114221) 34.5%
36	189* (118) 2.7%	444* (139) 16.5%	509* (129) 64.7%	1143 (273) 10.8%	11709* (7568) 5.1%	101408* (34683) 18.3%	923062 (162589) 78.1%	1036179 (180063) 52.7%
37	274* (155) 6.9%	304* (129) 25.5%	297* (83) 71.4%	875 (214) 15.7%	10981* (6313) 8.6%	70652* (34404) 29.5%	1306819 (229785) 86.3%	1388452 (222273) 73.8%
38	207* (176) 7.7%	64* (45) 6.7%	263* (107) 63.2%	534* (190) 13.2%	8423* (6305) 8.1%	16922* (12960) 8.7%	342003* (122988) 74.3%	367348* (122946) 48.4%
39	392* (233) 6.0%	171* (410) 21.5%	20* (17) 6.0%	584* (467) 7.6%	9275* (6281) 5.6%	34402* (80201) 23.0%	25466* (19911) 12.2%	69143* (80306) 13.2%
41	...	...	...	...	...	...	...	...
42	961* (497) 4.8%	90* (65) 6.1%	25* (26) 30.7%	1076* (490) 5.0%	41573* (26061) 8.5%	18369* (13754) 7.1%	20111* (20857) 26.9%	80053* (28647) 9.7%
45	...	...	30* (20) 20.5%	30* (20) .8%	...	...	91952* (58422) 34.8%	91952* (58422) 20.4%
48	751* (722) 5.1%	5* (5) .6%	3* (4) 10.1%	760* (722) 4.9%	16143* (14712) 3.8%	1043* (945) .6%	13226* (14092) 18.9%	30412* (19386) 4.5%
49	1953* (870) 23.8%	600* (240) 32.2%	121* (67) 70.0%	2674* (915) 26.1%	80970* (40988) 30.1%	129133* (51071) 30.4%	86656* (49101) 59.1%	296758* (84773) 35.3%
50	446* (435) 1.5%	244* (174) 13.6%	...	690* (469) 2.1%	15730* (13929) 2.5%	58583* (46012) 20.7%	...	74313* (47886) 8.1%
51	294* (234) 3.2%	...	...	294* (234) 3.1%	5211* (3790) 2.8%	...	...	5211* (3790) 2.5%
55	...	...	...	...	...	...	...	...
72	1760* (860) 8.5%	48* (48) 7.1%	...	1808* (861) 8.5%	33729* (17507) 8.9%	6003* (6025) 7.3%	...	39732* (18389) 8.4%
73	1390* (698) 8.4%	279* (98) 18.7%	159* (110) 46.6%	1828* (722) 9.9%	44212* (25826) 10.5%	77547* (25122) 22.2%	176712* (98820) 53.7%	298472* (100984) 27.1%
75	...	...	...	...	...	...	...	...
76	...	36* (45) 29.4%	...	36* (45) .4%	...	12672* (15755) 52.1%	...	12672* (15755) 6.2%
80	228* (234) 8.0%	629* (177) 29.0%	1095 (193) 53.1%	1952 (370) 27.6%	10924* (11242) 10.7%	156491* (43831) 29.3%	1693115 (303657) 56.0%	1860530 (304263) 50.9%
A11	15625 (1709) 3.5%	9275 (645) 18.7%	5097 (295) 54.1%	29997 (1847) 5.9%	579522 (55088) 5.3%	2092136 (156967) 21.4%	8048860 (388798) 64.6%	10720519 (434097) 32.2%

*Standard error >25% of the estimate. The estimate may be unreliable.
 ...No facilities observed.

FIGURE IV - 31
PLANTS WHICH MONITOR FUMES, GASES,
MISTS, DUSTS, OR VAPORS
(NOES 1981-1983)

