

**NOES QUESTIONNAIRE ITEM NO. 57**  
**Regularly Scheduled Safety Training Programs for Workers**

**Item**

The intent of this question was to determine if the facility had a regularly scheduled formal safety training program for workers.

This item was displayed on the questionnaire as:

57. Do you have a regularly scheduled formal safety training program for your employees?

- 1 Yes  
2 No

**Notes**

A safety training program was considered to be one which was devoted to the recognition, evaluation, and control of safety hazards. It might include such subjects as: recognition of hazards presented by unguarded machinery, inadequate fire protection, and procedures to follow in case of an accident.

Programs which are informal, not initiated by management, concerned only with first aid procedures, or voluntary on the part of the employee did not meet the criteria for safety training. After-accident discussions or seminars were also excluded.

**Analysis**

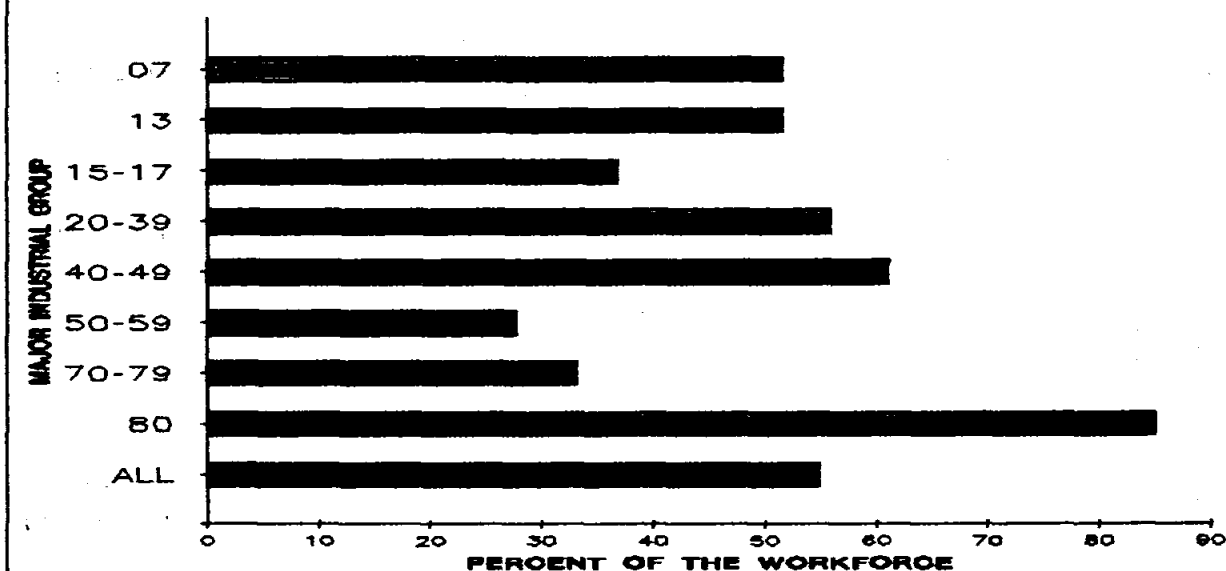
One analysis of the responses to question 57 is presented.

**Response 57.1 - Existence of regularly scheduled safety training**

The estimates of the plants which have a regularly scheduled formal safety training program, and workers in those plants (by number and proportion of the total) are displayed in Figures IV-128, IV-129, IV-130, IV-131, IV-132, and IV-133, and Tables IV-79 and IV-80.

Figure IV-128	Workers in plants with a safety training program (by major industrial group)
Figure IV-129	Workers in plants with a safety training program (by 2-digit SIC)
Figure IV-130	Plants which provide a safety training program (by major industrial group)
Figure IV-131	Plants which provide a safety training program (by 2-digit SIC)
Figure IV-132	Workers in plants which have a formal safety training program by plant size
Figure IV-133	Plants which have a formal safety training program
Table IV-79	Number and percent of plants and employees in plants which have a regularly scheduled safety training program (by major industrial group)
Table IV-80	Number and percent of plants and employees in plants which have a regularly scheduled safety training program (by 2-digit SIC)

**FIGURE IV - 128**  
**WORKERS IN PLANTS WITH A SAFETY TRAINING PROGRAM**  
 (NOES 1981-1983)



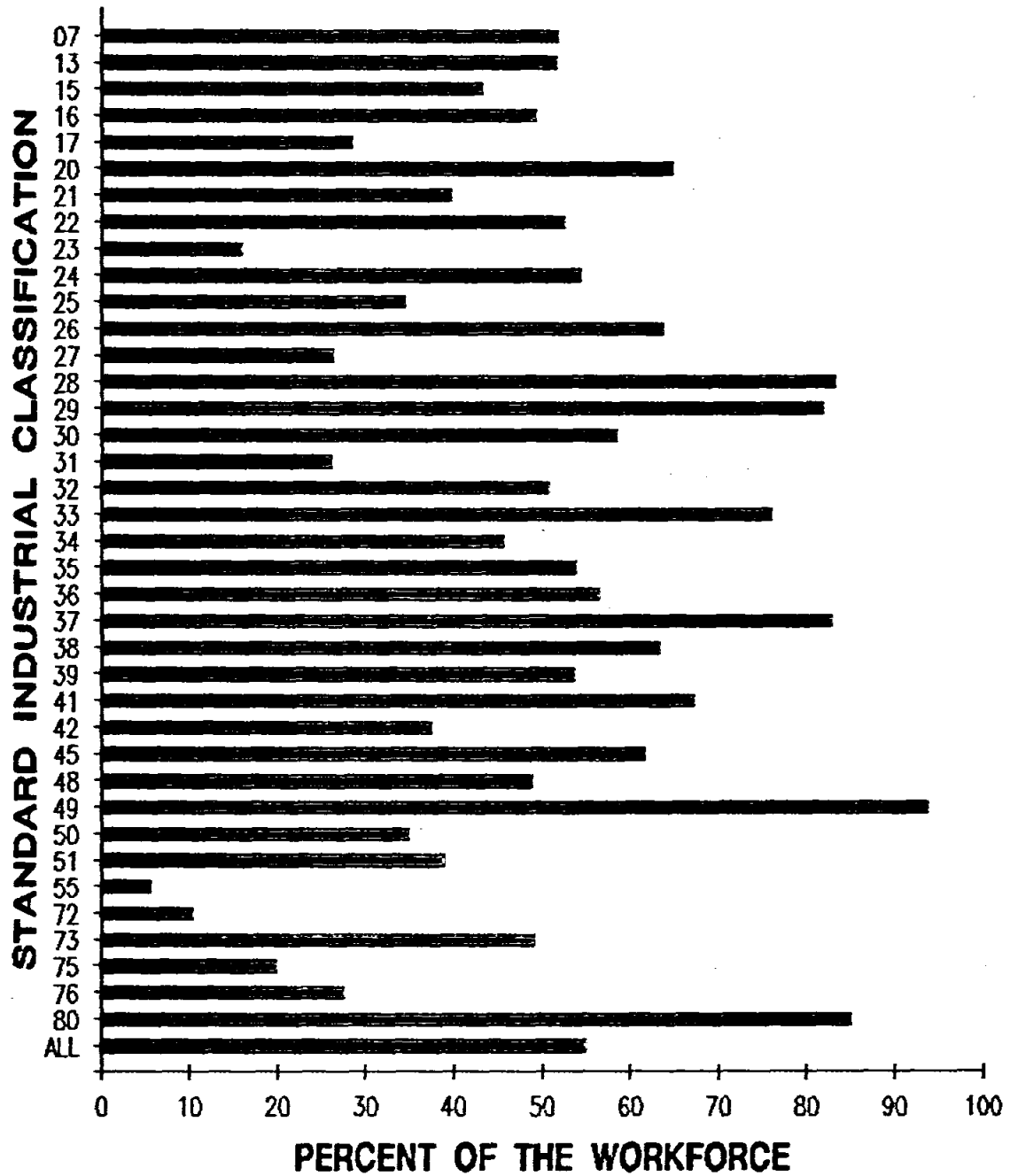
NATIONAL OCCUPATIONAL EXPOSURE SURVEY (1981-1983) TABLE NO. IV-79

NUMBER AND PERCENT OF PLANTS AND EMPLOYEES IN PLANTS WHICH  
 HAVE A REGULARLY SCHEDULED SAFETY TRAINING PROGRAM

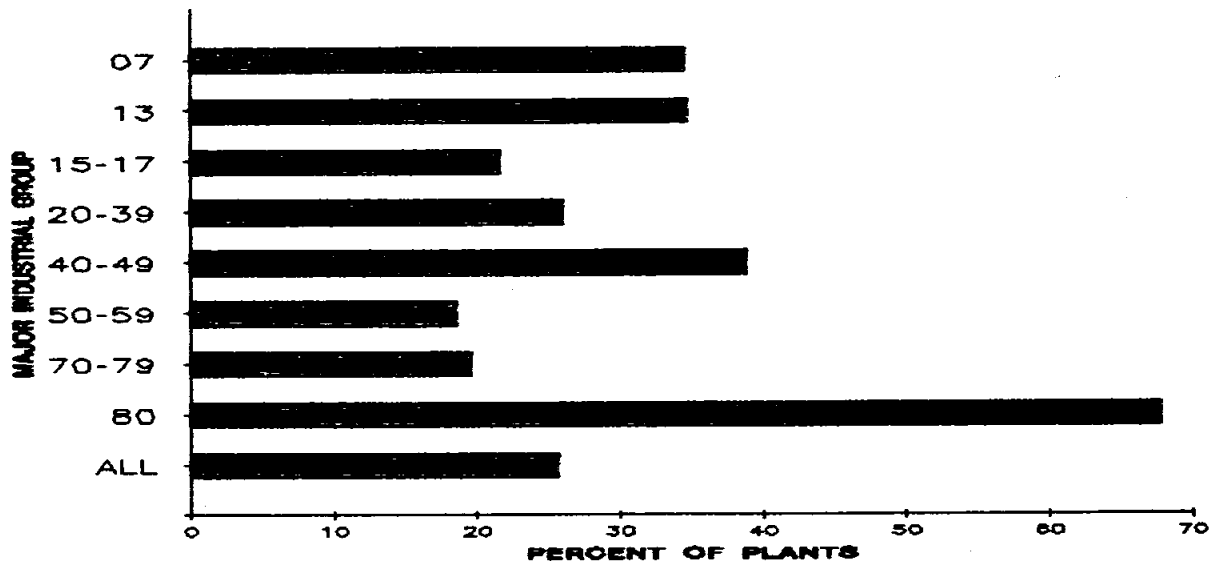
MAJOR GROUP	PLANTS			TOTAL	EMPLOYEES			TOTAL
	SMALL (8-99)	MEDIUM (100-499)	LARGE (≥500)		SMALL (8-99)	MEDIUM (100-499)	LARGE (≥500)	
07	1885* (647) 33.9%	70* (67) 100.0%	...	1955* (629) 34.7%	50402* (23214) 48.6%	7009* (6680) 100.0%	...	57411* (22027) 51.9%
13	2769* (1126) 32.2%	558* (247) 54.7%	46* (52) 100.0%	3373* (1186) 34.9%	72037* (21275) 34.5%	111082* (49229) 63.9%	31383* (35291) 100.0%	214502* (74309) 51.8%
15-17	19280 (1638) 20.4%	2088 (414) 50.4%	174* (120) 71.8%	21542 (1714) 21.8%	585150 (47932) 27.9%	379543 (80356) 51.5%	170606* (83834) 72.3%	1135298 (101243) 37.0%
20-39	30812 (1987) 20.1%	14748 (1023) 46.4%	4371 (415) 69.7%	49931 (2500) 26.1%	1197432 (58326) 25.9%	3127588 (230785) 49.0%	6474962 (293059) 78.3%	10799983 (368059) 56.1%
40-49	18810 (1816) 35.4%	3979 (783) 68.1%	380* (123) 81.1%	23168 (1977) 39.0%	633793 (81933) 44.2%	848322 (200187) 73.6%	455684* (115389) 79.4%	1937799 (282283) 61.3%
50-59	10396 (1627) 17.8%	1086* (345) 40.9%	...	11482 (1624) 18.8%	249730 (37715) 22.2%	177659* (61442) 43.5%	...	427389 (77922) 27.9%
70-79	13941 (2397) 19.1%	805 (172) 34.3%	247* (127) 69.8%	14993 (2404) 19.8%	285370 (55140) 20.5%	198815 (41935) 42.8%	248958* (105894) 73.3%	733143 (114815) 33.4%
80	1367* (527) 48.1%	1674 (229) 77.3%	1760 (280) 85.4%	4800 (576) 67.9%	59743* (17667) 58.8%	399756 (61956) 74.8%	2659327 (357729) 88.0%	3118826 (356756) 85.2%
ALL	99259 (4504) 22.1%	25008 (1449) 50.0%	6977 (547) 73.9%	131244 (4863) 25.8%	3133658 (134830) 28.3%	5249773 (334117) 53.2%	10040920 (496644) 80.5%	18424351 (614767) 55.1%

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

**FIGURE IV - 129**  
**WORKERS IN PLANTS WITH A SAFETY TRAINING PROGRAM**  
 (NOES 1981-1993)



**FIGURE IV - 130**  
**PLANTS WHICH PROVIDE A SAFETY TRAINING PROGRAM**  
**(NOES 1981-1983)**



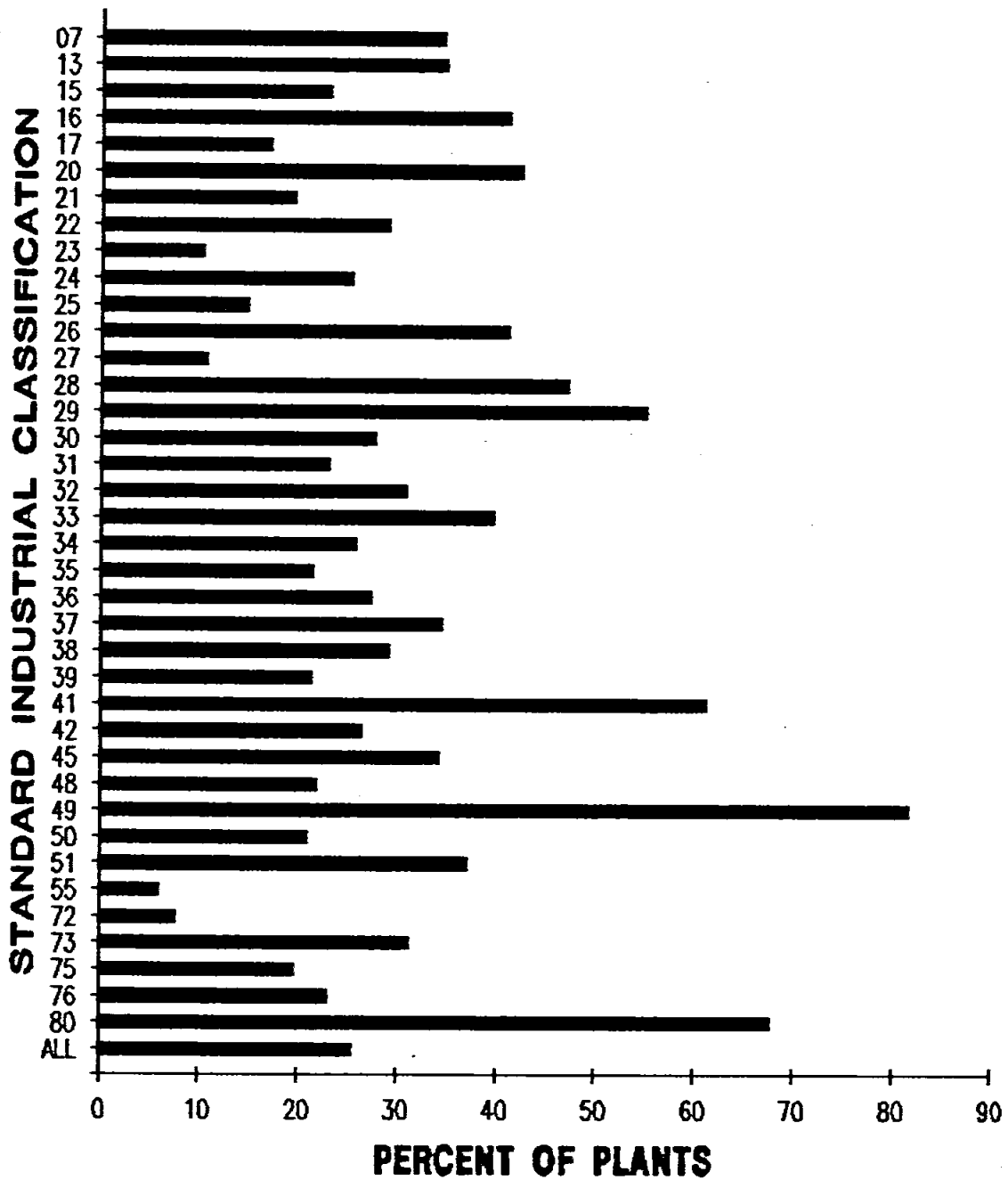
NUMBER AND PERCENT OF PLANTS AND EMPLOYEES IN PLANTS WHICH HAVE A REGULARLY SCHEDULED SAFETY TRAINING PROGRAM

SIC CODE	PLANTS			TOTAL	EMPLOYEES			TOTAL
	SMALL (8-99)	MEDIUM (100-499)	LARGE (>500)		SMALL (8-99)	MEDIUM (100-499)	LARGE (>500)	
07	1885* (647) 33.9%	70* (67) 100.0%	...	1955* (629) 34.7%	50402* (23214) 48.6%	7009* (6680) 100.0%	...	57411* (22027) 51.9%
13	2769* (1126) 32.2%	558* (247) 54.7%	46* (52) 100.0%	3373* (1186) 34.9%	72037* (21275) 34.5%	111082* (49229) 63.9%	31383* (35291) 100.0%	214502* (74309) 51.8%
15	5279 (881) 21.2%	661* (250) 59.7%	135* (100) 100.0%	6075 (934) 23.2%	158431 (23823) 28.1%	95791* (33796) 48.3%	134799* (71218) 100.0%	389021 (76249) 43.4%
16	4552* (1255) 40.3%	574* (179) 51.3%	39* (48) 36.2%	5165* (1313) 41.3%	133172* (35369) 46.9%	124547* (43559) 59.9%	35806* (31376) 35.4%	293525 (62970) 49.5%
17	9450 (1446) 16.3%	853* (221) 44.4%	...	10303 (1470) 17.2%	293548 (40382) 23.4%	159205* (48453) 48.1%	...	452753 (58960) 28.6%
20	4084 (541) 35.8%	1936 (349) 60.2%	457* (150) 81.8%	6477 (711) 42.7%	168739 (14936) 43.4%	423678 (84835) 62.9%	417472* (127700) 84.9%	1009889 (128083) 65.0%
21	4* (6) 14.6%	...	17* (28) 21.6%	21* (25) 19.7%	258* (345) 13.8%	...	45151* (41947) 40.3%	45409* (41728) 39.8%
22	422* (201) 14.4%	800* (203) 50.4%	190* (74) 63.4%	1411* (392) 29.3%	18754* (8320) 17.7%	186557* (48074) 53.8%	171405* (71835) 65.6%	376716* (103410) 52.7%
23	1201* (493) 9.6%	383* (130) 12.4%	85* (49) 35.2%	1670* (517) 10.5%	37107* (12879) 8.8%	73191* (30271) 12.0%	90063* (50341) 43.2%	200361* (54637) 16.1%
24	2212 (469) 20.7%	752 (178) 65.5%	104* (74) 100.0%	3068 (465) 25.6%	104336 (23200) 34.4%	119532 (28663) 65.1%	92355* (52501) 100.0%	316222 (66366) 54.6%
25	347* (194) 8.3%	442* (160) 41.6%	14* (22) 12.0%	803 (160) 15.0%	17268* (10204) 12.4%	128499* (46133) 50.1%	33632* (28613) 27.3%	179398* (49223) 34.6%
26	1410* (594) 34.3%	850 (207) 54.2%	180* (85) 84.2%	2440* (668) 41.4%	49080* (15085) 35.7%	165809* (46367) 58.9%	184857* (74073) 89.4%	399747* (104110) 63.9%
27	1561* (441) 8.6%	493* (149) 26.3%	133* (58) 42.2%	2187 (465) 10.8%	69948* (21366) 14.6%	93851* (31839) 26.0%	149386* (57024) 43.2%	313185 (67435) 26.4%
28	2386 (522) 38.6%	893 (116) 77.0%	369 (66) 97.1%	3648 (592) 47.3%	90417 (12561) 50.0%	208039 (32959) 79.8%	468180 (98398) 98.3%	766635 (106159) 83.5%
29	414* (252) 41.0%	293* (125) 100.0%	69* (40) 68.4%	777* (305) 55.3%	27919* (16421) 68.1%	63255* (21394) 100.0%	90619* (69338) 77.1%	181793* (79863) 82.0%
30	1301* (386) 19.4%	883* (256) 57.5%	180* (67) 80.3%	2364 (450) 27.9%	59452* (15428) 26.4%	174192* (51746) 59.1%	208455* (70884) 89.2%	442099 (89605) 58.7%
31	202* (124) 21.6%	154* (78) 27.1%	...	356* (153) 23.3%	8464* (4913) 34.0%	37891* (18953) 28.0%	...	46354* (20051) 26.3%
32	2373* (667) 27.0%	616* (158) 60.8%	117* (47) 63.8%	3106 (692) 31.1%	83573 (19701) 35.2%	129913* (37884) 62.2%	79886* (35340) 61.9%	293372 (55527) 51.0%
33	1243* (323) 30.1%	835 (204) 56.9%	294 (60) 87.3%	2373 (388) 39.9%	46557 (9390) 33.6%	185161 (42841) 59.5%	583617 (70723) 93.9%	815335 (85590) 76.1%

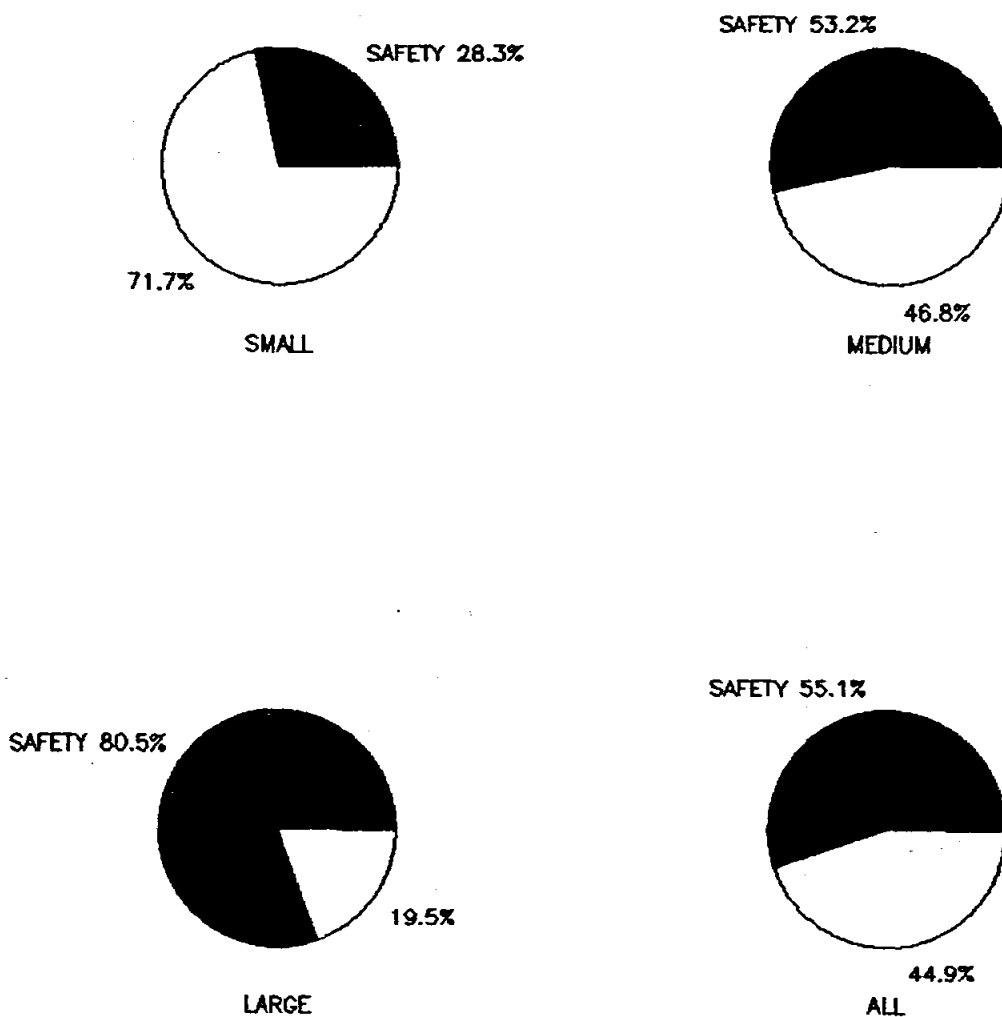
SIC CODE	PLANTS				EMPLOYEES			
	SMALL (8-99)	MEDIUM (100-499)	LARGE (>500)	TOTAL	SMALL (8-99)	MEDIUM (100-499)	LARGE (>500)	TOTAL
34	4072 (737) 22.0%	1383 (137) 44.3%	252* (79) 73.0%	5708 (753) 26.0%	126480 (16648) 22.8%	278869 (32979) 46.7%	282613* (104174) 80.5%	687961 (117431) 45.8%
35	3598 (833) 15.9%	1696 (268) 49.8%	523 (77) 66.7%	5817 (884) 21.7%	123989 (25372) 20.4%	324451 (40217) 49.1%	837558 (122687) 75.3%	1285998 (125049) 54.0%
36	1387* (412) 19.5%	1133 (196) 42.2%	404* (113) 51.3%	2923 (531) 27.6%	66390* (16761) 28.8%	257820 (41375) 46.7%	790938 (197529) 66.9%	1115149 (202807) 56.7%
37	989* (355) 24.9%	570* (151) 47.9%	377 (90) 90.7%	1937 (452) 34.7%	45958* (18752) 36.2%	119916* (39485) 50.1%	1393982 (226346) 92.1%	1559856 (222483) 83.0%
38	559* (113) 20.8%	345* (111) 36.1%	291* (102) 70.0%	1195 (257) 29.4%	28810* (9533) 27.5%	87395* (26524) 45.0%	365956* (110653) 79.5%	482160* (122776) 63.5%
39	1048* (407) 16.0%	291* (615) 36.4%	312* (227) 92.3%	1650* (641) 21.5%	23935* (8706) 14.4%	69569* (157739) 46.6%	188837* (128281) 90.2%	282340* (159387) 53.8%
41	2699* (824) 61.1%	329* (126) 64.5%	...	3027* (845) 61.4%	75582* (20375) 64.3%	58610* (32330) 71.9%	...	134191* (40199) 67.4%
42	5045 (974) 25.2%	652* (172) 44.0%	42* (27) 50.7%	5739 (960) 26.6%	155010 (31227) 31.8%	121118 (29335) 46.8%	33539* (21995) 44.8%	309667 (44378) 37.7%
45	1097* (647) 33.8%	173* (137) 29.4%	99* (38) 67.4%	1369* (666) 34.4%	36010* (23294) 46.5%	55575* (49616) 50.8%	187486* (71448) 70.9%	279072* (100282) 61.9%
48	2709* (913) 18.4%	708* (181) 78.5%	34* (21) 99.0%	3451* (966) 22.1%	128393* (63205) 30.2%	131580* (38601) 74.6%	70083* (43687) 100.0%	330056* (92460) 49.1%
49	6358 (1442) 77.4%	1862* (567) 100.0%	173* (99) 99.8%	8393 (1586) 81.9%	218026 (47488) 80.9%	425470* (151076) 100.0%	146565* (65566) 100.0%	790060 (174982) 93.9%
50	5695* (1591) 18.8%	1086* (345) 60.3%	...	6781 (1604) 21.1%	143113* (38507) 22.7%	177659* (61442) 62.7%	...	320772 (76754) 35.1%
51	3490 (587) 38.3%	...	...	3490 (587) 37.3%	83186* (22955) 45.0%	...	...	83186* (22955) 39.2%
55	1212* (597) 6.4%	...	...	1212* (597) 6.2%	23431* (12981) 7.6%	...	...	23431* (12981) 5.7%
72	1561* (757) 7.6%	124* (88) 18.3%	...	1685* (739) 7.9%	31107* (15985) 8.2%	19116* (15200) 23.3%	...	50223* (20302) 10.6%
73	4898 (950) 29.6%	645 (135) 43.3%	247* (127) 72.4%	5790 (995) 31.5%	126752* (32329) 30.1%	167026 (32867) 47.8%	248958* (105894) 75.7%	542736 (113159) 49.3%
75	5213* (1773) 19.9%	...	...	5213* (1773) 19.9%	84105* (31090) 20.4%	...	...	84105* (31090) 20.0%
76	2268* (1058) 23.3%	36* (45) 29.4%	...	2304* (1064) 23.3%	43406* (18957) 24.3%	12672* (15755) 52.1%	...	56079* (25875) 27.7%
80	1367* (527) 48.1%	1674 (229) 77.3%	1760 (280) 85.4%	4800 (576) 67.9%	59743* (17667) 58.8%	399756 (61956) 74.8%	2659327 (357729) 88.0%	3118826 (356756) 85.2%
ALL	98357 (4897) 22.0%	24780 (1187) 50.0%	6961 (392) 73.9%	130098 (5440) 25.7%	3112886 (135066) 28.2%	5202892 (228985) 53.2%	10031915 (451385) 80.5%	18347693 (516304) 55.2%

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

**FIGURE IV - 131**  
**PLANTS WHICH PROVIDE A SAFETY TRAINING PROGRAM**  
**(NOES 1981-1983)**

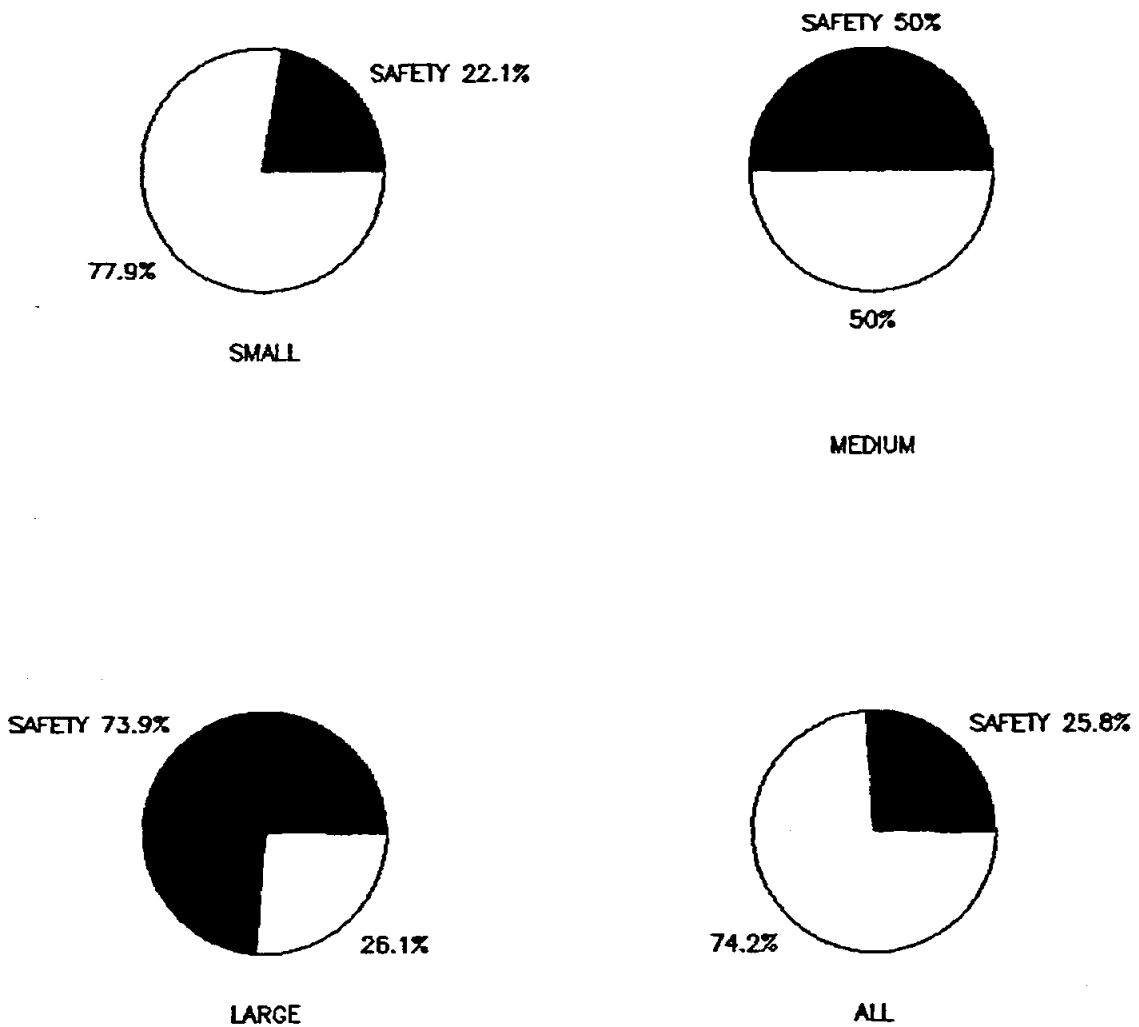


**FIGURE IV - 132**  
**WORKERS IN PLANTS WHICH HAVE A FORMAL**  
**SAFETY TRAINING PROGRAM BY PLANT SIZE**  
**(NOES 1981-1983)**





**FIGURE IV - 133**  
**PLANTS WHICH HAVE A FORMAL**  
**SAFETY TRAINING PROGRAM**  
**(NOES 1981-1983)**



**NOES QUESTIONNAIRE ITEM NO. 58**

**Existence of a Program to Regularly Assess Worker Awareness of Safety Rules**

**Intent**

The intent of this question was to determine if management makes periodic assessments of employee awareness of the safety rules established for the facility.

This item was displayed on the questionnaire as:

**58. Do you have a program under which you regularly or routinely assess the employee's awareness of safety rules?**

- 1 Yes**
- 2 No**

**Notes**

Continual, informal assessments by management representatives met the intent of this question if there was evidence that management initiated the assessment and received reports.

Voluntary or employee-suggestion input by workers to management concerning job safety were not an acceptable alternative program.

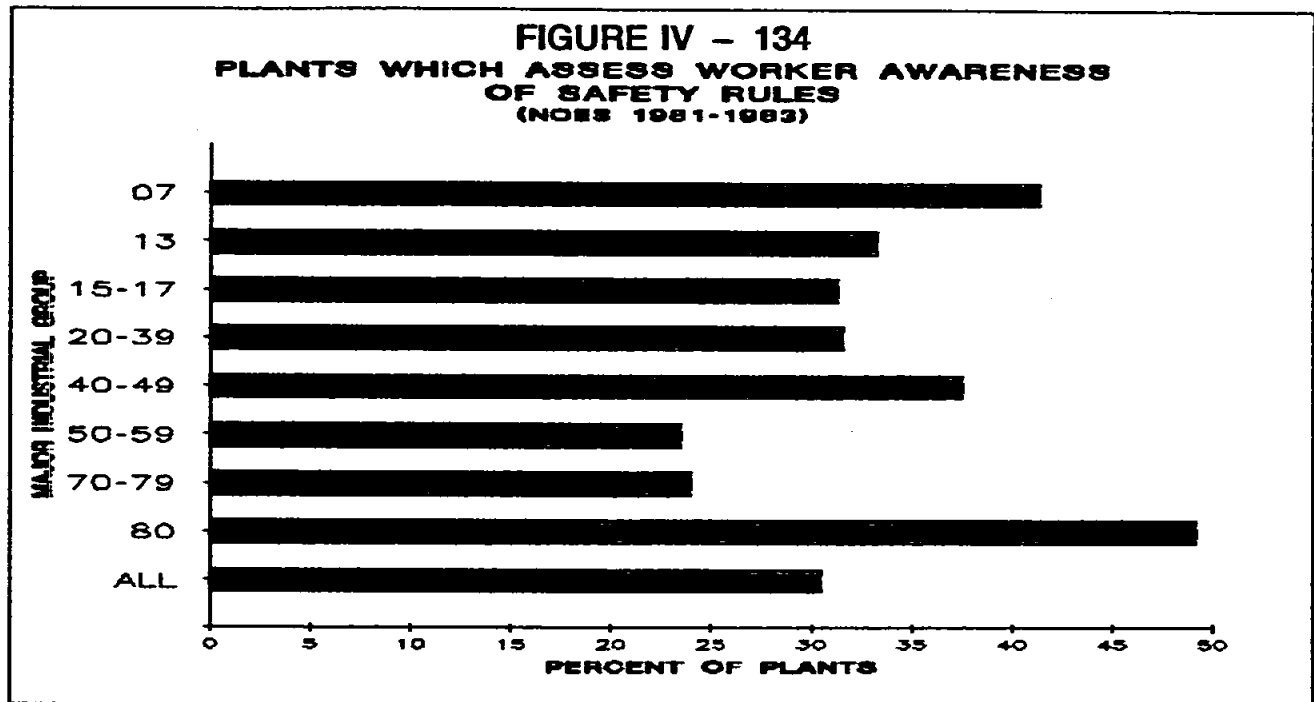
**Analysis**

One analysis of the responses to question 58 is presented.

**Response 58.1 - Employee awareness of safety rules regularly assessed.**

Number and percent of plants and employees in plants which had a management-initiated and regularly scheduled (or continuous) program to assess employee awareness of facility safety rules, and workers in those plants (by number and proportion of the total) are displayed in Figures IV-134, IV-135, IV-136, and IV-137, and Tables IV-81 and IV-82.

- Figure IV-134** Plants which assess worker awareness of safety rules (by major industrial group)
- Figure IV-135** Plants which assess worker awareness of safety rules (by 2-digit SIC)
- Figure IV-136** Workers in plants which assess employee awareness of safety rules by plant size
- Figure IV-137** Plants with programs to assess worker awareness of safety rules
- Table IV-81** Number and percent of plants and employees in plants which regularly assess worker awareness of safety rules (by major industrial group)
- Table IV-82** Number and percent of plants and employees in plants which regularly assess worker awareness of safety rules (by 2-digit SIC)



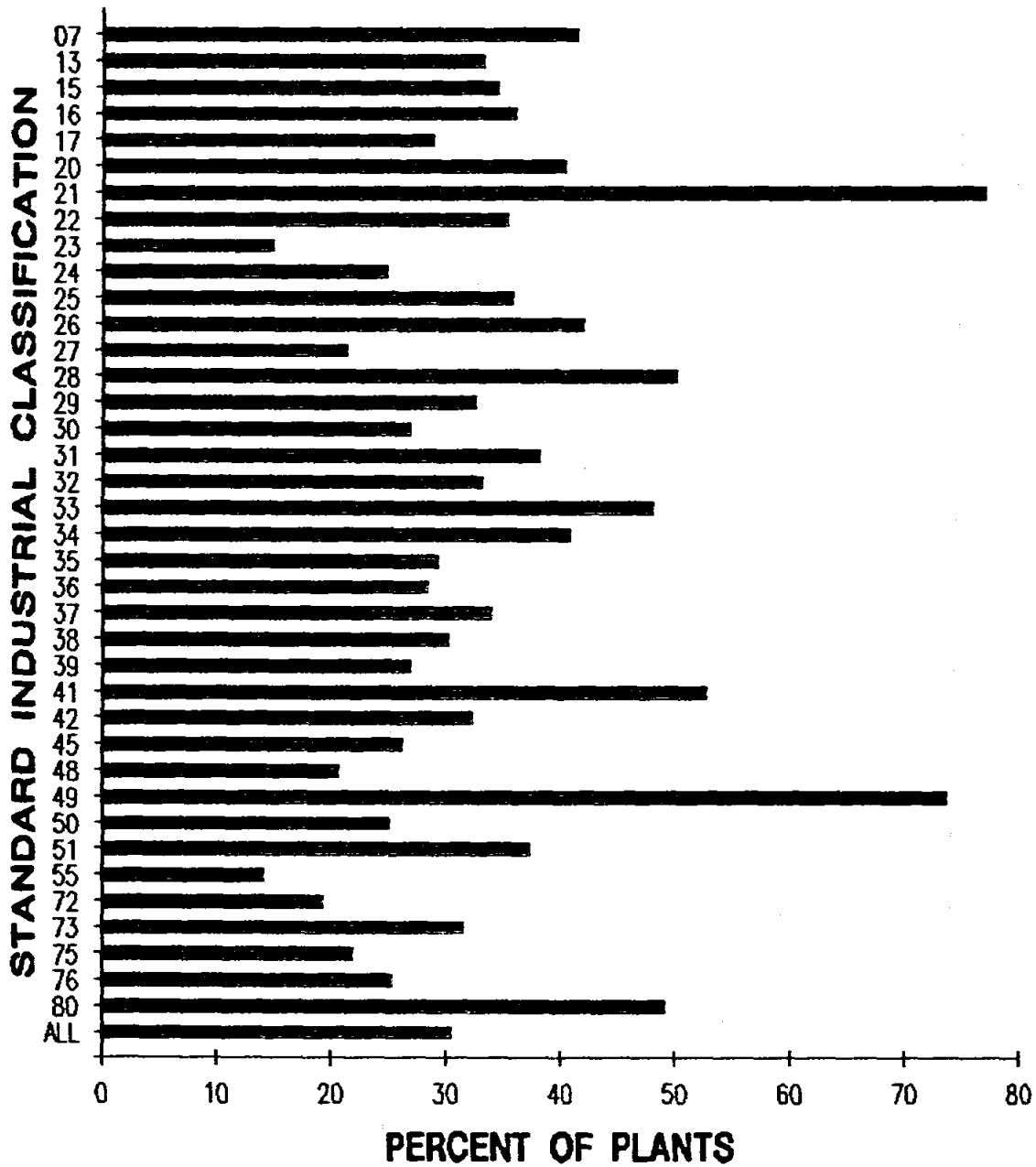
NATIONAL OCCUPATIONAL EXPOSURE SURVEY (1981-1983) TABLE NO. IV-81

## NUMBER AND PERCENT OF PLANTS AND EMPLOYEES IN PLANTS WHICH REGULARLY ASSESS EMPLOYEE AWARENESS OF SAFETY RULES

MAJOR GROUP	PLANTS				EMPLOYEES			
	SMALL (8-99)	MEDIUM (100-499)	LARGE (≥500)	TOTAL	SMALL (8-99)	MEDIUM (100-499)	LARGE (≥500)	TOTAL
07	2270* (918) 40.8%	70* (67) 100.0%	...	2340* (900) 41.5%	47539* (22117) 45.9%	7009* (6680) 100.0%	...	54548* (20894) 49.3%
13	2869* (825) 33.4%	312* (105) 30.6%	46* (52) 100.0%	3227* (866) 33.4%	94897 (23199) 45.4%	72837* (25031) 41.9%	31383* (35291) 100.0%	199117* (59911) 48.1%
15-17	28949 (2630) 30.7%	1874 (441) 45.2%	154* (124) 63.5%	30976 (2613) 31.4%	725656 (56583) 34.6%	357539 (81053) 48.5%	152371* (90750) 64.5%	1235567 (132453) 40.2%
20-39	40506 (3120) 26.4%	16320 (968) 51.4%	3786 (221) 60.4%	60613 (3436) 31.7%	1455889 (76338) 31.5%	3453914 (188007) 54.1%	5626005 (255302) 68.1%	10535807 (332450) 54.7%
40-49	17925 (2352) 33.7%	4164 (752) 71.2%	262* (85) 55.9%	22350 (2377) 37.6%	608598 (75200) 42.4%	878104 (186746) 76.1%	340948* (91106) 59.4%	1827649 (238474) 57.8%
50-59	13076 (1669) 22.4%	1309* (456) 49.2%	...	14385 (1729) 23.6%	325198 (39804) 28.9%	201384* (67735) 49.3%	...	526582 (83332) 34.3%
70-79	17077 (2631) 23.4%	1001* (255) 42.7%	174* (70) 49.0%	18252 (2714) 24.1%	362333 (57433) 26.0%	218475 (53160) 47.0%	171831* (66073) 50.6%	752640 (101394) 34.3%
80	530 (123) 18.7%	1418 (186) 65.5%	1537 (264) 74.6%	3484 (303) 49.3%	38373 (8066) 37.8%	356361 (50017) 66.7%	2360310 (342649) 78.1%	2755044 (347845) 75.3%
ALL	123201 (5782) 27.4%	26467 (1421) 52.9%	5958 (386) 63.1%	155627 (6024) 30.6%	3658484 (143735) 33.0%	5545625 (295596) 56.2%	8682848 (452476) 69.6%	17886957 (572000) 53.5%

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

**FIGURE IV - 135**  
**PLANTS WHICH ASSESS WORKER AWARENESS**  
**OF SAFETY RULES**  
**(NOES 1981-1983)**



NUMBER AND PERCENT OF PLANTS AND EMPLOYEES IN PLANTS WHICH REGULARLY ASSESS EMPLOYEE AWARENESS OF SAFETY RULES

SIC CODE	PLANTS				EMPLOYEES			
	SMALL (8-99)	MEDIUM (100-499)	LARGE (≥500)	TOTAL	SMALL (8-99)	MEDIUM (100-499)	LARGE (≥500)	TOTAL
07	2270* (918) 40.8%	70* (67) 100.0%	...	2340* (900) 41.5%	47539* (23117) 45.9%	7009* (6680) 100.0%	...	54548* (20894) 49.3%
13	2869* (825) 33.4%	312* (105) 30.6%	46* (52) 100.0%	3227* (866) 33.4%	94897 (23199) 45.4%	72837* (25031) 41.9%	31383* (35291) 100.0%	199117* (59911) 48.1%
15	8318 (923) 33.4%	643* (228) 58.1%	82* (94) 61.1%	9044 (942) 34.6%	204755 (25203) 36.4%	128241* (40373) 64.7%	84501* (63424) 62.7%	417497 (80181) 46.6%
16	4050* (1245) 35.9%	404* (151) 36.1%	71* (64) 66.4%	4525* (1239) 36.2%	125267* (35700) 44.1%	70680* (27200) 34.0%	67871* (50891) 67.0%	263817 (60934) 44.5%
17	16581 (2248) 28.5%	827* (279) 43.1%	...	17408 (2285) 29.0%	395634 (44309) 31.6%	158619* (56573) 47.9%	...	554253 (72991) 35.0%
20	3964 (799) 34.7%	1888 (365) 58.7%	303* (96) 54.3%	6156 (936) 40.5%	160565 (23892) 41.3%	399446 (79917) 59.3%	287227* (89078) 58.4%	847238 (97437) 54.5%
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	623* (271) 21.2%	838* (221) 52.8%	252* (84) 84.2%	1713 (416) 35.5%	33650* (14305) 31.7%	205385 (50781) 59.2%	223117* (93168) 85.5%	462151 (107414) 64.7%
23	1299* (441) 10.4%	950 (189) 30.6%	122* (59) 50.6%	2371 (528) 15.0%	46468* (15822) 11.0%	197961 (37789) 32.5%	112777* (54877) 54.1%	357206 (69478) 28.8%
24	2312 (551) 21.6%	649* (173) 56.5%	19* (8) 18.1%	2980 (575) 24.9%	100440 (23186) 33.1%	112293* (29004) 61.2%	35767* (18789) 38.7%	248500 (42543) 42.9%
25	1317 (329) 31.6%	571* (195) 53.7%	30* (31) 25.2%	1917 (429) 35.9%	43192* (10944) 31.0%	151612* (49551) 59.1%	50849* (32821) 41.3%	245653* (65914) 47.4%
26	1368* (521) 33.3%	932 (225) 59.4%	180* (85) 84.2%	2481* (642) 42.1%	41886* (12178) 30.4%	177540* (48711) 63.1%	184857* (74073) 89.4%	404283* (106701) 64.6%
27	3284 (585) 18.1%	914 (195) 48.8%	165* (79) 52.1%	4363 (619) 21.5%	119479 (20389) 25.0%	181882* (47753) 50.4%	163722* (65373) 47.4%	465083 (82304) 39.3%
28	2712 (509) 43.9%	820 (140) 70.7%	343 (64) 90.2%	3874 (580) 50.2%	80746 (13574) 44.7%	192663 (39534) 73.9%	430177 (96925) 90.3%	703586 (103694) 76.7%
29	96* (109) 9.5%	293* (125) 100.0%	69* (40) 68.4%	459* (188) 32.7%	3667* (4156) 8.9%	63255* (21394) 100.0%	90619* (69338) 77.1%	157541* (76702) 71.0%
30	1338* (432) 19.9%	797* (221) 51.9%	154* (63) 68.7%	2289 (509) 27.0%	69127* (20552) 30.7%	141551* (37015) 48.1%	191165* (69068) 81.8%	401843 (78375) 53.4%
31	425* (228) 45.7%	137* (87) 24.1%	22* (20) 87.3%	584* (274) 38.3%	14051* (6419) 56.5%	31456* (20087) 23.2%	11650* (10428) 74.4%	57157* (27651) 32.5%
32	2482* (706) 28.2%	702 (130) 69.4%	144* (60) 78.0%	3328 (727) 33.3%	66005 (15619) 27.8%	144060 (34105) 68.9%	96654* (43227) 74.9%	306719 (58522) 53.3%
33	1775* (524) 42.9%	799 (138) 54.4%	291 (65) 86.3%	2864 (544) 48.2%	67702* (19251) 48.9%	190331 (32867) 61.2%	554568 (77004) 89.2%	812601 (85279) 75.9%

SIC CODE					EMPLOYEES			
	SMALL (8-99)	PLANTS MEDIUM (100-499)	LARGE (≥500)	TOTAL	SMALL (8-99)	MEDIUM (100-499)	LARGE (≥500)	TOTAL
34	7102 (937) 38.3%	1705 (192) 54.6%	194* (59) 56.0%	9001 (919) 40.9%	218268 (22012) 39.3%	356793 (37800) 59.8%	180113* (59538) 51.3%	755174 (78882) 50.3%
35	5564 (957) 24.6%	1799 (216) 52.8%	553 (82) 70.6%	7916 (1002) 29.5%	175522 (22366) 28.9%	326439 (36957) 49.4%	836046 (114057) 75.1%	1338007 (126437) 56.2%
36	1396* (493) 19.7%	1253 (165) 46.7%	364* (92) 46.3%	3014 (493) 28.5%	72187* (20919) 31.3%	283113 (39032) 51.2%	661504* (203100) 55.9%	1016803 (201851) 51.7%
37	1080* (352) 27.2%	540 (129) 45.4%	285* (80) 68.5%	1905 (411) 34.1%	52854* (18241) 41.6%	122225* (31942) 51.1%	1121372 (183654) 74.1%	1296451 (173936) 69.0%
38	586* (336) 21.8%	428* (128) 44.7%	223* (91) 53.6%	1236* (349) 30.4%	30883* (11369) 29.5%	105960* (33726) 54.5%	270267* (99538) 58.7%	407110* (115775) 53.6%
39	1753* (605) 26.8%	304* (662) 38.1%	20* (17) 6.0%	2078* (918) 27.0%	57332* (14947) 34.6%	69950* (155954) 46.8%	25466* (19911) 12.2%	152747* (156505) 29.1%
41	2279* (823) 51.6%	329* (126) 64.5%	...	2607* (841) 52.9%	63004* (15996) 53.6%	58610* (32330) 71.9%	...	121614* (34747) 61.1%
42	6099* (1609) 30.5%	886 (162) 59.8%	27* (16) 32.8%	7012 (1612) 32.5%	198571 (44866) 40.7%	152274 (22318) 58.8%	29949* (20183) 40.0%	380794 (52553) 46.4%
45	733* (432) 22.6%	249* (210) 42.2%	63* (33) 42.8%	1045* (497) 26.3%	18978* (13638) 24.5%	63345* (57328) 57.9%	135826* (69779) 51.4%	218149* (97460) 48.4%
48	2420* (795) 16.5%	820 (195) 90.9%	19* (16) 56.8%	3260* (868) 20.8%	94535* (47302) 22.2%	156147* (42209) 88.6%	37029* (29526) 52.8%	287712* (86527) 42.8%
49	5736* (1457) 69.8%	1714* (554) 92.0%	120* (90) 69.2%	7569 (1647) 73.8%	207970 (50681) 77.2%	405465* (150700) 95.3%	120133* (61318) 82.0%	733568 (173005) 87.2%
50	7029 (1223) 23.2%	1072* (372) 59.5%	...	8100 (1322) 25.2%	201461 (36371) 32.0%	174371* (62993) 61.6%	...	375832 (81384) 41.1%
51	3257 (793) 35.7%	237* (237) 100.0%	...	3494 (793) 37.4%	68625* (19344) 37.1%	27013* (27013) 100.0%	...	95638* (35217) 45.1%
55	2790* (872) 14.7%	...	...	2790* (872) 14.3%	55112* (21601) 17.8%	...	...	55112* (21601) 13.5%
72	4015* (1250) 19.5%	125* (96) 18.5%	...	4140* (1287) 19.4%	84876* (27697) 22.3%	12665* (9763) 15.4%	...	97541* (30797) 20.6%
73	4903 (970) 29.6%	753 (172) 50.6%	174* (70) 50.9%	5830 (992) 31.7%	126867 (27147) 30.1%	181469 (40791) 51.9%	171831* (66073) 52.2%	480168 (74921) 43.6%
75	5770* (1772) 22.0%	...	...	5770* (1772) 22.0%	93232* (26845) 22.6%	...	...	93232* (26845) 22.1%
76	2389* (885) 24.5%	123* (94) 100.0%	...	2512* (894) 25.4%	57358* (18850) 32.1%	24341* (19716) 100.0%	...	81699* (27922) 40.3%
80	530 (123) 18.7%	1418 (186) 65.5%	1537 (264) 74.6%	3484 (303) 49.3%	38373 (8066) 37.8%	356361 (50017) 66.7%	2360310 (342649) 78.1%	2755044 (347845) 75.3%
ALL	122544 (7921) 27.4%	26327 (1112) 53.1%	5942 (403) 63.0%	154813 (8315) 30.6%	3632944 (171735) 33.0%	5512451 (221932) 56.4%	8673843 (463098) 69.6%	17819238 (524555) 53.6%

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

**FIGURE IV - 136**  
**WORKERS IN PLANTS WHICH ASSESS EMPLOYEE**  
**AWARENESS OF SAFETY RULES BY PLANT SIZE**  
**(NOES 1981-1983)**

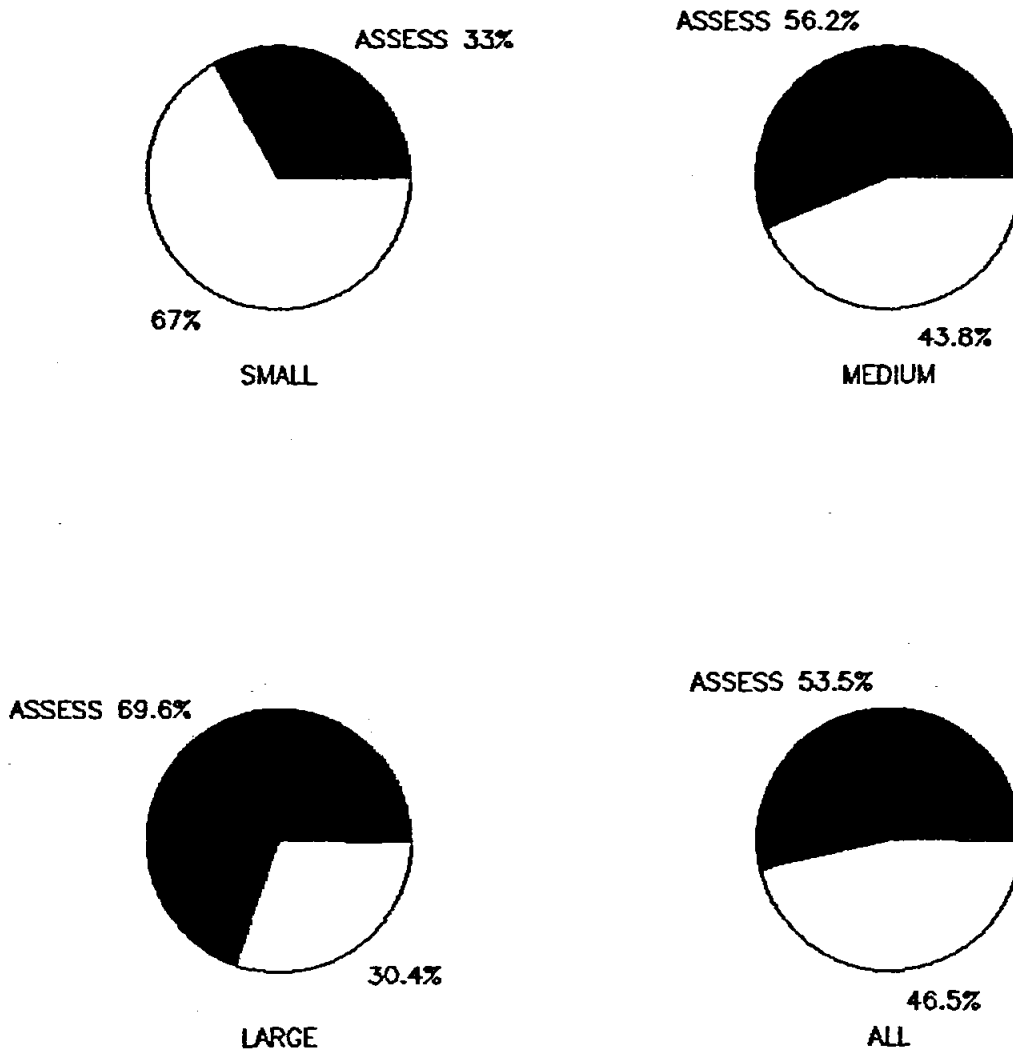
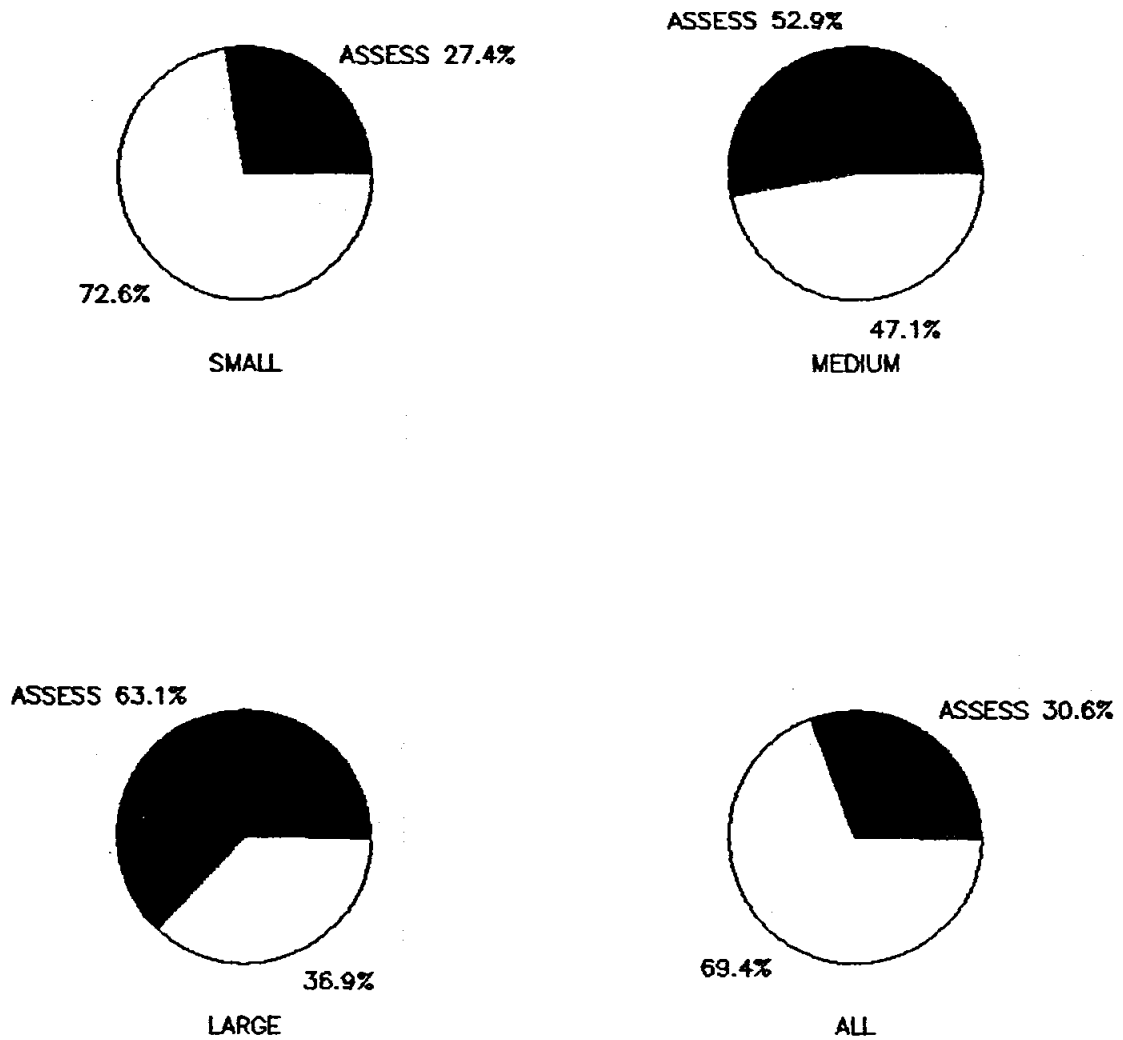


FIGURE IV - 137  
**PLANTS WITH PROGRAMS TO ASSESS WORKER  
AWARENESS OF SAFETY RULES  
(NOES 1981-1983)**





**NOES QUESTIONNAIRE ITEM NO. 59**  
**Plants Taking Corrective Measures for Safety Rule Violations**

**Intent**

The intent of this question was to determine if the facility had a functioning program of corrective actions to be used when safety rules were violated.

This item was displayed on the questionnaire as:

59. In those instances where employees are found to be in violation of the safety rules, are correcting measures taken?

- 1 Yes
- 2 No (Skip to Question 62)

**Notes**

A corrective measure was considered to be a formal action by management personnel against a worker or workers who violated safety rules established for the facility. These actions include, but are not limited to: transfer, removal, dismissal, suspension, or fines imposed by management.

Verbal reprimands by management, or union sanctions against the worker(s) do not meet the intent of the question.

**Analysis**

One analysis of the responses to question 59 is presented.

**Response 59.1 - Corrective measures taken for safety rule violations**

The estimates of the plants which have a management-directed policy to take corrective measures against employees who violate safety rules, and workers in those plants (by number and proportion of the total) are displayed in Figures IV-138, IV-139, IV-140, IV-141, IV-142, and IV-143, and Tables IV-83 and IV-84.

<b>Figure IV-138</b>	<b>Workers in plants which take corrective measures for safety rule violations (by major industrial group)</b>
<b>Figure IV-139</b>	<b>Workers in plants which take corrective measures for safety rule violations (by 2-digit SIC)</b>
<b>Figure IV-140</b>	<b>Plants which take corrective measures for safety rule violations (by major industrial group)</b>
<b>Figure IV-141</b>	<b>Plants which take corrective measures for safety rule violations (by 2-digit SIC)</b>
<b>Figure IV-142</b>	<b>Workers in plants which take corrective measures if employees violate safety rules by plant size</b>
<b>Figure IV-143</b>	<b>Plants which take corrective action if employees violate safety rules</b>

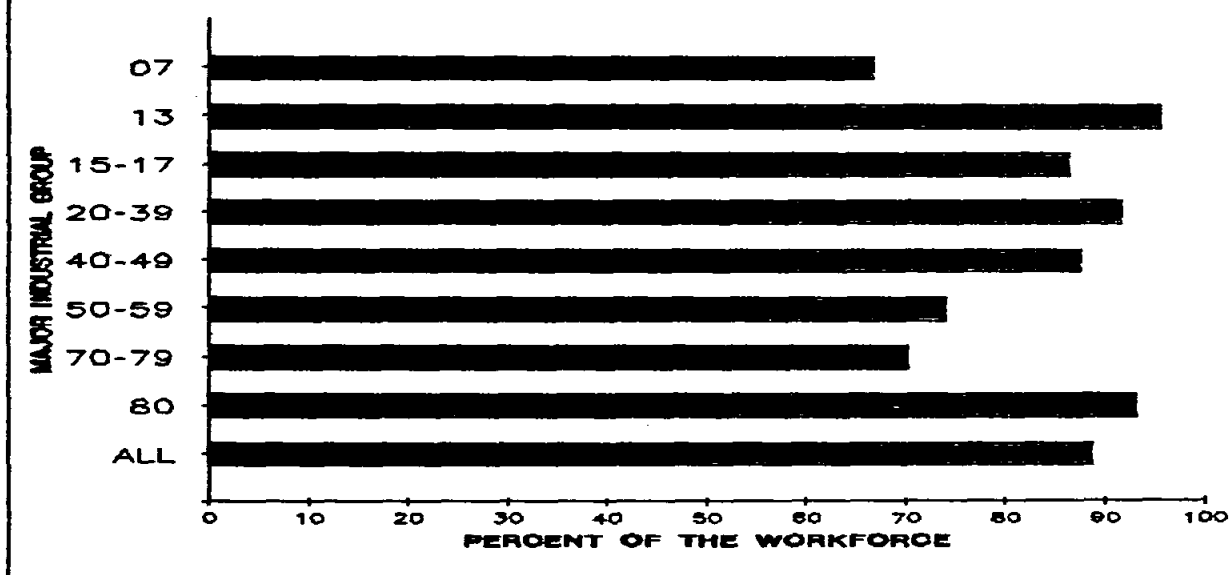
**Table IV-83**

**Number and percent of plants and employees in plants which take corrective measures for safety rule violations (by major industrial group)**

**Table IV-84**

**Number and percent of plants and employees in plants which take corrective measures for safety rule violations (by 2-digit SIC)**

**FIGURE IV - 138**  
**WORKERS IN PLANTS WHICH TAKE CORRECTIVE**  
**MEASURES FOR SAFETY RULE VIOLATIONS**  
**(NOES 1981-1983)**



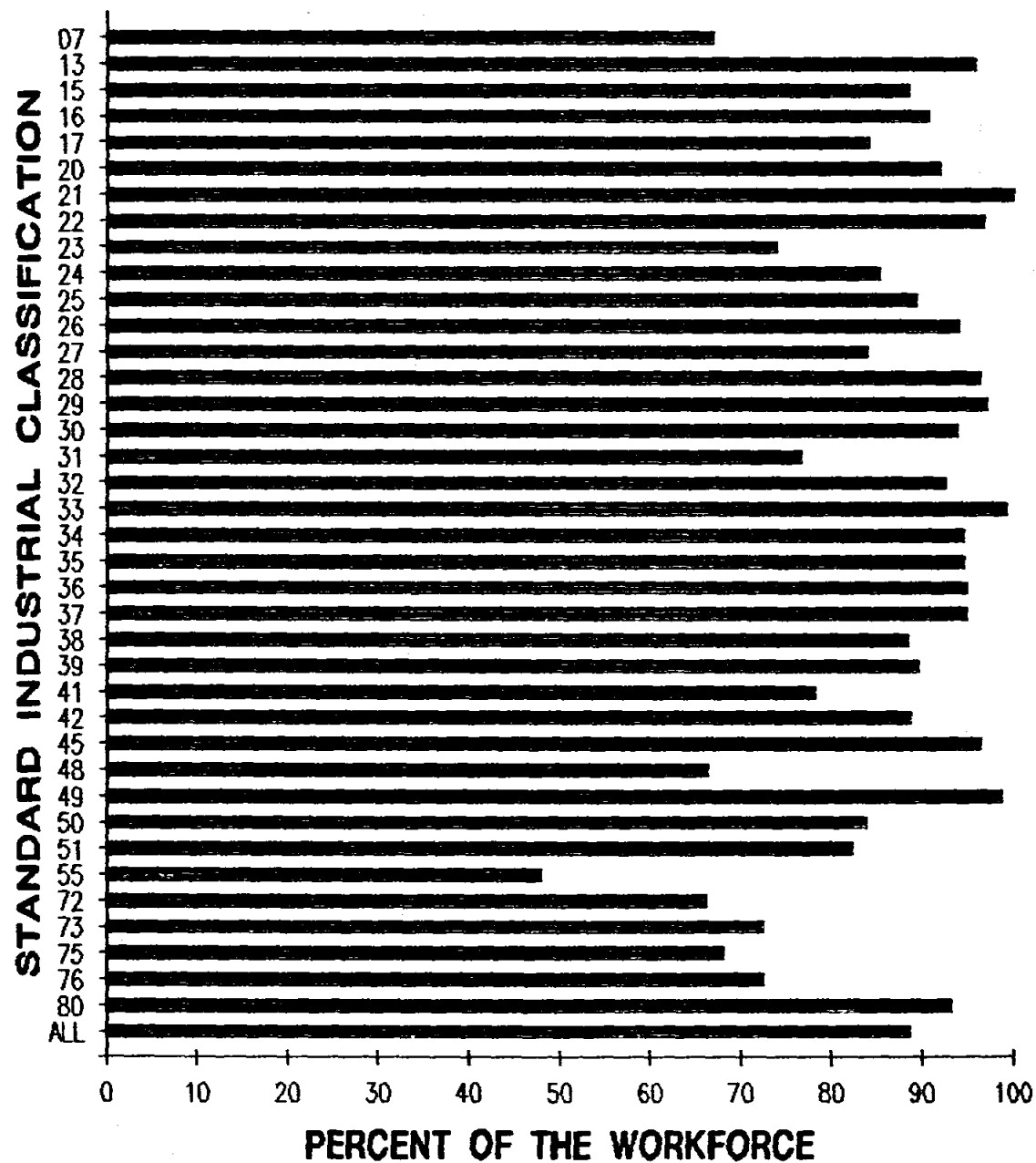
NATIONAL OCCUPATIONAL EXPOSURE SURVEY (1981-1983) TABLE NO. IV-83

NUMBER AND PERCENT OF PLANTS AND EMPLOYEES IN PLANTS WHICH  
 TAKE CORRECTIVE MEASURES FOR SAFETY RULE VIOLATIONS

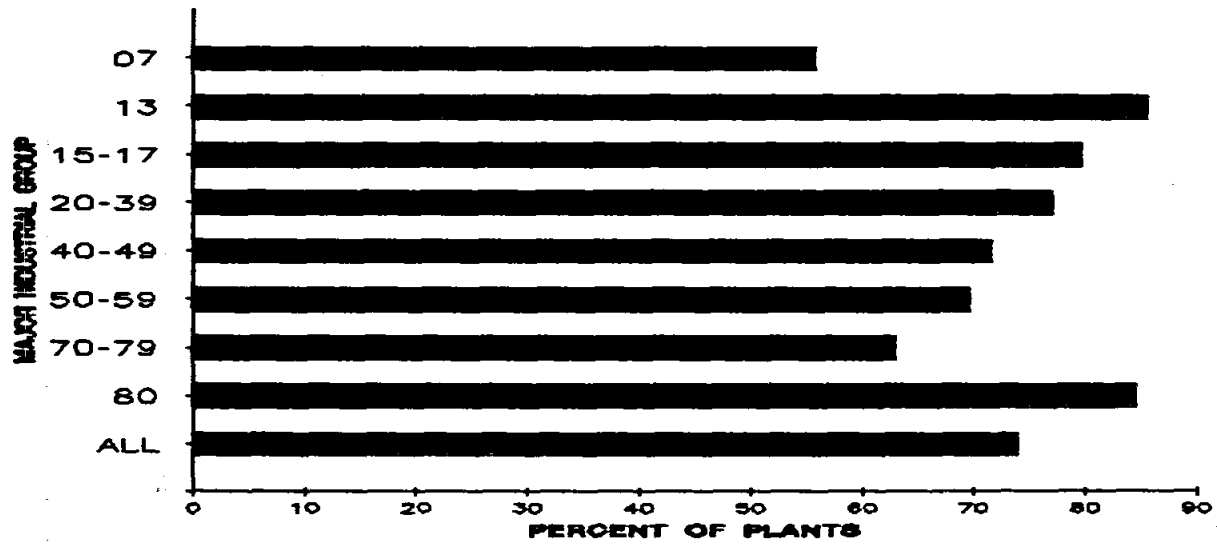
MAJOR GROUP	PLANTS				EMPLOYEES			
	SMALL (8-99)	MEDIUM (100-499)	LARGE (≥500)	TOTAL	SMALL (8-99)	MEDIUM (100-499)	LARGE (≥500)	TOTAL
07	3082* (1107) 55.4%	70* (67) 100.0%	...	3152* (1096) 56.0%	67193* (26732) 64.8%	7009* (6680) 100.0%	...	74203* (25825) 67.0%
13	7214 (1605) 83.9%	1019* (331) 100.0%	46* (52) 100.0%	8279 (1811) 85.7%	191455 (36051) 91.6%	173943* (58021) 100.0%	31383* (35291) 100.0%	396781* (99982) 95.8%
15-17	74739 (2510) 79.2%	3858 (507) 93.1%	242* (135) 100.0%	78840 (2486) 79.9%	1732743 (42900) 82.6%	695584 (102062) 94.4%	236057* (100060) 100.0%	2664384 (121873) 86.7%
20-39	111992 (4799) 73.1%	29558 (1792) 93.1%	6052 (206) 96.5%	147602 (5360) 77.2%	3629899 (107189) 78.6%	5999090 (357219) 94.0%	8076451 (222145) 97.7%	17705440 (501980) 91.9%
40-49	36692 (2804) 69.0%	5551 (968) 95.0%	464* (134) 99.2%	42707 (2997) 71.8%	1101435 (88711) 76.8%	1105798 (215611) 95.9%	567814 (106651) 99.0%	2775046 (260300) 87.8%
50-59	40549 (3119) 69.4%	2040* (537) 76.7%	...	42588 (3081) 69.8%	828100 (82824) 73.6%	310533* (79958) 76.0%	...	1138632 (115618) 74.3%
70-79	45673 (4058) 62.5%	1925 (300) 82.1%	342* (150) 96.5%	47940 (3953) 63.2%	843443 (71592) 60.5%	384455 (62572) 82.8%	319786* (122169) 94.2%	1547684 (107817) 70.4%
80	1970* (616) 69.4%	2046 (282) 94.5%	1969 (294) 95.5%	5985 (569) 84.7%	81906 (18585) 80.6%	491538 (76729) 92.0%	2842421 (376570) 94.0%	3415865 (373035) 93.4%
ALL	321911 (8220) 71.7%	46067 (2232) 92.1%	9115 (436) 96.5%	377094 (8591) 74.1%	8476174 (188533) 76.5%	9167950 (451793) 93.0%	12073912 (478237) 96.8%	29718035 (713725) 89.0%

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

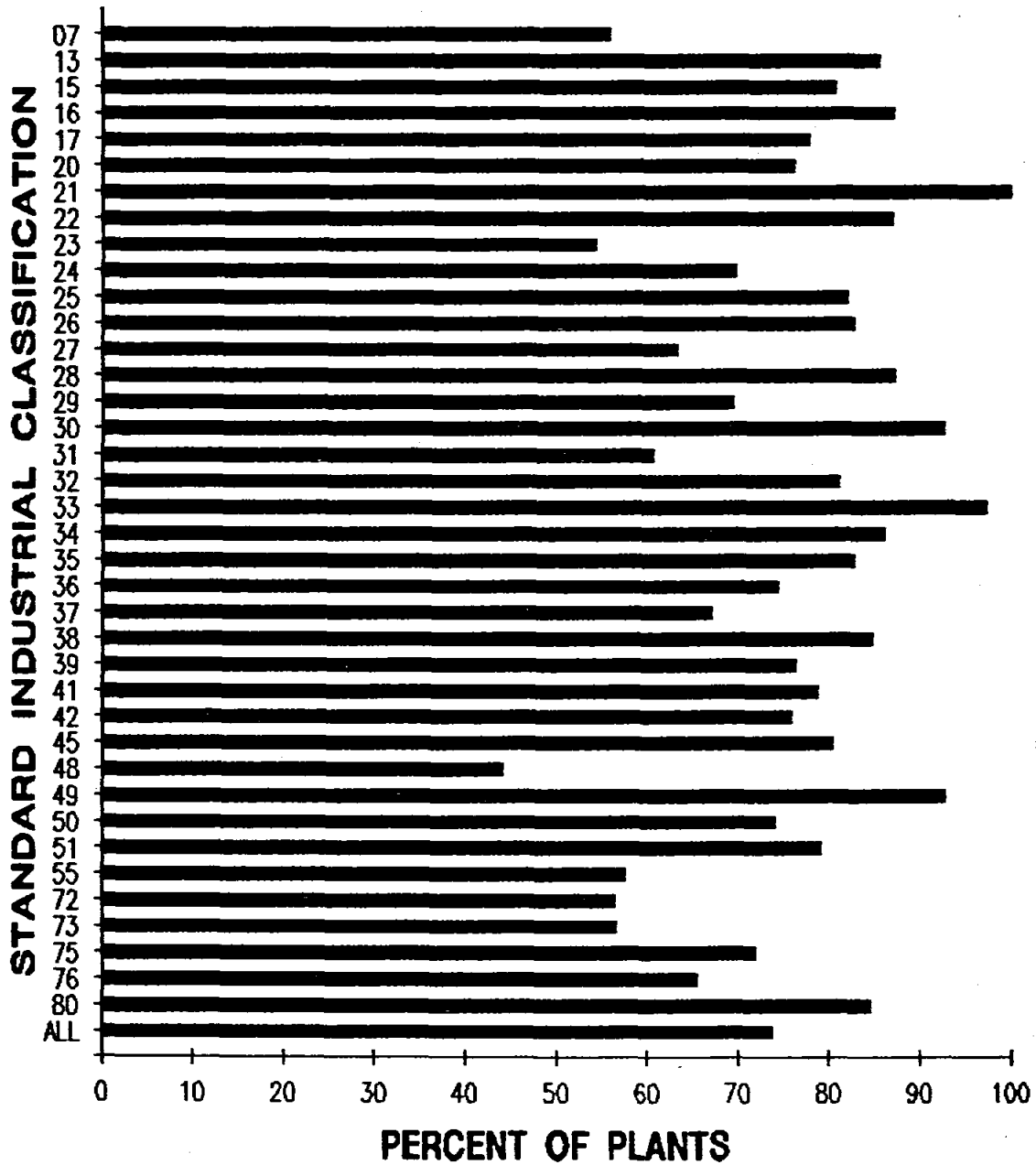
**FIGURE IV - 139**  
**WORKERS IN PLANTS WHICH TAKE CORRECTIVE**  
**MEASURES FOR SAFETY RULE VIOLATIONS**  
 (NOES 1981-1983)



**FIGURE IV - 140**  
**PLANTS WHICH TAKE CORRECTIVE MEASURES**  
**FOR SAFETY RULE VIOLATIONS**  
**(NOES 1981-1983)**



**FIGURE IV - 141**  
**PLANTS WHICH TAKE CORRECTIVE MEASURES**  
**FOR SAFETY RULE VIOLATIONS**  
**(NOES 1981-1983)**



NUMBER AND PERCENT OF PLANTS AND EMPLOYEES IN PLANTS WHICH TAKE CORRECTIVE MEASURES FOR SAFETY RULE VIOLATIONS

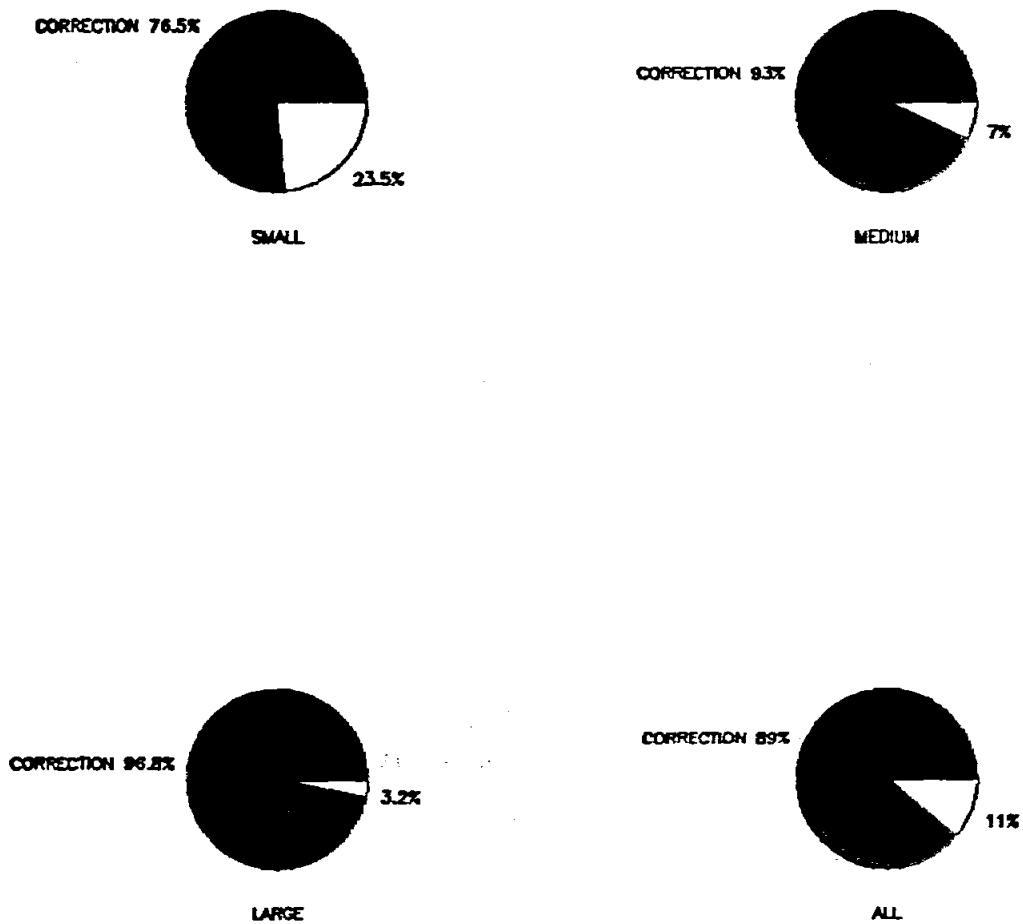
SIC CODE	PLANTS			TOTAL	EMPLOYEES			TOTAL
	SMALL (8-99)	MEDIUM (100-499)	LARGE (>500)		SMALL (8-99)	MEDIUM (100-499)	LARGE (>500)	
07	3082* (1107) 55.4%	70* (67) 100.0%	...	3152* (1096) 56.0%	67193* (26732) 64.8%	7009* (6680) 100.0%	...	74203* (25825) 67.0%
13	7214 (1605) 83.9%	1019* (331) 100.0%	46* (52) 100.0%	8279 (1811) 85.7%	191455 (36051) 91.6%	173943* (58021) 100.0%	31383* (35291) 100.0%	396781* (99982) 95.8%
15	19946 (1777) 80.1%	1044 (194) 94.3%	135* (100) 100.0%	21124 (1853) 80.8%	467857 (44490) 83.1%	190966 (38345) 96.3%	134799* (71218) 100.0%	793622 (90259) 88.6%
16	9853 (1286) 87.3%	952 (184) 85.1%	107* (67) 100.0%	10912 (1314) 87.2%	253081 (44014) 89.1%	184114 (42377) 88.6%	101258* (53561) 100.0%	538453 (86100) 90.8%
17	44941 (1763) 77.3%	1863 (425) 97.1%	...	46804 (1735) 77.9%	1011805 (37478) 80.8%	320505* (82896) 96.8%	...	1332309 (84397) 84.2%
20	7943 (946) 69.6%	3078 (455) 95.7%	559 (121) 100.0%	11581 (1027) 76.3%	281721 (26590) 72.5%	655659 (105498) 97.3%	491775 (104930) 100.0%	1429154 (107832) 92.0%
21	30* (43) 100.0%	...	79* (56) 99.6%	109* (65) 100.0%	1866* (2685) 100.0%	...	112133* (67572) 100.0%	113999* (66861) 100.0%
22	2397 (392) 81.7%	1502 (159) 94.6%	299* (80) 99.9%	4198 (408) 87.1%	93336 (9405) 88.0%	336648 (29009) 97.0%	261093* (94186) 100.0%	691078 (89155) 96.8%
23	5994 (936) 47.9%	2388 (220) 77.0%	242* (93) 100.0%	8625 (996) 54.4%	224706 (18468) 53.0%	484727 (34859) 79.5%	208437* (79559) 100.0%	917870 (80023) 73.9%
24	7175 (733) 67.0%	1082 (136) 94.2%	104* (74) 100.0%	8361 (712) 69.9%	227562 (25924) 74.9%	174437 (24113) 95.0%	92355* (52501) 100.0%	494354 (77337) 85.3%
25	3382 (486) 81.2%	894 (171) 84.2%	119* (75) 99.6%	4395 (519) 82.2%	117677 (16828) 84.6%	223173 (44846) 87.0%	122998* (62394) 100.0%	463848 (80417) 89.5%
26	3187 (581) 77.5%	1480 (264) 94.3%	214* (73) 100.0%	4881 (607) 82.8%	117796 (16532) 85.6%	264622 (49646) 94.0%	206864* (65220) 100.0%	589282 (91463) 94.1%
27	10819 (1404) 59.7%	1779 (132) 95.0%	298* (115) 94.2%	12896 (1397) 63.5%	327464 (30577) 68.5%	342068 (39767) 94.8%	326596* (82467) 94.5%	996128 (98366) 84.1%
28	5252 (505) 85.1%	1118 (93) 96.4%	369 (66) 97.1%	6739 (472) 87.4%	160966 (8502) 89.1%	255608 (28516) 98.0%	468180 (98398) 98.3%	884754 (104401) 96.4%
29	584* (289) 57.8%	293* (125) 100.0%	101* (42) 100.0%	978* (351) 69.6%	34715* (17013) 84.7%	63255* (21394) 100.0%	117545* (70259) 100.0%	215515* (82016) 97.2%
30	6183 (1024) 92.1%	1499 (368) 97.5%	180* (67) 80.3%	7861 (1177) 92.8%	209633 (27481) 93.2%	289412* (79571) 98.3%	208455* (70884) 89.2%	707500 (105492) 93.9%
31	470* (230) 50.5%	432 (97) 75.9%	25* (24) 100.0%	927* (273) 60.8%	14172* (6084) 56.9%	105231* (28642) 77.7%	15664* (16901) 100.0%	135067* (36050) 76.7%
32	6962 (1197) 79.1%	973 (146) 96.2%	184* (71) 99.9%	8119 (1246) 81.2%	199296 (16238) 84.0%	204667 (32074) 97.9%	128993* (49687) 100.0%	532957 (48966) 92.7%
33	3981 (453) 96.3%	1468 (138) 100.0%	337 (62) 100.0%	5786 (471) 97.4%	130640 (9786) 94.3%	311081 (30513) 100.0%	621499 (82456) 100.0%	1063220 (85653) 99.3%

SIC CODE	PLANTS				EMPLOYEES			
	SMALL (8-99)	MEDIUM (100-499)	LARGE (≥500)	TOTAL	SMALL (8-99)	MEDIUM (100-499)	LARGE (≥500)	TOTAL
34	15546 (1079) 83.9%	3061 (156) 98.0%	346 (83) 99.9%	18953 (1050) 86.2%	487233 (18403) 87.8%	585438 (25971) 98.1%	351056* (100266) 100.0%	1423727 (105376) 94.7%
35	18157 (1257) 80.2%	3304 (129) 97.0%	777 (80) 99.1%	22238 (1230) 82.9%	515338 (17058) 84.9%	636433 (13917) 96.3%	1102774 (149310) 99.1%	2254546 (151279) 94.7%
36	4539 (583) 63.9%	2591 (96) 96.5%	746 (168) 94.8%	7876 (598) 74.5%	176264 (17279) 76.5%	536462 (9299) 97.1%	1152759 (193759) 97.5%	1865485 (191763) 94.9%
37	2214 (441) 55.7%	1131 (89) 95.0%	413 (91) 99.3%	3757 (446) 67.3%	80298 (19384) 63.2%	229699 (24531) 96.0%	1474248 (217195) 97.4%	1784245 (215071) 94.9%
38	2260 (478) 84.0%	865 (96) 90.4%	322* (107) 77.3%	3447 (476) 84.9%	94810 (14075) 90.6%	173822 (22647) 89.4%	403657* (120817) 87.7%	672289 (129754) 88.5%
39	4916 (614) 75.0%	619* (1129) 77.6%	338* (216) 100.0%	5873 (1324) 76.4%	134406 (17021) 81.0%	126649* (232079) 84.7%	209369* (120490) 100.0%	470424* (212221) 89.7%
41	3568 (817) 80.7%	320* (119) 62.8%	...	3888 (830) 78.9%	104297 (22714) 88.7%	51926* (27319) 63.7%	...	156223 (34762) 78.4%
42	14921 (1986) 74.5%	1409 (304) 95.1%	82* (54) 99.5%	16411 (2052) 76.0%	406818 (50104) 83.4%	248926 (55375) 96.2%	74830* (49333) 100.0%	730574 (70402) 88.9%
45	2473* (792) 76.3%	590* (397) 99.9%	144* (56) 97.6%	3206* (854) 80.6%	67879* (22174) 87.6%	109332* (75829) 100.0%	258326* (79623) 97.8%	435537 (101568) 96.6%
48	6011 (1157) 40.9%	872 (201) 96.7%	34* (21) 99.0%	6917 (1189) 44.2%	209117* (60216) 49.1%	168317* (42649) 95.5%	70083* (43687) 100.0%	447518 (91137) 66.6%
49	7497 (1874) 91.3%	1862* (567) 100.0%	173* (99) 99.8%	9531 (2061) 93.0%	260110 (59959) 96.6%	425470* (151076) 100.0%	146565* (65566) 100.0%	832144 (186869) 98.9%
50	22169 (2195) 73.0%	1711* (451) 95.0%	...	23880 (2248) 74.3%	495377 (65074) 78.6%	272107* (75159) 96.1%	...	767484 (111349) 84.0%
51	7174 (1231) 78.7%	237* (237) 100.0%	...	7410 (1270) 79.2%	147861* (41403) 79.9%	27013* (27013) 100.0%	...	174874* (53871) 82.5%
55	11207 (2169) 59.2%	91* (84) 14.7%	...	11298 (2190) 57.8%	184862 (41820) 59.8%	11413* (10448) 11.6%	...	196275 (45803) 48.2%
72	11493 (1512) 55.7%	582* (180) 86.2%	13* (19) 100.0%	12089 (1561) 56.7%	231762 (39116) 61.0%	71681* (23137) 87.2%	10670* (15114) 100.0%	314113 (53290) 66.4%
73	8962 (1597) 54.1%	1161 (225) 78.0%	328* (141) 96.3%	10452 (1618) 56.8%	209285 (40887) 49.7%	280195 (54144) 80.1%	309116* (116237) 94.0%	798595 (106863) 72.6%
75	18851 (3436) 72.0%	59* (60) 99.7%	...	18910 (3448) 72.1%	279449 (49800) 67.6%	8238* (8380) 100.0%	...	287688 (51371) 68.3%
76	6366 (1413) 65.3%	123* (94) 100.0%	...	6490 (1432) 65.7%	122947 (22914) 68.9%	24341* (19716) 100.0%	...	147288 (34683) 72.6%
80	1970* (616) 69.4%	2046 (282) 94.5%	1969 (294) 95.5%	5985 (569) 84.7%	81906 (18585) 80.6%	491538 (76729) 92.0%	2842421 (376570) 94.0%	3415865 (373035) 93.4%
ALL	319689 (9124) 71.6%	45617 (1013) 92.1%	9099 (387) 96.5%	374404 (8908) 74.0%	8422960 (163737) 76.4%	9081729 (150510) 92.9%	12064906 (491298) 96.8%	29569595 (491585) 88.9%

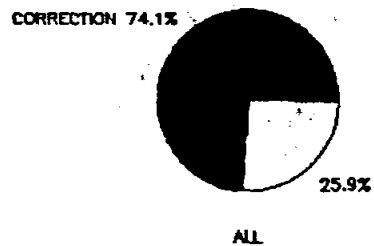
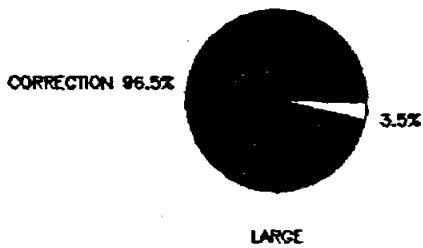
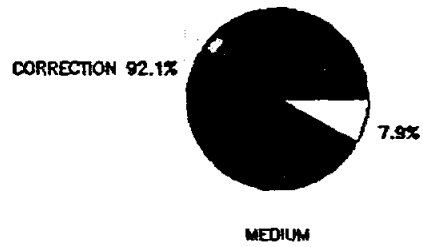
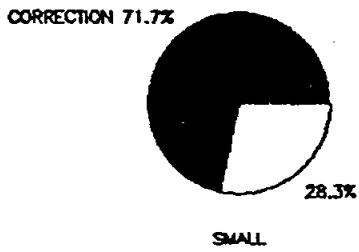
\*Standard error >25% of the estimate. The estimate may be unreliable.  
 ...No facilities observed.



**FIGURE IV - 142**  
**WORKERS IN PLANTS WHICH TAKE CORRECTIVE MEASURES**  
**IF EMPLOYEES VIOLATE SAFETY RULES BY PLANT SIZE**  
**(NOES 1981-1983)**



**FIGURE IV - 143**  
**PLANTS WHICH TAKE CORRECTIVE MEASURES**  
**IF EMPLOYEES VIOLATE SAFETY RULES**  
**(NOES 1981-1983)**



NOES QUESTIONNAIRE ITEM NO. 60

Corrective Measures for Safety Rule Violations Which Involve Economic Penalties

Intent

The intent of this question was to determine if the facility used economic penalties as part of the corrective measures policy for safety rule violations.

This item was displayed on the questionnaire as:

60. Do those corrective measures involve economic penalties?

- 1 Yes
- 2 No (Skip to Question 62)

Notes

This question was asked only of those respondents that indicated that corrective measures were taken by management for safety rule violations.

Economic penalties imposed by management were considered to be those which resulted in a financial loss to the penalized worker. Examples of such action include fines, dismissal, work hour reduction, suspension, or loss of seniority.

Actions not undertaken by management, such as labor union sanctions against the offending worker(s), were not considered to meet the intent of this question.

Analysis

One analysis of the responses to question 60 is presented.

Response 60.1 - Corrective measures include economic penalties

The estimates of the plants which include economic penalties in their corrective measures to enforce work safety rules, and workers in those plants (by number and proportion of the total) are displayed in Figures IV-144, IV-145, IV-146, and IV-147, and Tables IV-85 and IV-86.

- Figure IV-144      Plants which use economic penalties for safety rule violations  
                                (by major industrial group)
- Figure IV-145      Plants which use economic penalties for safety rule violations  
                                (by 2-digit SIC)
- Figure IV-146      Workers in plants which use economic penalties for safety rule violations by plant size
- Figure IV-147      Plants which use economic penalties for safety rule violations

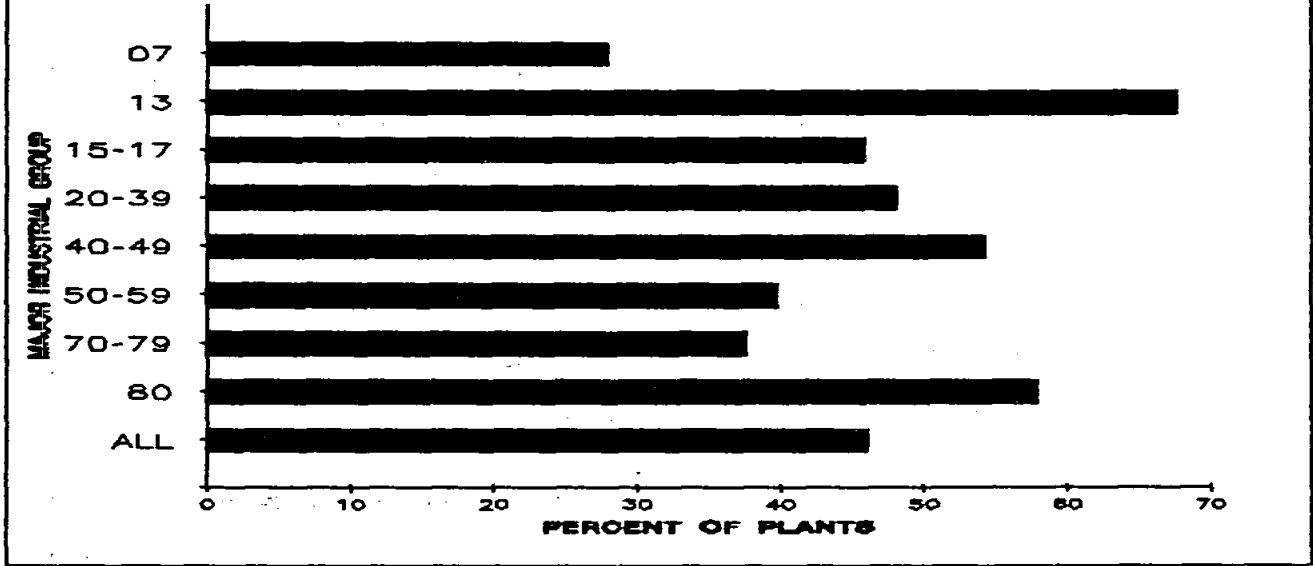
**Table IV-85**

**Number and percent of plants and employees in plants which use economic penalties when safety rules are violated (by major industrial group)**

**Table IV-86**

**Number and percent of plants and employees in plants which use economic penalties when safety rules are violated (by 2-digit SIC)**

**FIGURE IV - 144**  
**PLANTS WHICH USE ECONOMIC PENALTIES**  
**FOR SAFETY RULE VIOLATIONS**  
**(NOES 1981-1983)**



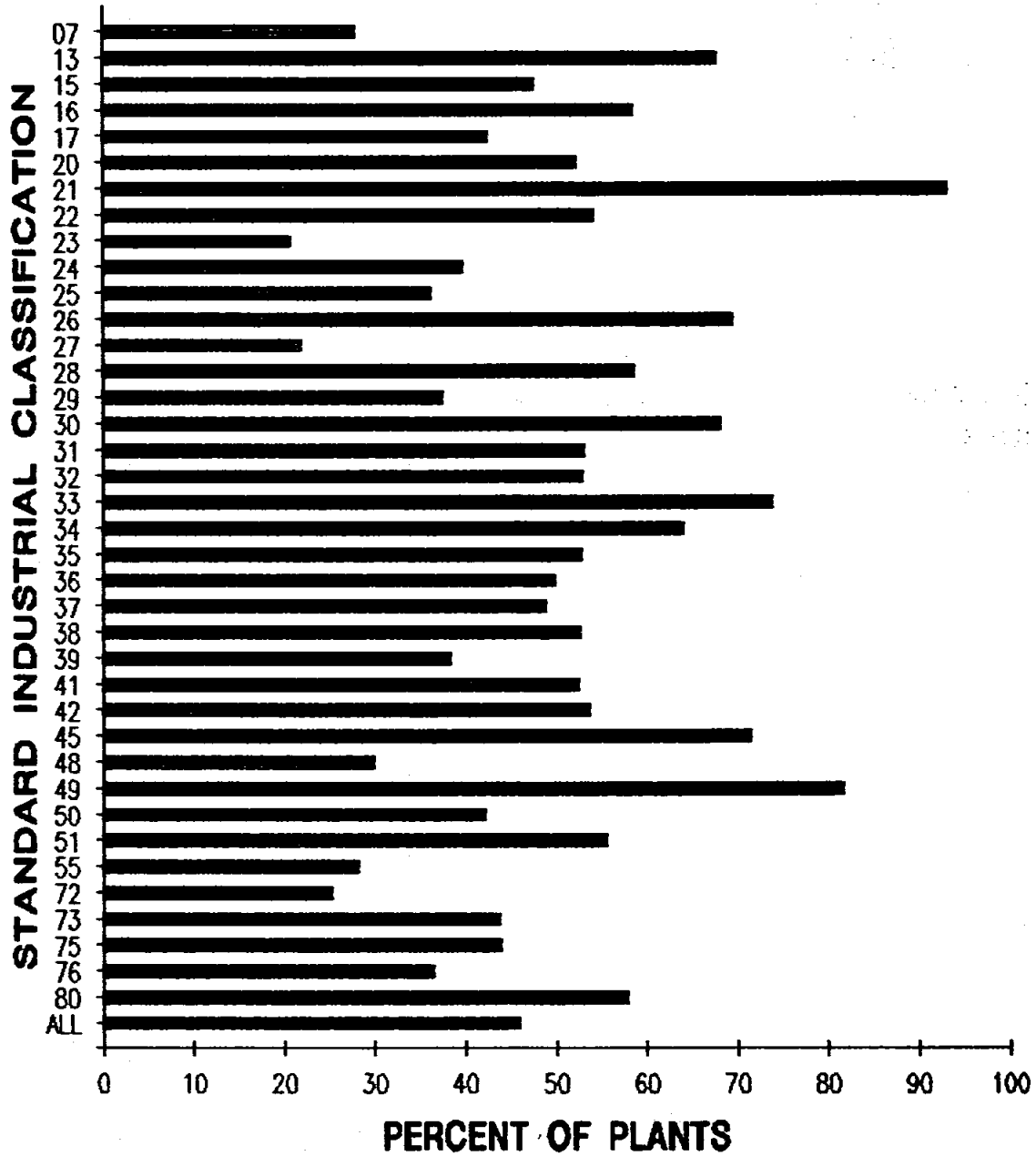
NATIONAL OCCUPATIONAL EXPOSURE SURVEY (1981-1983) TABLE NO. IV-85

NUMBER AND PERCENT OF PLANTS AND EMPLOYEES IN PLANTS WHICH  
 USE ECONOMIC PENALTIES WHEN SAFETY RULES ARE VIOLATED

MAJOR GROUP	PLANTS				EMPLOYEES			
	SMALL (8-99)	MEDIUM (100-499)	LARGE (≥500)	TOTAL	SMALL (8-99)	MEDIUM (100-499)	LARGE (≥500)	TOTAL
07	1511* (690) 27.2%	70* (67) 100.0%	...	1581* (669) 28.1%	37912* (17064) 36.6%	7009* (6680) 100.0%	...	44921* (15742) 40.6%
13	5547* (1433) 64.5%	961* (323) 94.3%	46* (52) 100.0%	6554* (1690) 67.8%	141105 (28673) 67.5%	163920* (56580) 94.2%	31383* (35291) 100.0%	336408* (95923) 81.2%
15-17	42498 (2331) 45.1%	2747 (419) 66.3%	202* (126) 83.6%	45447 (2217) 46.0%	1072159 (54746) 51.1%	499599 (79484) 67.8%	205974* (92441) 87.3%	1777731 (104974) 57.9%
20-39	62404 (3063) 40.7%	24367 (1416) 76.7%	5341 (246) 85.2%	92112 (3900) 48.2%	2280933 (89322) 49.4%	4977142 (293260) 78.0%	6956513 (314927) 84.2%	14214587 (562239) 73.8%
40-49	27035 (2623) 50.9%	4947 (916) 84.7%	362* (124) 77.4%	32344 (2718) 54.4%	889658 (87209) 62.0%	1010637 (207302) 87.6%	476816 (105403) 83.1%	2377111 (247081) 75.2%
50-59	22667 (3284) 38.8%	1687* (432) 63.5%	...	24354 (3205) 39.9%	508668 (81451) 45.2%	270390* (70793) 66.1%	...	779058 (105894) 50.8%
70-79	26997 (2491) 36.9%	1401 (281) 59.7%	294* (141) 83.1%	28692 (2409) 37.8%	517397 (49273) 37.1%	269919 (46274) 58.1%	260951* (108870) 76.8%	1048267 (106265) 47.7%
80	976* (330) 34.4%	1584 (263) 73.1%	1545 (255) 75.0%	4105 (497) 58.1%	48879* (13722) 48.1%	373119 (72130) 69.8%	2279171 (338207) 75.4%	2701168 (333665) 73.8%
ALL	189635 (6429) 42.2%	37765 (1861) 75.5%	7791 (423) 82.5%	235190 (6866) 46.2%	5496709 (170131) 49.6%	7571736 (388452) 76.8%	10210806 (496302) 81.9%	23279252 (729019) 69.7%

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

**FIGURE IV - 145**  
**PLANTS WHICH USE ECONOMIC PENALTIES**  
**FOR SAFETY RULE VIOLATIONS**  
**(NOES 1981-1983)**



NUMBER AND PERCENT OF PLANTS AND EMPLOYEES IN PLANTS WHICH USE ECONOMIC PENALTIES WHEN SAFETY RULES ARE VIOLATED

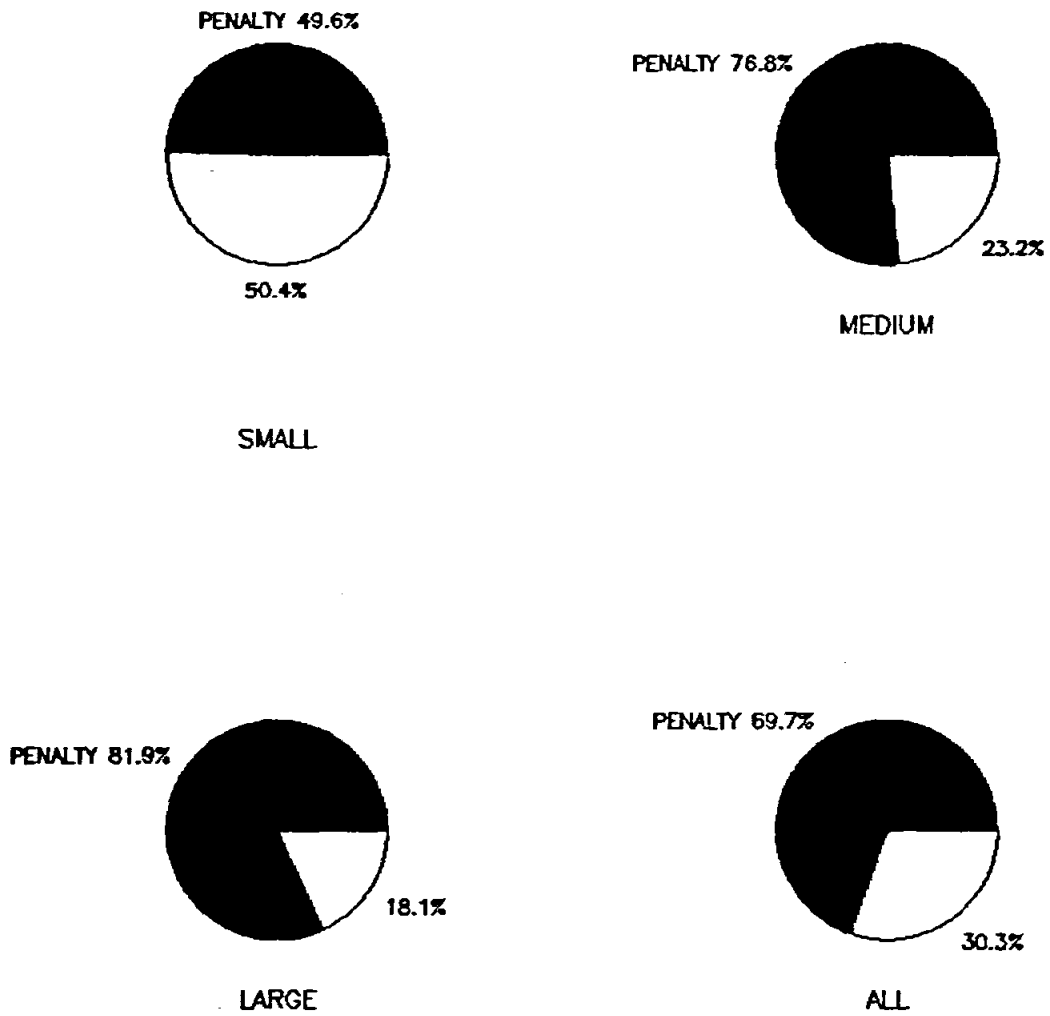
SIC CODE	PLANTS				EMPLOYEES			
	SMALL (8-99)	MEDIUM (100-499)	LARGE (≥500)	TOTAL	SMALL (8-99)	MEDIUM (100-499)	LARGE (≥500)	TOTAL
07	1511* (690) 27.2%	70* (67) 100.0%	...	1581* (669) 28.1%	37912* (17064) 36.6%	7009* (6680) 100.0%	...	44921* (15742) 40.6%
13	5547* (1433) 64.5%	961* (323) 94.3%	46* (52) 100.0%	6554* (1690) 67.8%	141105 (28673) 67.5%	163920* (56580) 94.2%	31383* (35291) 100.0%	336408* (95923) 81.2%
15	11493 (1103) 46.1%	900 (188) 81.3%	112* (97) 83.3%	12505 (1116) 47.8%	269205 (33776) 47.8%	155630 (37144) 78.5%	116685* (68268) 86.6%	541520 (76490) 60.4%
16	6789 (1165) 60.2%	462* (170) 41.3%	90* (66) 84.0%	7340 (1190) 58.7%	184418 (35144) 64.9%	98050* (40408) 47.2%	89288* (54040) 88.2%	371756 (85247) 62.7%
17	24216 (2182) 41.7%	1386* (358) 72.2%	...	25602 (2130) 42.6%	618536 (46240) 49.4%	245919* (72878) 74.3%	...	864455 (73317) 54.6%
20	4585 (732) 40.2%	2840 (368) 88.3%	534 (124) 95.5%	7958 (886) 52.4%	175473 (25544) 45.2%	604179 (90664) 89.7%	473800 (106393) 96.3%	1253452 (109358) 80.7%
21	30* (43) 100.0%	...	71* (53) 90.2%	102* (63) 93.2%	1866* (2685) 100.0%	...	96114* (64119) 85.7%	97980* (63568) 85.9%
22	1268 (266) 43.2%	1083 (128) 68.2%	265* (82) 88.7%	2616 (273) 54.3%	53613 (8792) 50.6%	248352 (30008) 71.6%	200267* (78947) 76.7%	502232 (76084) 70.3%
23	1635* (502) 13.1%	1476 (209) 47.6%	200* (90) 82.6%	3311 (507) 20.9%	73044 (17416) 17.2%	301890 (39021) 49.5%	179306* (76896) 86.0%	554240 (68754) 44.6%
24	3736 (580) 34.9%	922 (164) 80.3%	104* (74) 100.0%	4762 (592) 39.8%	158800 (23493) 52.3%	145195 (26029) 79.1%	92355* (52501) 100.0%	396349 (74643) 68.4%
25	1207* (382) 29.0%	622* (166) 58.6%	119* (75) 99.6%	1948 (408) 36.4%	55299 (13781) 39.8%	155245* (39827) 60.5%	122998* (62394) 100.0%	333542 (75318) 64.3%
26	2600 (549) 63.2%	1300 (262) 82.8%	203* (74) 94.8%	4103 (651) 69.6%	96471 (14266) 70.1%	238747 (49330) 84.8%	166625* (67320) 80.5%	501843 (99367) 80.2%
27	3160 (574) 17.4%	1099 (134) 58.7%	222* (93) 70.2%	4481 (581) 22.1%	133449 (28345) 27.9%	233213 (35618) 64.6%	219021* (65840) 63.3%	585683 (82188) 49.4%
28	3129 (468) 50.7%	1096 (89) 94.5%	309 (68) 81.4%	4535 (487) 58.8%	121554 (12452) 67.3%	248788 (26707) 95.4%	399322* (108520) 83.8%	769664 (111469) 83.8%
29	249* (178) 24.6%	178* (124) 60.9%	101* (42) 100.0%	528* (232) 37.6%	17737* (11943) 43.3%	30529* (18332) 48.3%	117545* (70259) 100.0%	165811* (78962) 74.8%
30	4185 (918) 62.4%	1421 (324) 92.4%	180* (67) 80.3%	5786 (1099) 68.3%	160596 (24951) 71.4%	266667 (57144) 90.5%	208455* (70884) 89.2%	635718 (92262) 84.4%
31	359* (201) 38.5%	432 (97) 75.9%	22* (20) 87.3%	812* (255) 53.3%	12383* (5865) 49.8%	105231* (28642) 77.7%	11650* (10428) 74.4%	129263* (34159) 73.4%
32	4182 (1024) 47.5%	944 (146) 93.3%	184* (71) 99.9%	5310 (1014) 53.1%	138414 (22616) 58.4%	198819 (32000) 95.1%	128993* (49687) 100.0%	466225 (53034) 81.1%
33	2623 (533) 63.5%	1443 (137) 98.3%	324 (61) 96.0%	4391 (562) 73.9%	92949 (16227) 67.1%	305873 (29406) 98.3%	609529 (84534) 98.1%	1008352 (89452) 94.1%

SIC CODE	PLANTS				EMPLOYEES			
	SMALL (8-99)	MEDIUM (100-499)	LARGE (>500)	TOTAL	SMALL (8-99)	MEDIUM (100-499)	LARGE (>500)	TOTAL
34	11184 (1277) 60.4%	2617 (250) 83.8%	305* (85) 88.0%	14105 (1195) 64.2%	36611 (27981) 66.0%	520783 (35419) 87.3%	324545* (104665) 92.4%	1211439 (110296) 80.6%
35	10759 (1312) 47.5%	2808 (214) 82.5%	662 (82) 84.4%	14229 (1288) 53.0%	339565 (27887) 56.0%	525542 (41514) 79.5%	855781 (107821) 76.9%	1720888 (117901) 72.3%
36	2669 (547) 37.6%	2003 (228) 74.6%	620* (171) 78.8%	5292 (594) 50.0%	112009 (15892) 48.6%	406540 (60704) 73.6%	897804 (159525) 75.9%	1416352 (178553) 72.1%
37	1398 (329) 35.2%	950 (121) 79.8%	391 (97) 94.0%	2738 (356) 49.1%	53931* (15259) 42.5%	209445 (28467) 87.6%	1436385 (207867) 94.9%	1699760 (208200) 90.4%
38	1235* (432) 45.9%	711 (106) 74.3%	199* (95) 47.8%	2145 (412) 52.8%	49311* (12958) 47.1%	138218 (23818) 71.1%	212649* (112312) 46.2%	400178* (118131) 52.7%
39	2213 (495) 33.8%	421* (775) 52.7%	328* (221) 97.0%	2962* (976) 38.5%	68359 (15934) 41.2%	93887* (180410) 62.8%	203369* (123186) 97.1%	365616* (175746) 69.7%
41	2374* (854) 53.7%	223* (153) 43.8%	...	2597* (852) 52.7%	61956* (17549) 52.7%	40408* (34747) 49.6%	...	102364* (35334) 51.4%
42	10276 (1515) 51.3%	1300 (290) 87.7%	56* (43) 68.8%	11632 (1635) 53.9%	314927 (46951) 64.6%	232548 (53959) 89.8%	54719* (40786) 73.1%	602194 (67218) 73.3%
45	2126* (737) 65.6%	590* (397) 99.9%	134* (53) 91.2%	2849* (826) 71.6%	57939* (20848) 74.8%	109332* (75829) 100.0%	246924* (79117) 93.4%	414195* (105441) 91.8%
48	4045* (1254) 27.5%	649 (155) 72.0%	19* (16) 56.8%	4714* (1244) 30.1%	154871* (57450) 36.4%	127065* (38334) 72.1%	37029* (29526) 52.8%	318966 (77554) 47.5%
49	6401* (1797) 77.9%	1862* (567) 100.0%	120* (90) 69.2%	8383 (1997) 81.8%	250019 (60418) 92.8%	425470* (151076) 100.0%	120133* (61318) 82.0%	795622 (185045) 94.6%
50	12143 (1868) 40.0%	1450 (361) 80.5%	...	13593 (1857) 42.3%	291775 (47716) 47.2%	243378* (67863) 85.9%	...	541153 (93852) 59.2%
51	4974* (1389) 54.6%	237* (237) 100.0%	...	5211* (1460) 55.7%	104841* (43149) 56.7%	27013* (27013) 100.0%	...	131853* (55095) 62.2%
55	5550 (1318) 29.3%	...	...	5550 (1318) 28.4%	106052* (30738) 34.3%	...	...	106052* (30738) 26.0%
72	4921* (1395) 23.9%	478* (164) 70.8%	13* (19) 100.0%	5413* (1435) 25.4%	107365 (24111) 28.3%	59833* (21543) 72.8%	10670* (15114) 100.0%	177868 (39397) 37.6%
73	7072 (1506) 42.7%	741 (174) 49.8%	281* (135) 82.3%	8094 (1508) 44.0%	162518 (35697) 38.6%	177507 (34967) 50.8%	250280* (104326) 76.1%	590305 (102795) 53.7%
75	11504 (1981) 43.9%	59* (60) 99.7%	...	11563 (1982) 44.1%	188746 (33648) 45.7%	8238* (8380) 100.0%	...	196984 (34008) 46.7%
76	3499 (776) 35.9%	123* (94) 100.0%	...	3622 (765) 36.7%	58769 (13596) 32.9%	24341* (19716) 100.0%	...	83110* (22888) 41.0%
80	976* (330) 34.4%	1584 (263) 73.1%	1545 (255) 75.0%	4105 (497) 58.1%	48879* (13722) 48.1%	373119 (72130) 69.8%	2279171 (338207) 75.4%	2701168 (333665) 73.8%
ALL	187821 (7005) 42.0%	37490 (1159) 75.7%	7774 (427) 82.5%	233085 (7320) 46.1%	5446763 (174457) 49.4%	7511528 (197640) 76.9%	10201801 (527110) 81.9%	23160092 (617814) 69.6%

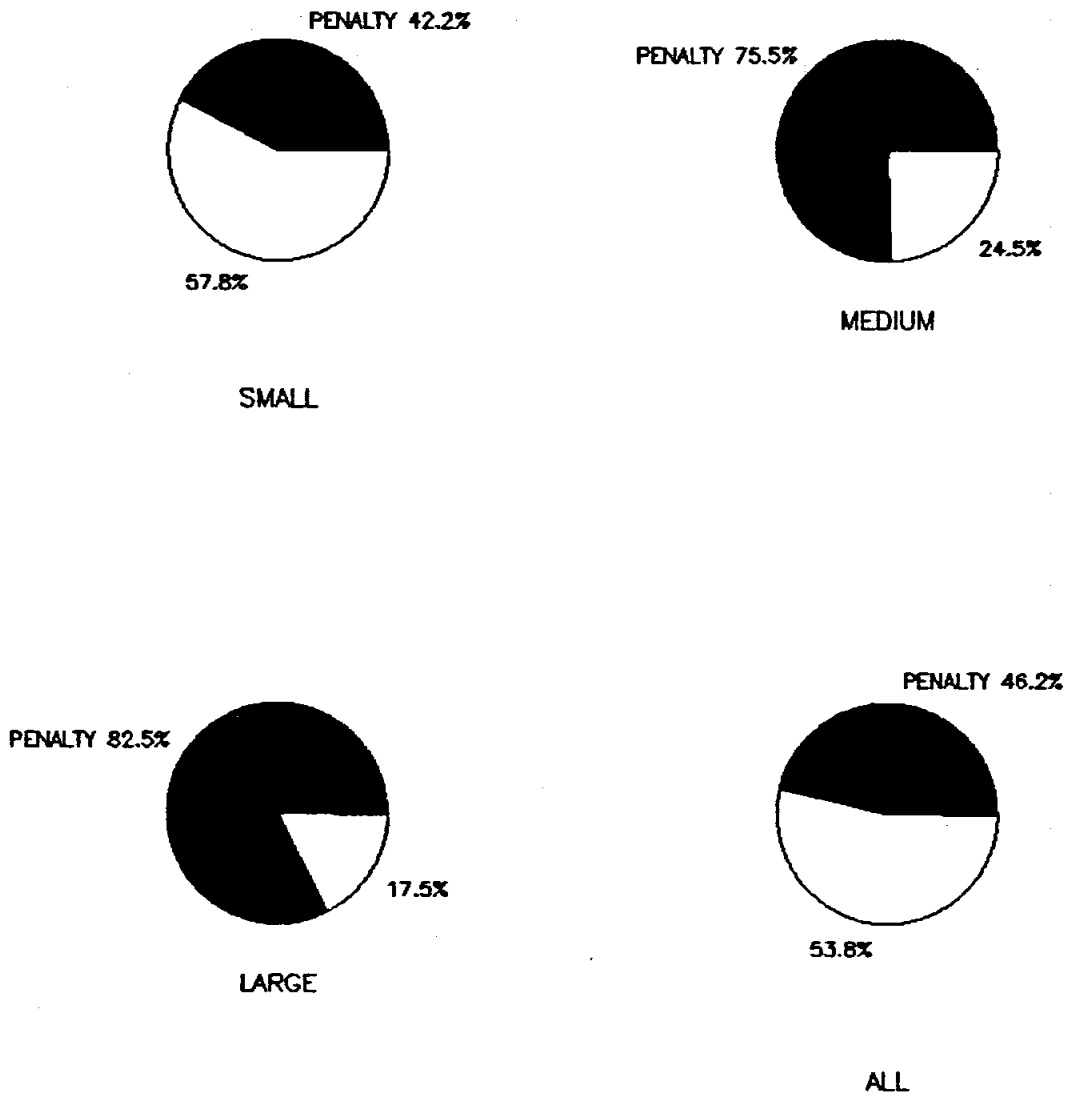
\*Standard error >25% of the estimate. The estimate may be unreliable.  
...No facilities observed.



**FIGURE IV - 146**  
**WORKERS IN PLANTS WHICH USE ECONOMIC PENALTIES**  
**FOR SAFETY RULE VIOLATIONS BY PLANT SIZE**  
**(NOES 1981-1983)**



**FIGURE IV - 147**  
**PLANTS WHICH USE ECONOMIC PENALTIES**  
**FOR SAFETY RULE VIOLATIONS**  
**(NOES 1981-1983)**



**NOES QUESTIONNAIRE ITEM NO. 61**  
**Assessment of Economic Penalties in the Past Year as a**  
**Result of a Safety Rule Enforcement Policy**

**Intent**

The intent of this question was to determine if management-directed actions which involved economic loss to the worker(s) concerned had been taken in the past year for safety rule violations.

This item was displayed on the questionnaire as:

61. Have any economic penalties been assessed in the past 12 months?

- 1 Yes
- 2 No, we know of no instances where violations of company policy have occurred within the last 12 months.
- 3 No, although we know that there was a minimum of one violation of company policy within the last 12 months.

**Notes**

This question was asked only of those who responded that their corrective measures for safety rule violations involved economic penalties.

As in question 60, economic penalties imposed by management resulted in an economic loss to the worker(s) involved. Examples included fines, dismissal, work hour reduction, suspension, or loss of seniority.

Corrective actions initiated by sources other than facility management were not considered affirmative responses to this question.

**Analysis**

Two analyses of the responses to question 61 are presented.

(1) Response 61.1 - Economic penalties assessed in the last year for safety rule violations

The estimated proportions of plants and workers in plants which imposed economic penalties (fines) on workers in the past year for safety rule violations are displayed in Figures IV-148, IV-149, IV-150, and IV-151.

- Figure IV-148 Workers in plants which fined employees for safety rule violations in the past year  
(by major industrial group)
- Figure IV-149 Workers in plants which fined employees for safety rule violations in the past year  
(by 2-digit SIC)
- Figure IV-150 Plants which fined employees for safety rule violations in the past year  
(by major industrial group)

**Figure IV-151**      **Plants which fined workers for safety rule violations  
in the past year  
(by 2-digit SIC)**

- (2) Response 61.1, 61.2, or 61.3 - Categories of economic penalties imposed  
in the last year**

**The estimates of the plants which have a policy of assessing economic penalties as part of their corrective measures for safety rule violations, by category of penalty assessment, and workers in those plants (by number and proportion of the total) are displayed in Figures IV-152 and IV-153, and Tables IV-87 and IV-88.**

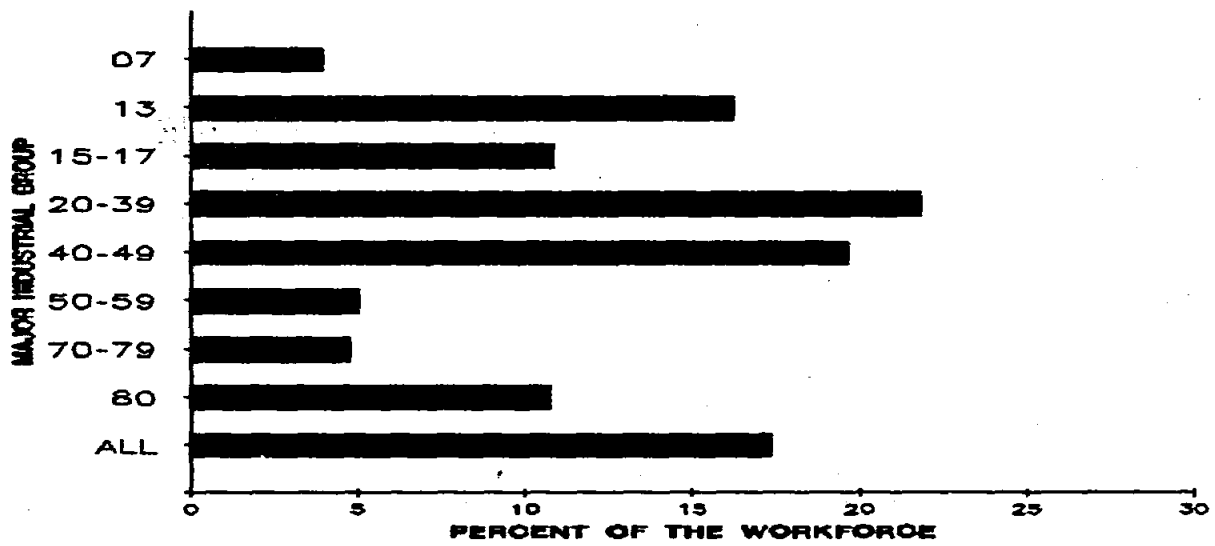
**Figure IV-152**      **Workers in plants by plant size and category of  
economic penalty for safety rule violations**

**Figure IV-153**      **Plants by size and category of economic penalty for  
safety rule violations**

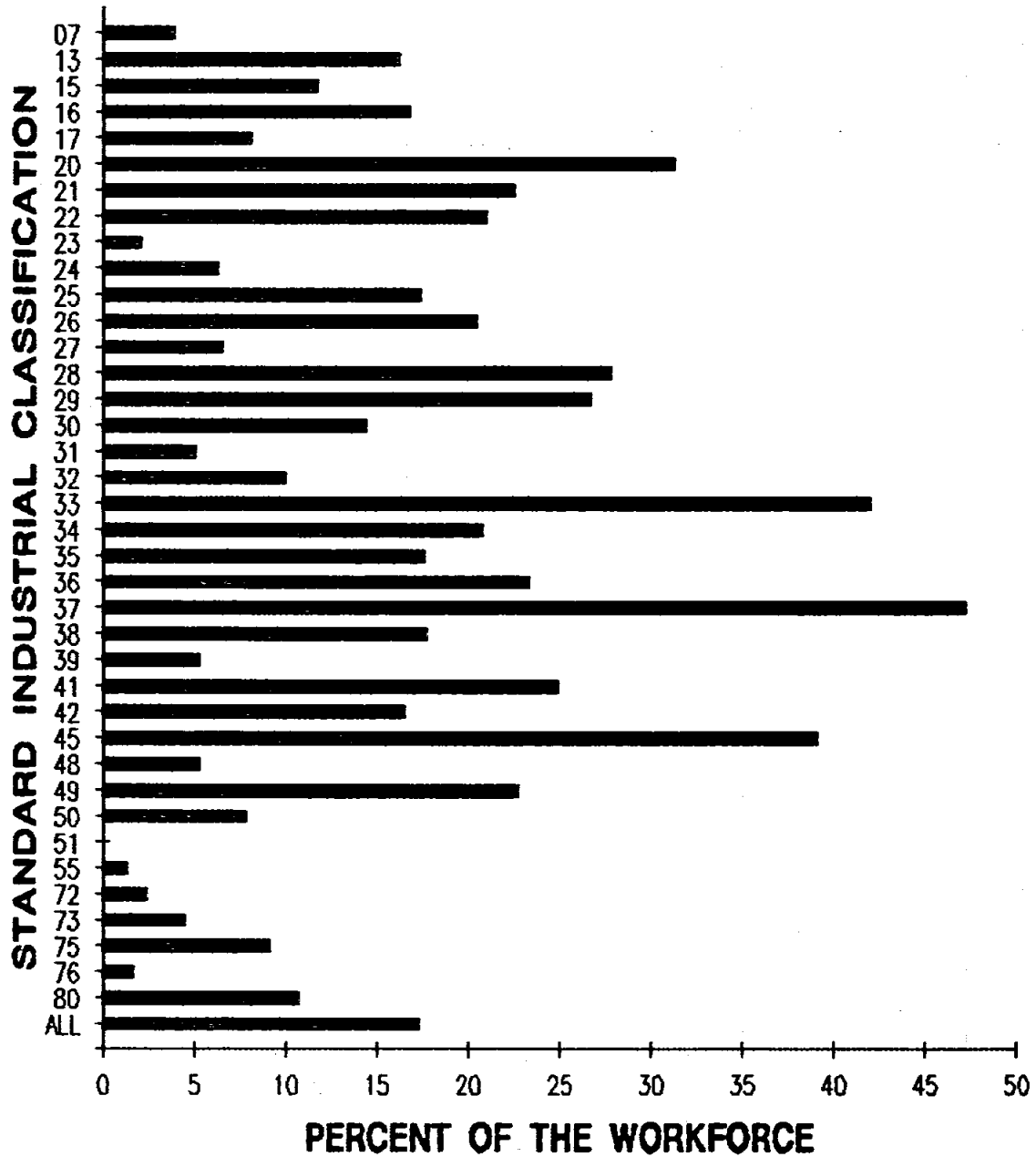
**Table IV-87**        **Number and percent of plants and workers in plants by  
category of economic penalty for safety rule violations  
(by major industrial group)**

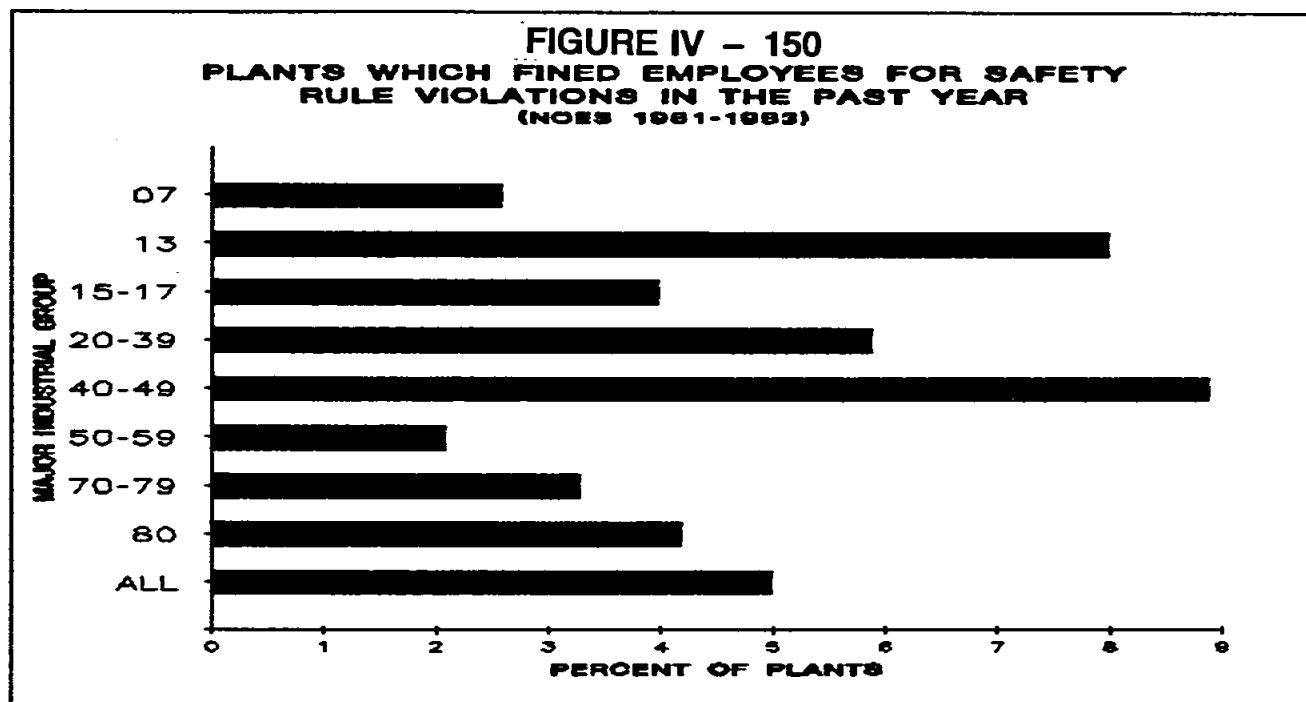
**Table IV-88**        **Number and percent of plants and workers in plants by  
category of economic penalty for safety rule violations  
(by 2-digit SIC)**

**FIGURE IV - 148**  
**WORKERS IN PLANTS WHICH FINED EMPLOYEES FOR**  
**SAFETY RULE VIOLATIONS IN THE PAST YEAR**  
**(NOES 1981-1987)**



**FIGURE IV - 149**  
**WORKERS IN PLANTS WHICH FINED EMPLOYEES FOR**  
**SAFETY RULE VIOLATIONS IN THE PAST YEAR**  
**(NOES 1981-1983)**





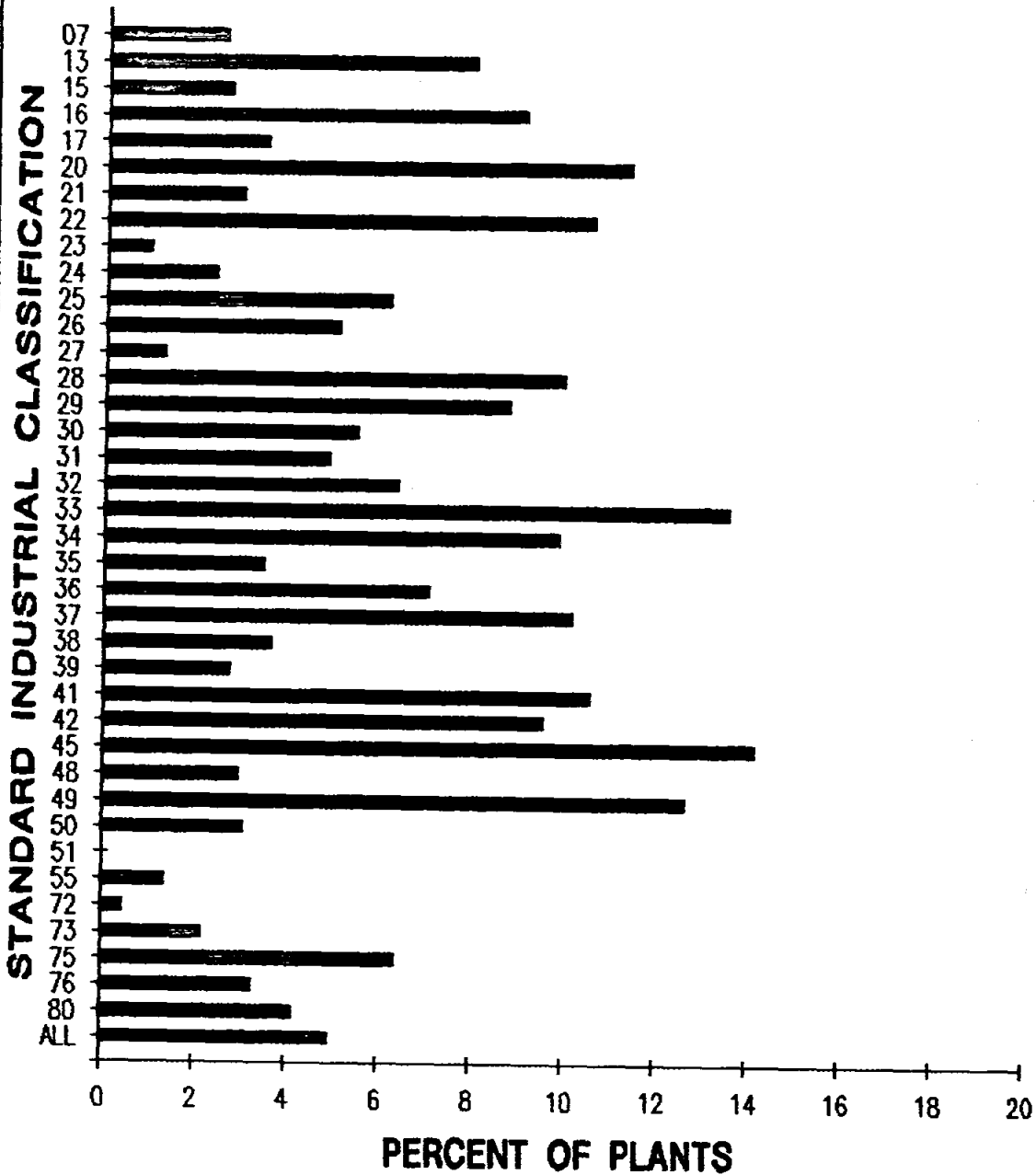
NATIONAL OCCUPATIONAL EXPOSURE SURVEY (1981-1983) TABLE NO. IV-87

NUMBER AND PERCENT OF PLANTS AND WORKERS IN PLANTS BY  
 CATEGORY OF ECONOMIC PENALTY FOR SAFETY RULE VIOLATION

MAJOR GROUP	PLANTS			WORKERS		
	ASSESSED PENALTIES	NO VIOLATIONS	UNPENALIZED VIOLATIONS	ASSESSED PENALTIES	NO VIOLATIONS	UNPENALIZED VIOLATIONS
07	149* (147) 2.6%	1294* (660) 23.0%	139* (137) 2.5%	4456* (4395) 4.0%	36854* (15135) 33.3%	3611* (3569) 3.3%
13	775* (401) 8.0%	4831 (1140) 50.0%	948* (497) 9.8%	67546* (23501) 16.3%	207332* (64535) 50.0%	61530* (23490) 14.9%
15-17	3974 (913) 4.0%	34562 (1983) 35.0%	6912 (1132) 7.0%	335981 (80367) 10.9%	1162435 (70494) 37.8%	279315 (66357) 9.1%
20-39	11266 (1109) 5.9%	63693 (3040) 33.3%	17153 (1847) 9.0%	4217148 (280250) 21.9%	7041364 (335146) 36.6%	2956075 (286842) 15.3%
40-49	5290 (987) 8.9%	22580 (2686) 38.0%	4475 (873) 7.5%	621565 (119300) 19.7%	1411145 (235788) 44.6%	344401 (72200) 10.9%
50-59	1275* (574) 2.1%	19404 (3301) 31.8%	3675* (1084) 6.0%	78411* (27893) 5.1%	578490 (102260) 37.7%	122157* (35379) 8.0%
70-79	2517* (783) 3.3%	24370 (2469) 32.1%	1805* (691) 2.4%	104627 (22500) 4.8%	797155 (103773) 36.3%	146485* (40464) 6.7%
80	294* (98) 4.2%	3490 (441) 49.4%	320* (115) 4.5%	394595* (112756) 10.8%	2044493 (312489) 55.9%	262080 (55657) 7.2%
ALL	25539 (2042) 5.0%	174224 (6270) 34.2%	35427 (2718) 7.0%	5824328 (337344) 17.4%	13279269 (544204) 39.7%	4175654 (313761) 12.5%

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

**FIGURE IV - 151**  
**PLANTS WHICH FINED WORKERS FOR SAFETY**  
**VIOLATIONS IN THE PAST YEAR**  
 (NOES 1981-1983)





NUMBER AND PERCENT OF PLANTS AND WORKERS IN PLANTS BY CATEGORY OF ECONOMIC PENALTY FOR SAFETY RULE VIOLATION

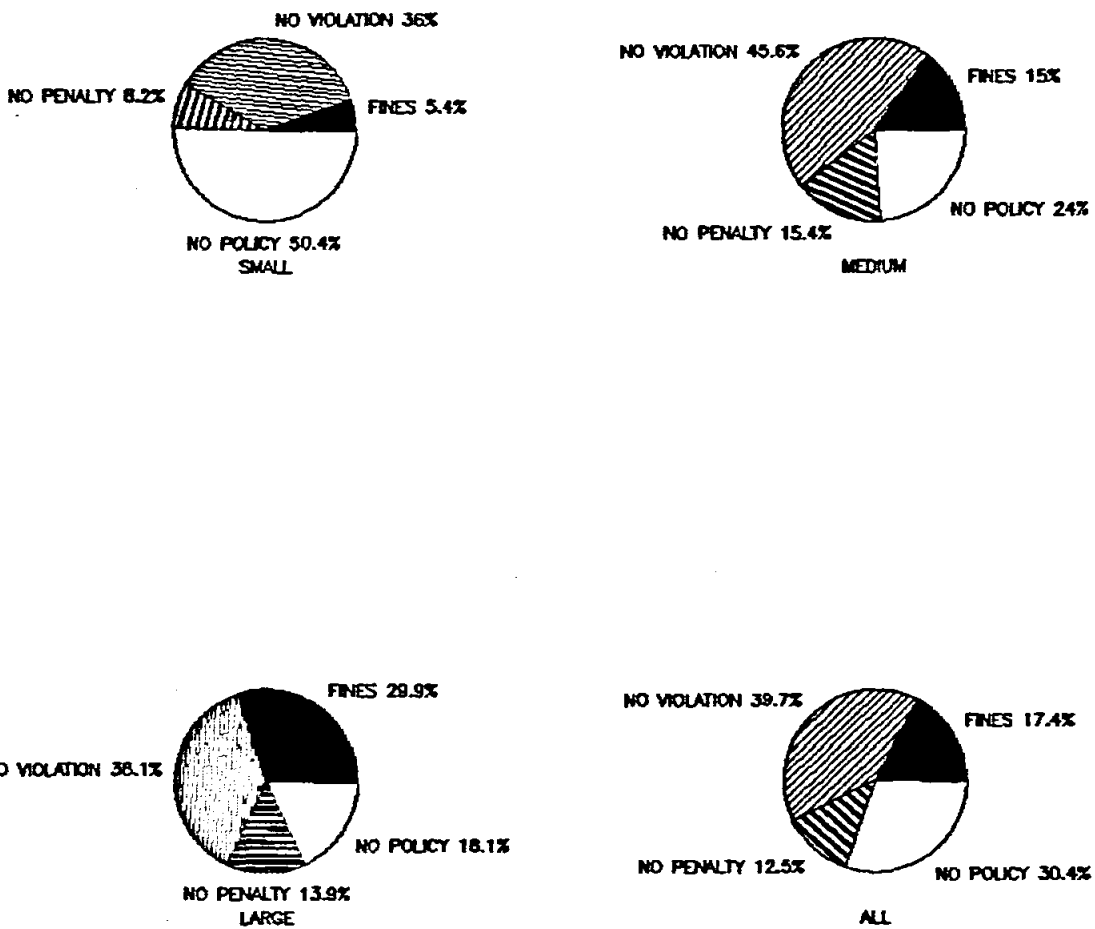
SIC CODE	PLANTS			WORKERS		
	ASSESSED PENALTIES	NO VIOLATIONS	UNPENALIZED VIOLATIONS	ASSESSED PENALTIES	NO VIOLATIONS	UNPENALIZED VIOLATIONS
07	149* (147) 2.6%	1294* (660) 23.0%	139* (137) 2.5%	4456* (4395) 4.0%	36854* (15135) 33.3%	3611* (3569) 3.3%
13	775* (401) 8.0%	4831 (1140) 50.0%	948* (497) 9.8%	67546* (23501) 16.3%	207332* (64535) 50.0%	61530* (23490) 14.9%
15	715* (394) 2.7%	9670 (1136) 37.0%	2120* (650) 8.1%	106135* (69321) 11.8%	347799 (42692) 38.8%	87587* (23274) 9.8%
16	1136* (524) 9.1%	4566 (1034) 36.5%	1638* (589) 13.1%	100122* (36948) 16.9%	172097 (42759) 29.0%	99538* (55563) 16.8%
17	2122* (609) 3.5%	20326 (2185) 33.8%	3154* (878) 5.3%	129725* (35753) 8.2%	642540 (61256) 40.6%	92191 (19697) 5.8%
20	1736* (524) 11.4%	4482 (795) 29.5%	1740* (464) 11.5%	488232* (122670) 31.4%	530840 (74148) 34.2%	234381* (61074) 15.1%
21	3* (4) 3.0%	62* (46) 56.5%	37* (45) 33.7%	25744* (28069) 22.6%	66982* (42632) 58.8%	5254* (9815) 4.6%
22	512* (153) 10.6%	1482 (367) 30.7%	622* (212) 12.9%	150460* (42110) 21.1%	248419* (68335) 34.8%	103353* (30922) 14.5%
23	153* (76) 1.0%	2695 (491) 17.0%	463* (143) 2.9%	26835* (13596) 2.2%	420092 (66050) 33.6%	107312* (32604) 8.6%
24	281* (175) 2.4%	3867 (713) 32.3%	614* (359) 5.1%	37336* (21817) 6.4%	276988* (78326) 47.8%	82025* (39556) 14.2%
25	332* (179) 6.2%	1430 (282) 26.7%	186* (163) 3.5%	90802* (32662) 17.5%	219132* (69188) 42.3%	23608* (19875) 4.6%
26	300* (128) 5.1%	2658 (624) 45.1%	1145* (300) 19.4%	128994* (59182) 20.6%	223696* (57864) 35.7%	149154* (59523) 23.8%
27	272* (134) 1.3%	3697 (584) 18.2%	512* (134) 2.5%	78335* (46839) 6.6%	435919 (78567) 36.8%	71429* (34928) 6.0%
28	769 (187) 10.0%	2896 (392) 37.6%	869 (213) 11.3%	255941* (87857) 27.9%	350216 (61023) 38.2%	163507* (46977) 17.8%
29	124* (129) 8.8%	157* (96) 11.2%	248* (196) 17.6%	59433* (58301) 26.8%	55262* (35434) 24.9%	51116* (33386) 23.0%
30	466* (227) 5.5%	3773 (776) 44.5%	1546* (477) 18.3%	109034* (33730) 14.5%	300565 (62887) 39.9%	226120* (68233) 30.0%
31	74* (74) 4.9%	625* (248) 41.0%	113* (60) 7.4%	9224* (10495) 5.2%	95184* (33292) 54.1%	24855* (13886) 14.1%
32	642* (256) 6.4%	3526 (804) 35.3%	1142* (301) 11.4%	58257* (25149) 10.1%	303636 (53579) 52.8%	104332* (36836) 18.1%
33	805* (243) 13.6%	2876 (624) 48.4%	709* (277) 11.9%	450661 (69289) 42.1%	311654* (85681) 29.1%	246037* (71111) 23.0%

SIC CODE	PLANTS			WORKERS		
	ASSESSED PENALTIES	NO VIOLATIONS	UNPENALIZED VIOLATIONS	ASSESSED PENALTIES	NO VIOLATIONS	UNPENALIZED VIOLATIONS
34	2168 (508) 9.9%	9811 (1136) 44.6%	2127 (344) 9.7%	314333* (80611) 20.9%	578509 (84797) 38.5%	318598 (51864) 21.2%
35	937* (308) 3.5%	10553 (1119) 39.3%	2739 (649) 10.2%	421148 (72111) 17.7%	965172 (106777) 40.5%	334568 (69072) 14.1%
36	754 (168) 7.1%	3316 (505) 31.4%	1221* (347) 11.5%	459236 (91292) 23.4%	645498 (109905) 32.8%	311618* (96766) 15.9%
37	571* (148) 10.2%	1703 (350) 30.5%	464* (187) 8.3%	889443 (186031) 47.3%	515330 (92031) 27.4%	294986* (107367) 15.7%
38	151* (59) 3.7%	1811 (393) 44.6%	182* (116) 4.5%	135348* (76716) 17.8%	229781 (49619) 30.3%	35049* (49683) 4.6%
39	215* (122) 2.8%	2272* (751) 29.6%	474* (315) 6.2%	28353* (24754) 5.4%	268489* (133598) 51.2%	68774* (66570) 13.1%
41	524* (309) 10.6%	2073* (808) 42.1%	...	49817* (35048) 25.0%	52547* (17883) 26.4%	...
42	2075* (590) 9.6%	8272 (1566) 38.3%	1285* (547) 6.0%	136541 (29392) 16.6%	389794 (63849) 47.5%	75858* (39345) 9.2%
45	564* (337) 14.2%	2083* (663) 52.4%	202* (141) 5.1%	176891* (84642) 39.2%	180207* (81143) 39.9%	57097* (31627) 12.7%
48	467* (309) 3.0%	2915* (926) 18.6%	1331* (829) 8.5%	36235* (23012) 5.4%	211430* (74876) 31.5%	71301* (38665) 10.6%
49	1302* (490) 12.7%	5906* (1644) 57.6%	1175* (466) 11.5%	191477* (53512) 22.8%	482299* (170509) 57.3%	121846* (52169) 14.5%
50	997* (475) 3.1%	10729 (1982) 33.4%	1867* (585) 5.8%	72563* (26433) 7.9%	372885 (83899) 40.8%	95704* (33955) 10.5%
51	...	4094* (1324) 43.8%	1117* (885) 11.9%	...	116512* (53625) 54.9%	15341* (9869) 7.2%
55	278* (278) 1.4%	4581* (1377) 23.4%	691* (348) 3.5%	5847* (5847) 1.4%	89093* (30028) 21.9%	11112* (5258) 2.7%
72	117* (84) .5%	4888* (1381) 22.9%	408* (341) 1.9%	11658* (8398) 2.5%	148286 (35638) 31.4%	17923* (12595) 3.8%
73	404* (186) 2.2%	7133 (1431) 38.8%	556* (262) 3.0%	50655* (13654) 4.6%	438585 (99711) 39.9%	101065* (30089) 9.2%
75	1669* (656) 6.4%	9437 (1766) 36.0%	457* (319) 1.7%	38715* (14850) 9.2%	150343 (27885) 35.7%	7925* (5303) 1.9%
76	327* (463) 3.3%	2911 (708) 29.5%	384* (260) 3.9%	3598* (5091) 1.8%	59941* (15002) 29.6%	19571* (16621) 9.7%
80	294* (98) 4.2%	3490 (441) 49.4%	320* (115) 4.5%	394595* (112756) 10.8%	2044493 (312489) 55.9%	262080 (55657) 7.2%
ALL	25182 (1876) 5.0%	172936 (6681) 34.2%	34967 (2994) 6.9%	5793725 (348916) 17.4%	13202494 (556441) 39.7%	4163873 (318742) 12.5%

\*Standard error &gt;25% of the estimate. The estimate may be unreliable.

...No facilities observed.

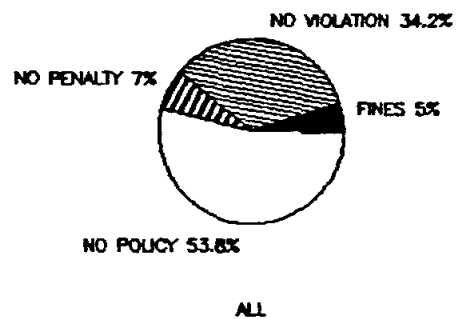
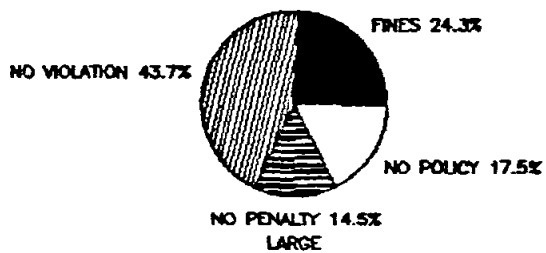
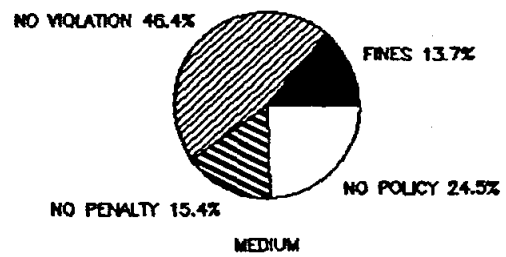
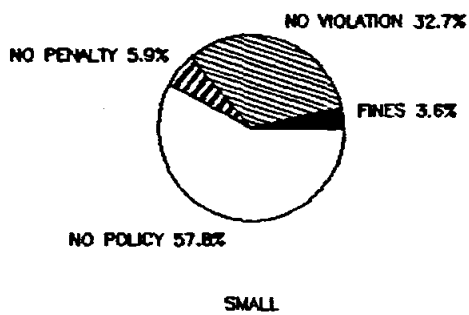
**FIGURE IV - 152**  
**WORKERS IN PLANTS BY PLANT SIZE AND CATEGORY**  
**OF ECONOMIC PENALTY FOR SAFETY RULE VIOLATIONS**  
**(NOES 1981-1983)**



**LEGEND**

- FINED - economic penalty(ies) in last year
- NO VIOLATION - no known violations in last year
- NO PENALTY - no economic penalty, although violations occurred in last year
- NO POLICY - no management policy to impose economic penalties

**FIGURE IV - 153  
PLANTS BY SIZE AND CATEGORY OF ECONOMIC  
PENALTY FOR SAFETY RULE VIOLATIONS  
(NOES 1981-1983)**



**LEGEND**

FINED	• economic penalty(ies) in last year
NO VIOLATION	• no known violations in last year
NO PENALTY	• no economic penalty, although violations occurred in last year
NO POLICY	• no management policy to impose economic penalties