

**SMACNA Safety Profile 2002**  
Performance and Characteristics

**October 2002**



## Introduction

Each year SMACNA conducts a Safety Awards Program. This Program recognizes SMACNA members with the lowest accident/illness rates in the prior calendar year. Awards are presented to participating contractors with the lowest accident/illness incidence rate (as computed using the OSHA lost workday incident rate formula). There are various award categories based upon a contractor's hours worked.

Information submitted for the contest provides a rich database for evaluating sheet metal industry safety performance. Findings are summarized in this report. In addition, contractors participating in the awards contest are provided with information to permit them to compare their own safety performance with other similar size contractors and those performing similar types of work.

In addition to safety performance information, the awards application profiles many aspects of SMACNA members' safety efforts. Information has been gathered on the prevalence and characteristics of safety programs and training and their effect on contractor safety performance. Particular attention is given to drug and alcohol abuse programs.

## Summary of Findings

Safety performance data provided by the 322 participating SMACNA contractors indicates that:

- The lost workday incidence rate was 3.99
- About one-third of all contractors reported no lost workday injuries
- Contractors with drug testing programs experienced significantly fewer lost workday cases
- Almost two-thirds of contractors accounting for 85 percent of hours worked reported a formal program for drug and alcohol abuse
- Lost workday incidence rate generally declined as hours worked increased.
- The average EMR for participants in the SSEAP was .84.

Characteristics of safety policies and programs of most SMACNA contractors include:

- A company safety policy
- A designated competent safety coordinator
- Regularly scheduled training programs
- A variety of safety training materials from SMACNA and other sources

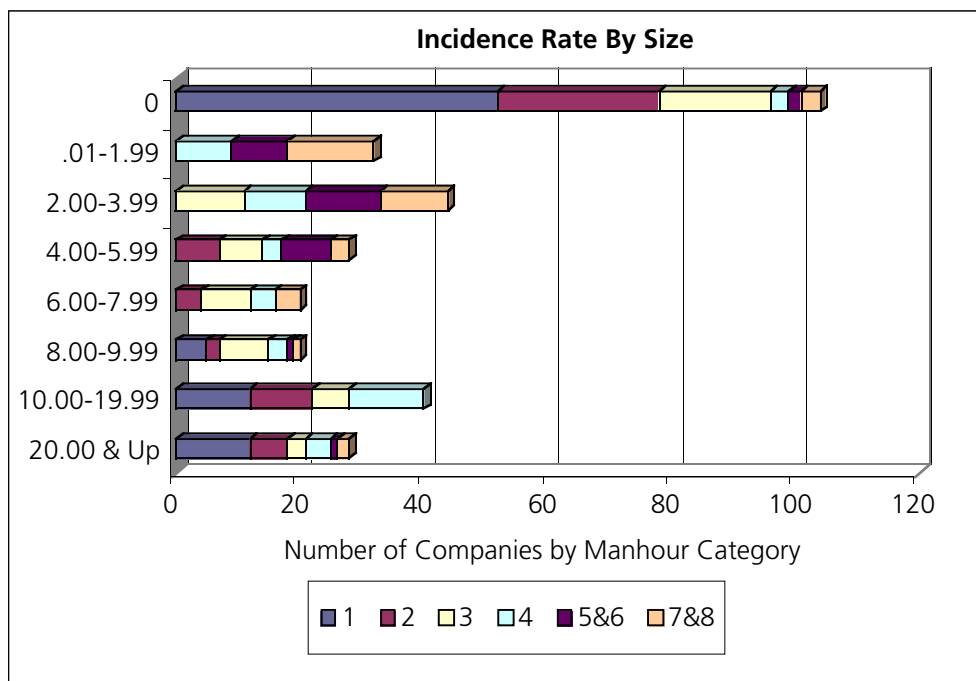
## Safety Summary and Incidence Rate by Size

There were 322 SMACNA contractors, representing more than 66 million man-hours worked, who participated in the 2002 Safety Statistics Evaluation and Awards Program (SSEAP). Nearly one-third of all participating SMACNA contractors reported having no occupational injuries or illnesses with lost workdays for the target year. The average lost workday incidence rate for contractors in the SSEAP was 3.99, an all-time low in the six-year history of the program.

The responding SMACNA contractors also reported nearly more than 15,600 lost workdays. This is in comparison to the 104 SMACNA contractors who reported having no lost workdays. For the SMACNA contractors who did report having lost workdays because of occupational injury or illness, the average number of days away from work was 87, the lowest average number for the program since 1998.

### SMACNA Safety Summary

| Class Size             | Reports    | Hours             | Number of Incidents | Incidence Rate |
|------------------------|------------|-------------------|---------------------|----------------|
| 1-25,000 hours         | 81         | 1,130,602         | 52                  | 9.20           |
| 25,001-50,000 hrs.     | 55         | 2,001,816         | 68                  | 6.79           |
| 50,001-100,000 hrs.    | 62         | 4,596,654         | 133                 | 5.79           |
| 100,001-200,000 hrs.   | 48         | 6,646,342         | 262                 | 7.88           |
| 200,001 - 300,000 hrs. | 22         | 5,458,198         | 163                 | 5.97           |
| 300,001-400,000 hrs.   | 16         | 5,420,827         | 113                 | 4.17           |
| 400,001-500,000 hrs.   | 11         | 4,831,280         | 96                  | 3.97           |
| Over 500,000 hrs.      | 27         | 36,321,241        | 439                 | 2.42           |
| <b>Grand Total</b>     | <b>322</b> | <b>66,406,960</b> | <b>1,326</b>        | <b>3.99</b>    |



## Incidence Rate Trends

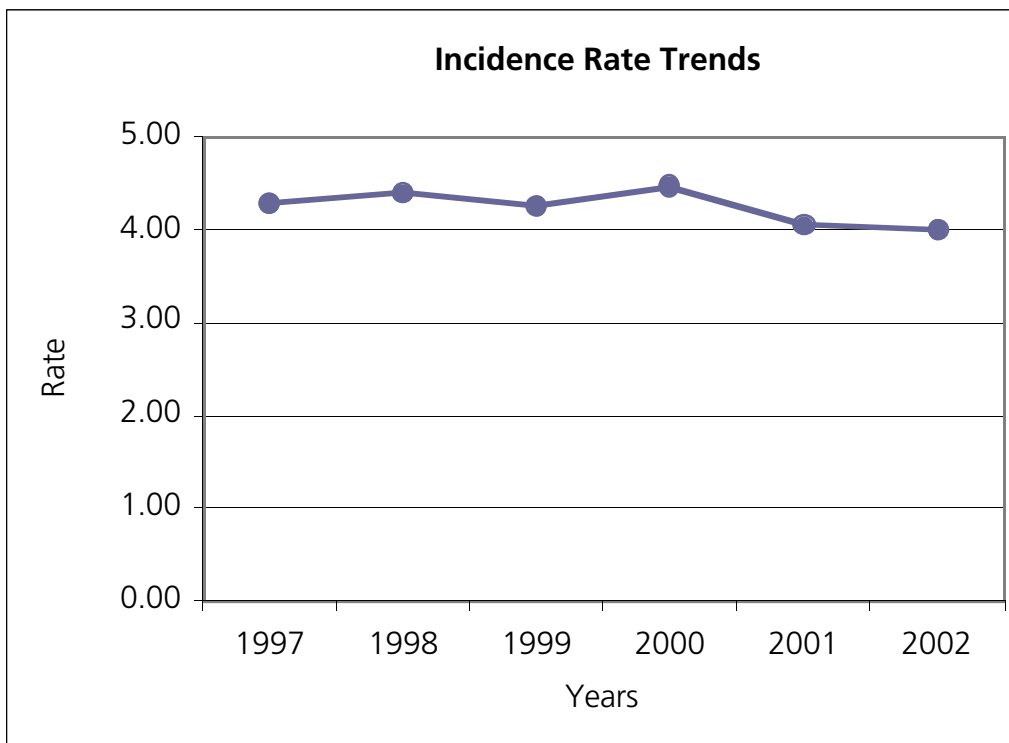
The last three years of the program have shown a positive trend in safety performance and, for the first time in its six-year history, the average lost workday incidence rate for SMACNA contractors participating in the SSEAP fell below four (3.99).

The Lost Workday Incident Rate (LWDI) is the average number of lost workday cases per 100 full time workers per year.

$$\text{LWDI} = \frac{\text{Number of Lost Workday Cases}}{\text{Number of Man Hours}} \times 200,000$$

There is a continuing trend for safety performance to appear to improve as the number of hours worked increases. This can be understood by the fact that the LWDI for a contractor working 25,000 man-hours is twice the LWDI of a contractor working 50,000 man-hours if each contractor has only one incident. Because this OSHA methodology is used in determining lost workday incidence rates, a small contractor is above the average as soon as one injury occurs.

At the same time, half the contractors working fewer than 25,000 hours reported no lost workday cases accounting for half of all contractors reporting a zero incidence rate. The LWDI is not the only indicator of safety performance and should only be one factor determining overall workplace safety.



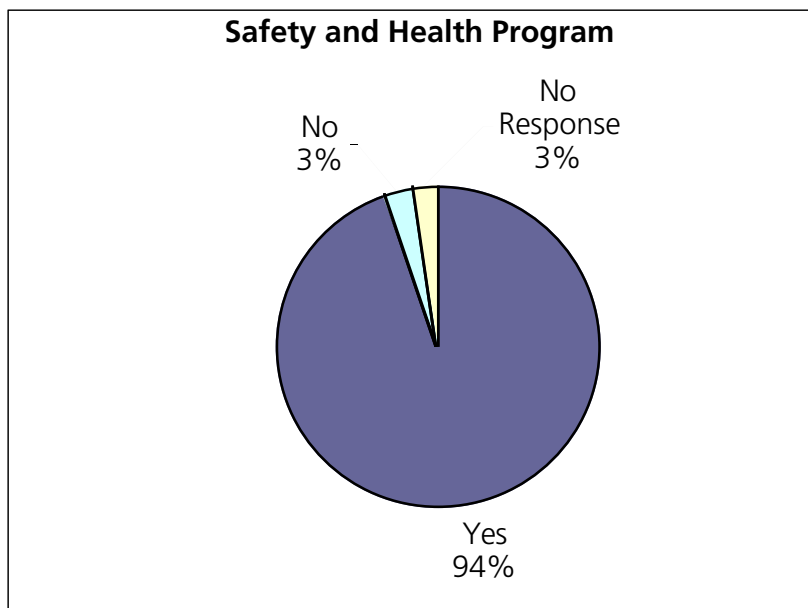
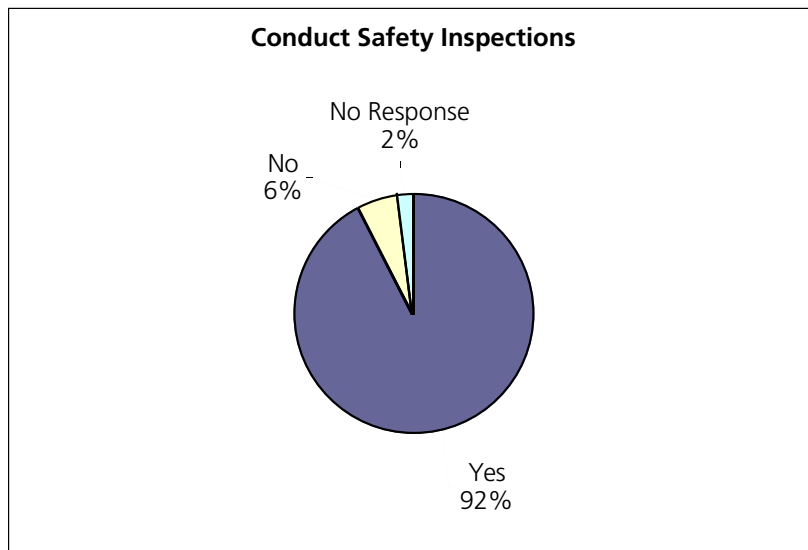
## Safety Programs

While Federal OSHA has not mandated written safety and health programs, there are many states that have such requirements. OSHA does publish guidelines for the development of a company safety and health program, however.

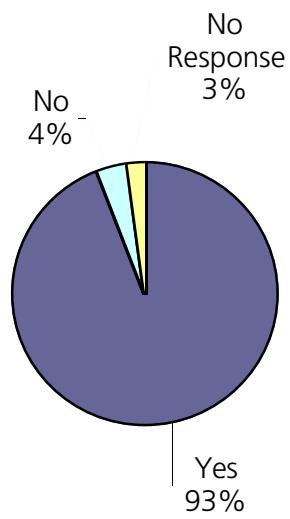
Industry statistics consistently report that the presence of a written safety and health program, which includes safety responsibilities and training, does lead to less injuries and illnesses on the jobsite.

The statistics gathered by SMACNA in the SSEAP show that most respondents report that their company does have a written safety and health program. In addition, a large number of contractors have designated competent safety coordinators and conduct regular safety training for their employees.

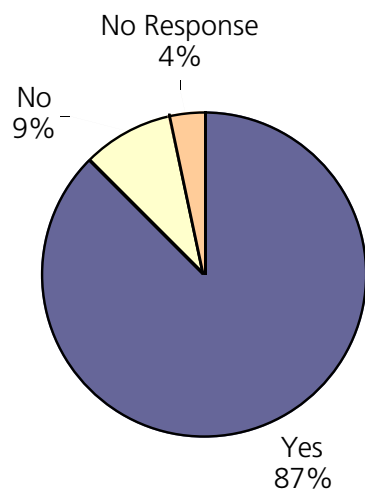
The reporting also shows that these contractors' programs include the use of the safety products and services that are made available by SMACNA. This is especially true amongst the larger contractors, as all responded positively to this survey question.



### Designated Safety Coordinator



### Use Safety Products & Services from SMACNA



## SMACNA Safety Trends

This is the sixth year of the SMACNA Safety Statistics Evaluation and Awards Program (SSEAP). The chart below shows the safety trends for this period. With the number of participating companies remaining relatively constant, it is easy to evaluate the trends.

- The overall incident rate for SMACNA contractors has been declining for three of the last four years with 2002 being the first year that the rate has dropped below 4.0
- The EMR for participating contractors has remained below 1.0.
- The most telling statistic might be the increasing number of SMACNA contractors who have reported a drug abuse program, increasing from 45% in 1997 to 64% in 2002.

SMACNA will continue to evaluate the trends of contractors to demonstrate that SMACNA contractors have a high level of safety excellence.

|  | 1997   | 1998   | 1999   | 2000   | 2001   | 2002   |
|--|--------|--------|--------|--------|--------|--------|
| Number of Companies Participating              | 294    | 312    | 334    | 303    | 292    | 322    |
| Total Number of Lost Workday Incidents         | 1,026  | 1,174  | 1,282  | 1,267  | 1,450  | 1,326  |
| Overall Incidence Rate                         | 4.28   | 4.39   | 4.25   | 4.47   | 4.04   | 3.99   |
| Total Number of Lost Workdays                  | 15,903 | 16,478 | 21,650 | 18,665 | 20,106 | 15,617 |
| Overall Average EMR                            | 0.84   | 0.84   | 0.85   | 0.81   | 0.83   | 0.84   |
| Contractors With Safety & Health Program       | 95%    | 91%    | 94%    | 92%    | 91%    | 94%    |
| Contractors With Designated Safety Coordinator | 94%    | 88%    | 95%    | 95%    | 92%    | 94%    |
| Contractors Using SMACNA Products              | 84%    | 82%    | 84%    | 89%    | 88%    | 88%    |
| Contractors With Drug Program                  | 45%    | 42%    | 46%    | 51%    | 58%    | 64%    |

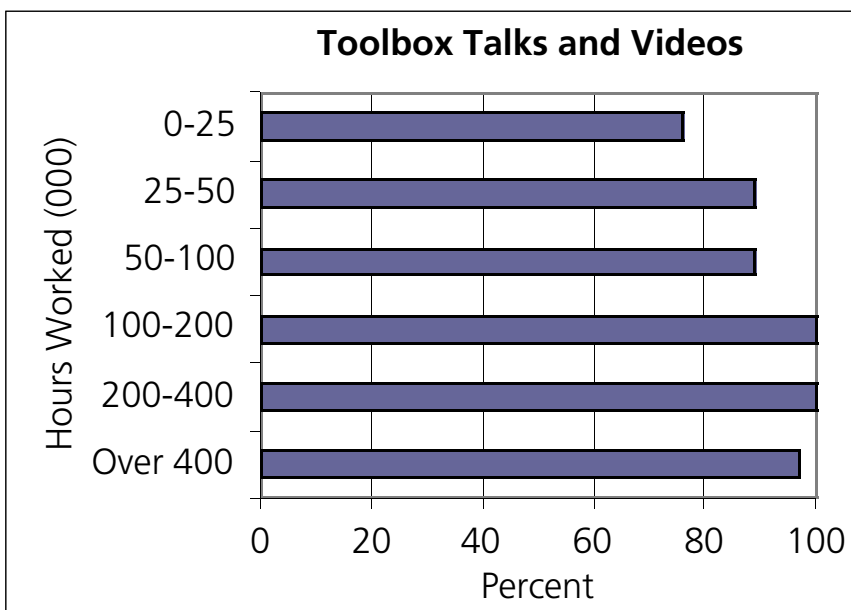
## Type of Training

The survey evaluates the various types of safety training that is utilized by SMACNA contractors. As the chart shows, all of the forms of training are conducted by a majority of contractors, with the lone exception being the OSHA 10-hour safety and health certification course.

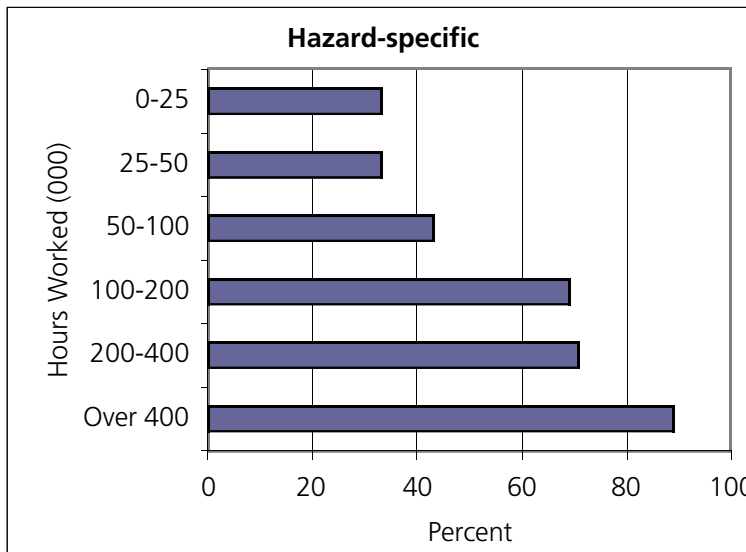
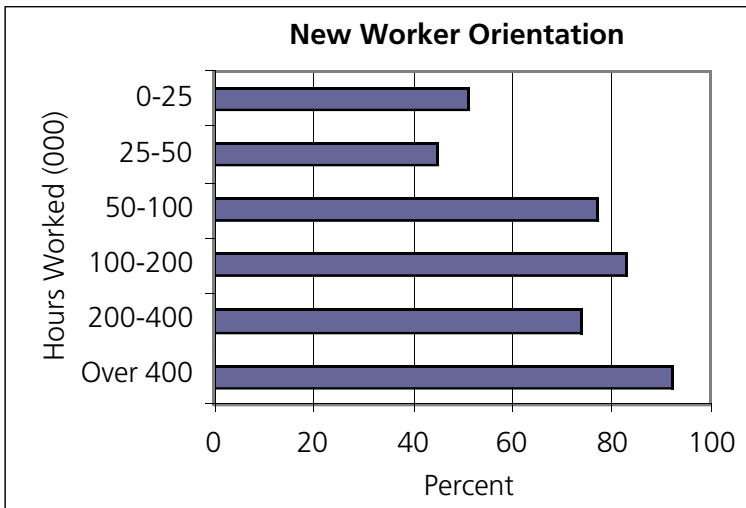
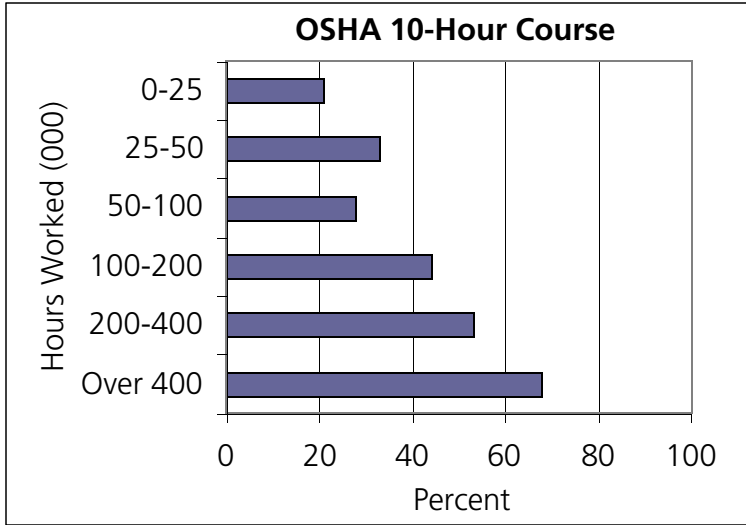
Like other training options, the OSHA 10-hour course was more likely to be associated with contractors reporting larger numbers of hours worked. The reported use of the OSHA 10-hour course was also geographically clustered as respondents in four chapters accounted for close to one-third of the contractors conducting this type of training. This could mean that general contractors in certain areas require the OSHA 10-hour card on their sites or that there have been efforts by the local chapter to offer the training on a regular basis.

The most popular form of training by respondents is the use of Toolbox talks and safety videos. These two methods were reported as being utilized by almost every company that responded to the SSEAP.

In general, the usage of each category of training increased with the number of hours worked by the contractor.





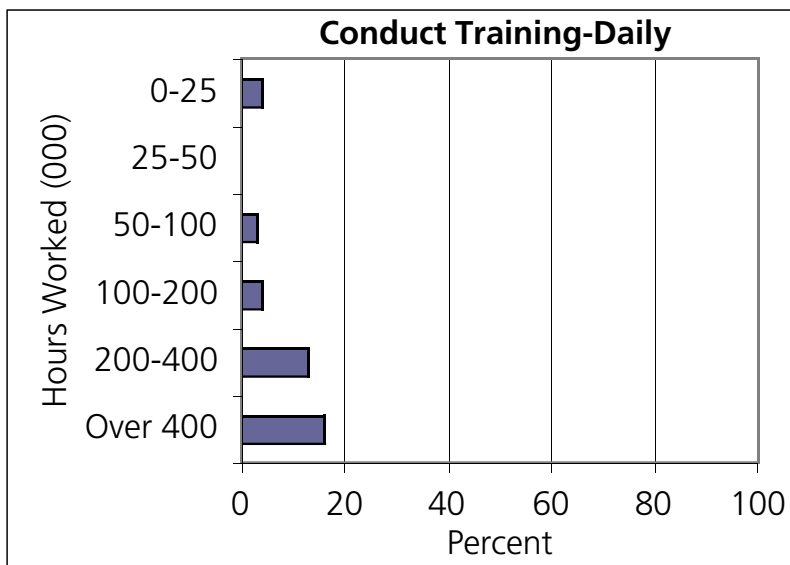
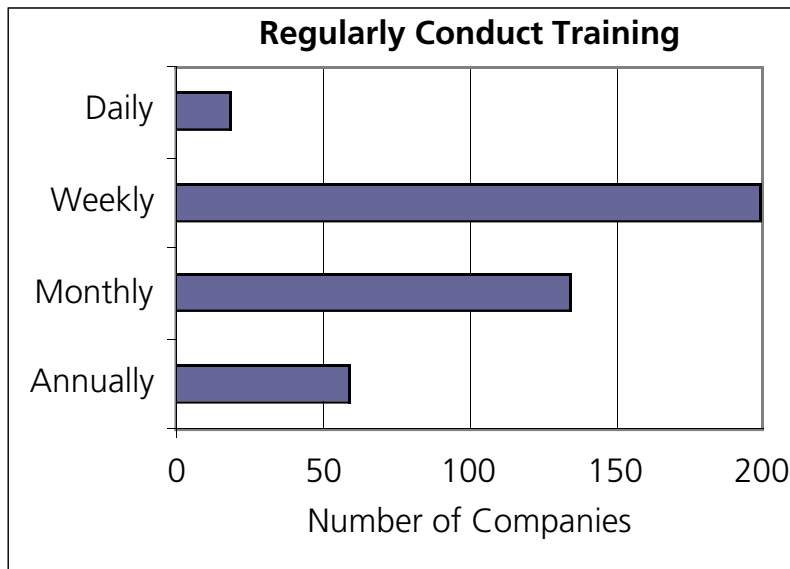


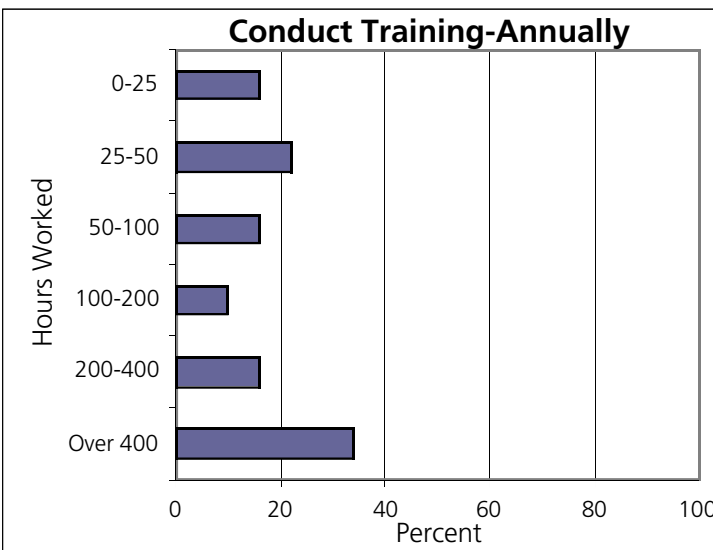
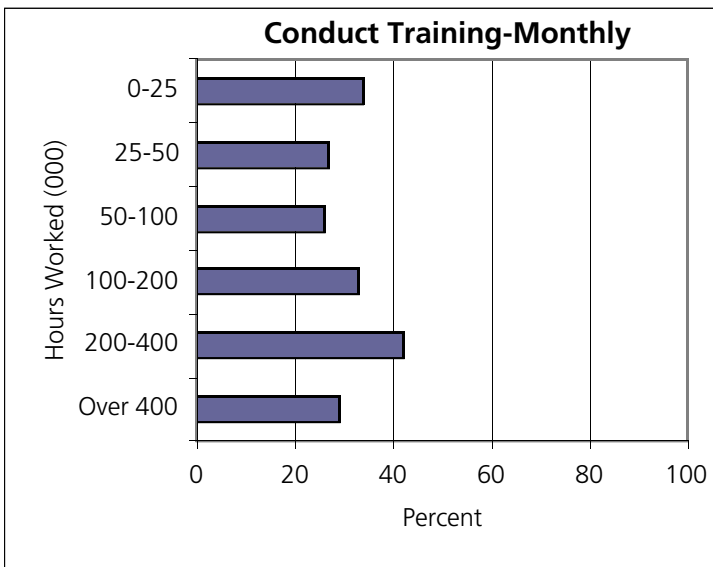
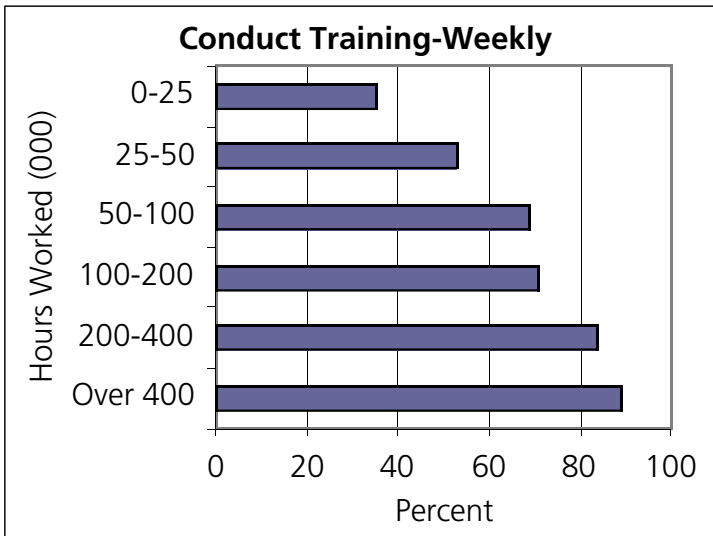
## Regularly Conduct Training

According to the results of the SSEAP, contractors report that safety training is most often performed on a weekly basis. This correlates with the fact that so many contractors reported using toolbox talks as a method of training, as these are typically set up to be weekly refresher training topics.

The chart indicates that a significant number of companies have a monthly training schedule. The likelihood of a contractor conducting weekly training increased with number of hours worked.

Overall there appears to be a trend toward more widespread training, usually weekly or monthly.

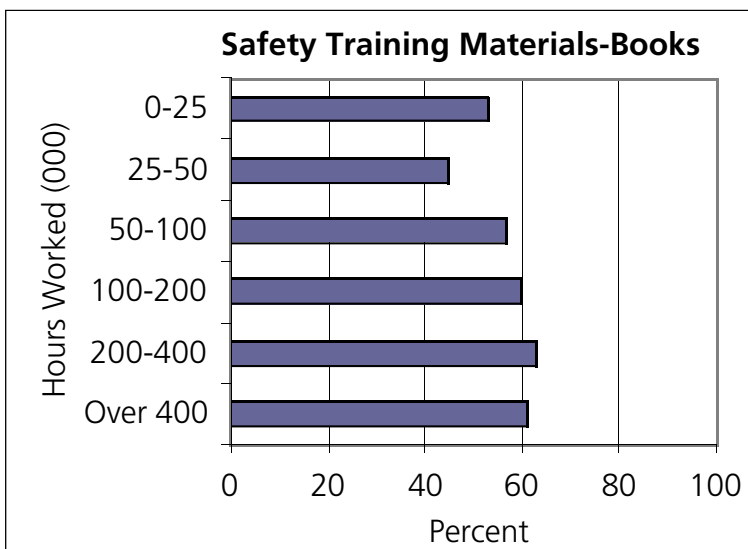
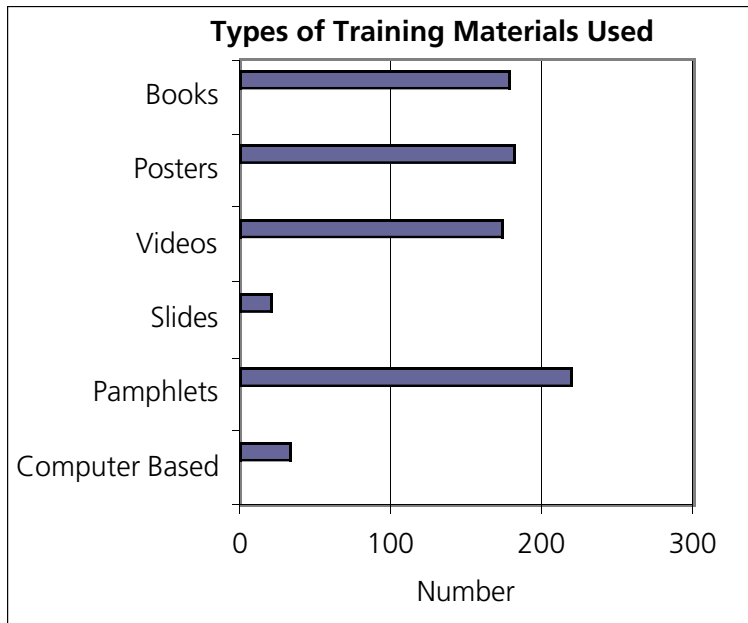


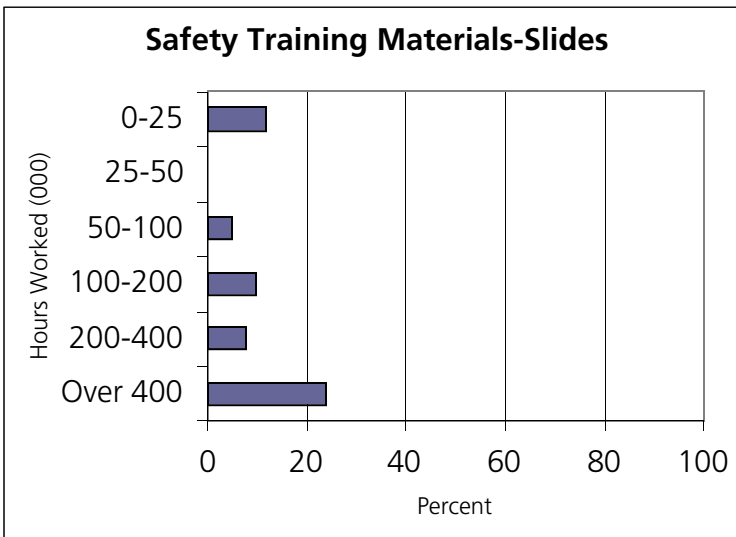
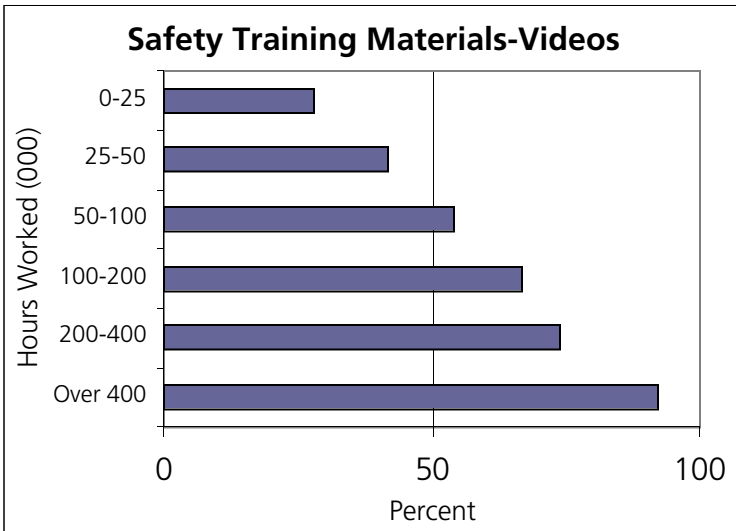
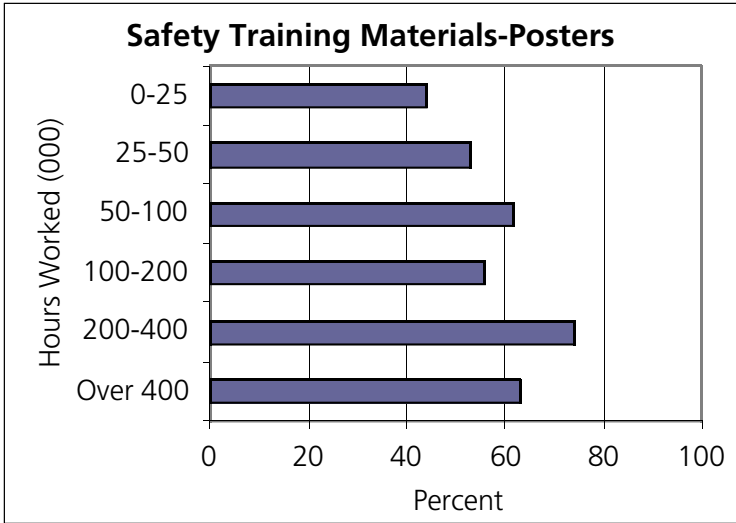


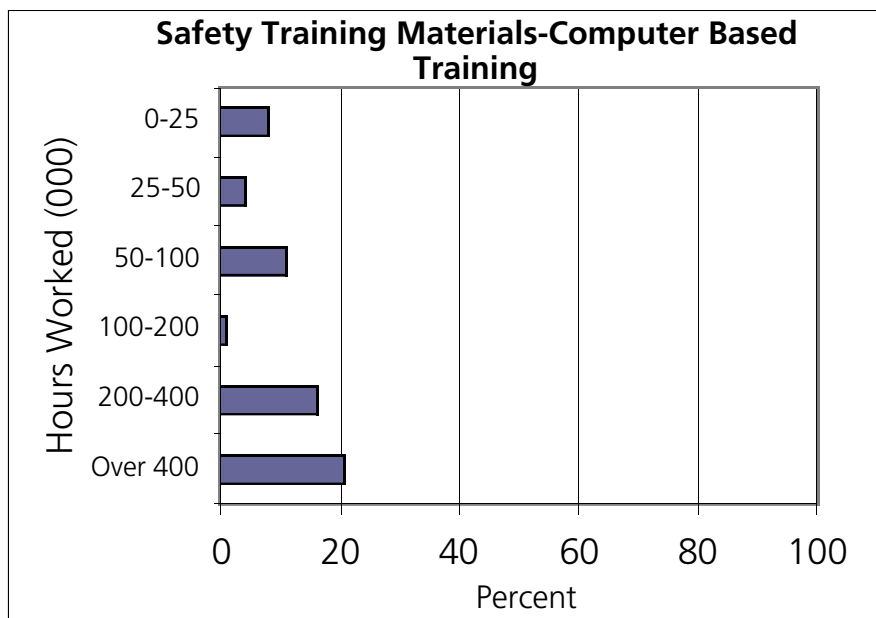
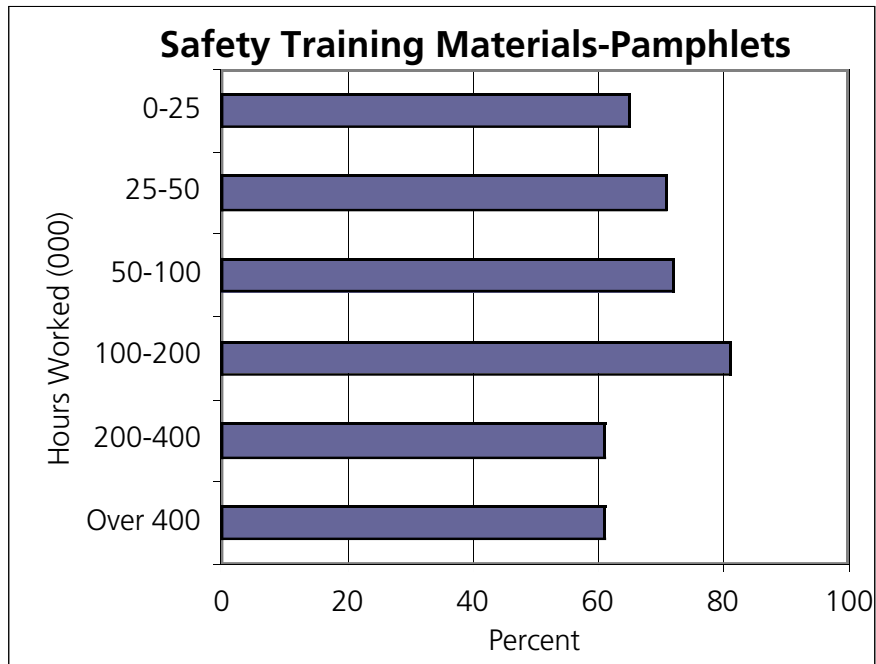
## Types of Materials

The survey asks contractors what types of materials they use to conduct safety training sessions. The results show that contractors use a wide variety of printed training materials, with more than half of all companies indicating that they do use some form of printed material.

While the use of printed materials was widespread among all sizes of companies, videos were used more often by contractors working larger numbers of hours.



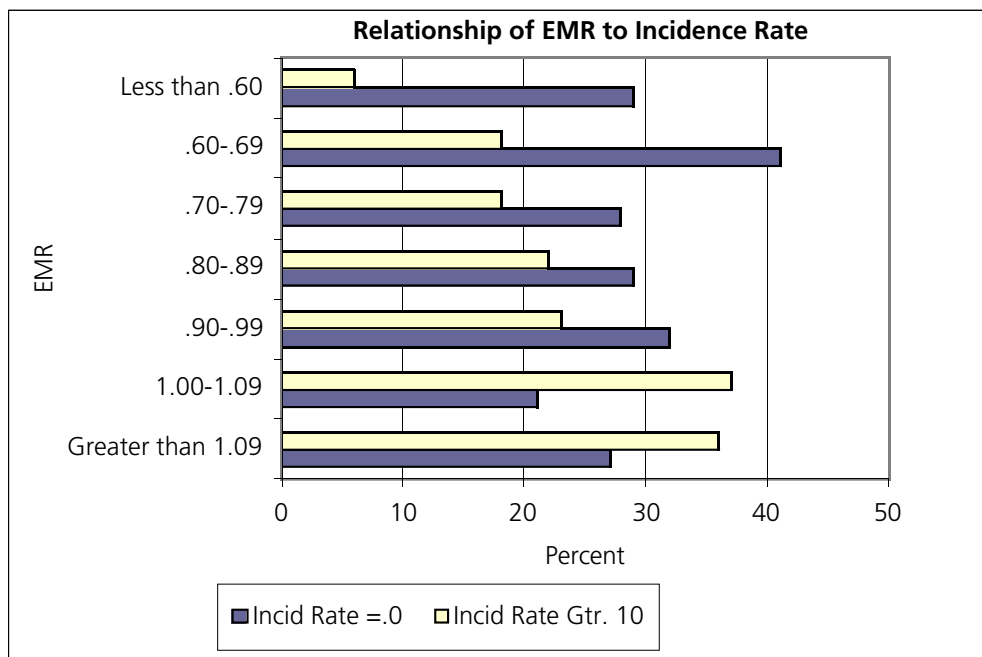
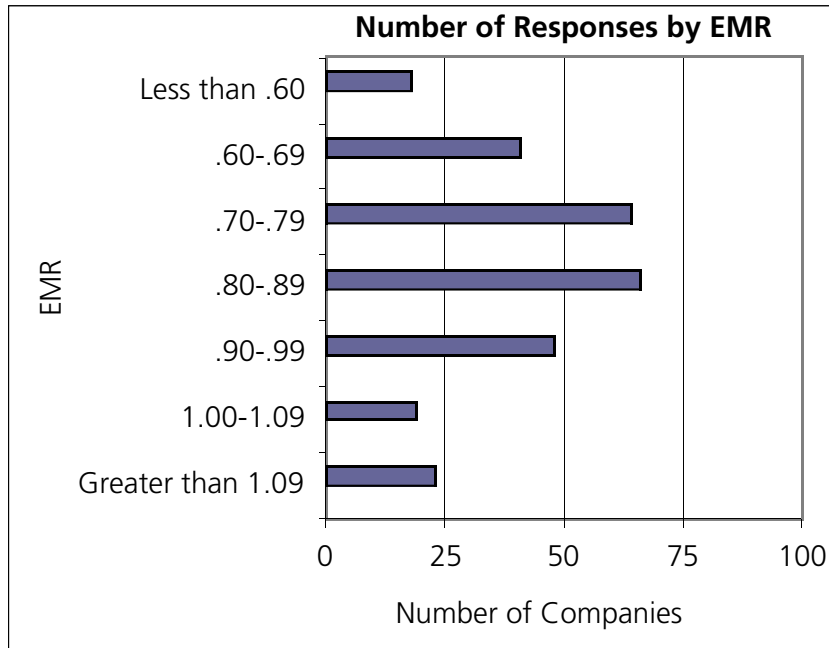




## Experience Modification Rate (EMR)

Over forty percent of all companies responding to the SSEAP reported an experience modification rate (EMR) of between .70 and .89. With 1.0 being the standard, this is an outstanding statement about the safety records of SMACNA contractors participating in the program.

The average of all contractors reporting was .84. Incidence rates of zero were associated with 20 to 40 percent of contractors, regardless of EMR. High incidence rates were most often reported by companies with an EMR greater than 1.00.



## Industry Segment Safety

For a majority of respondents, it was possible to relate the number of hours of work and the number of injuries and illnesses to type of work performed. Most reported work was either in the HVAC or industrial sheet metal categories. The lost workday incident rate for most categories was between four and five.

| Industry Segment Safety |        |            |           |               |
|-------------------------|--------|------------|-----------|---------------|
|                         | Number | Hours      | Incidents | Incident Rate |
| HVAC                    | 220    | 27,104,937 | 698       | 5.15          |
| HAC                     | 63     | 1,376,333  | 39        | 5.67          |
| ASM                     | 109    | 2,439,316  | 73        | 6             |
| ISM                     | 172    | 8,367,692  | 183       | 4.37          |
| KIT                     | 50     | 530,486    | 11        | 4.29          |
| MFG                     | 82     | 1,594,688  | 38        | 4.74          |
| TB                      | 67     | 910,499    | 19        | 4.18          |
| SD                      | 38     | 558,504    | 12        | 4.45          |



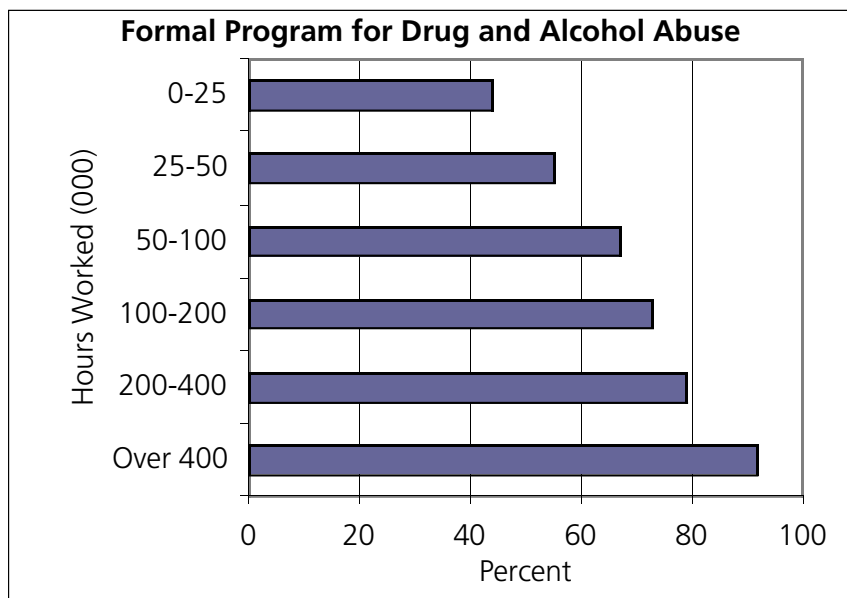
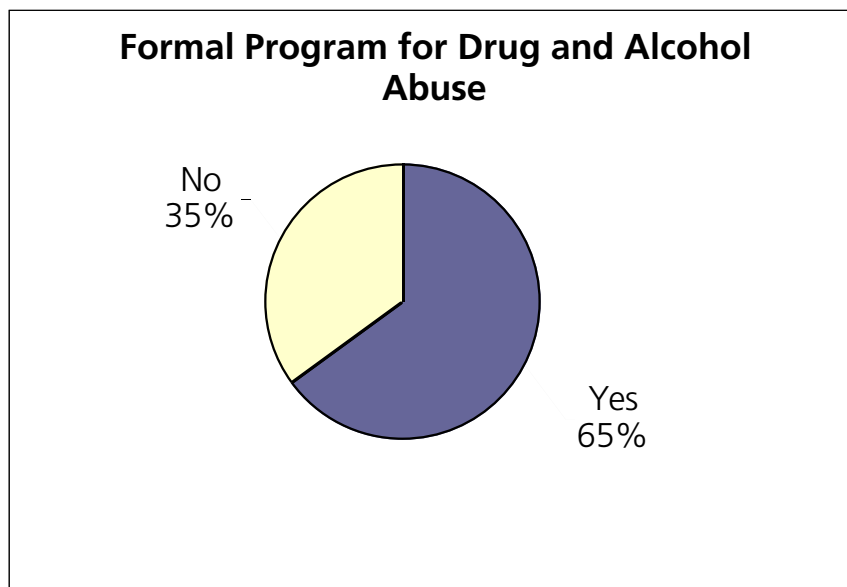
## Drug and Alcohol Policies vs. Accidents

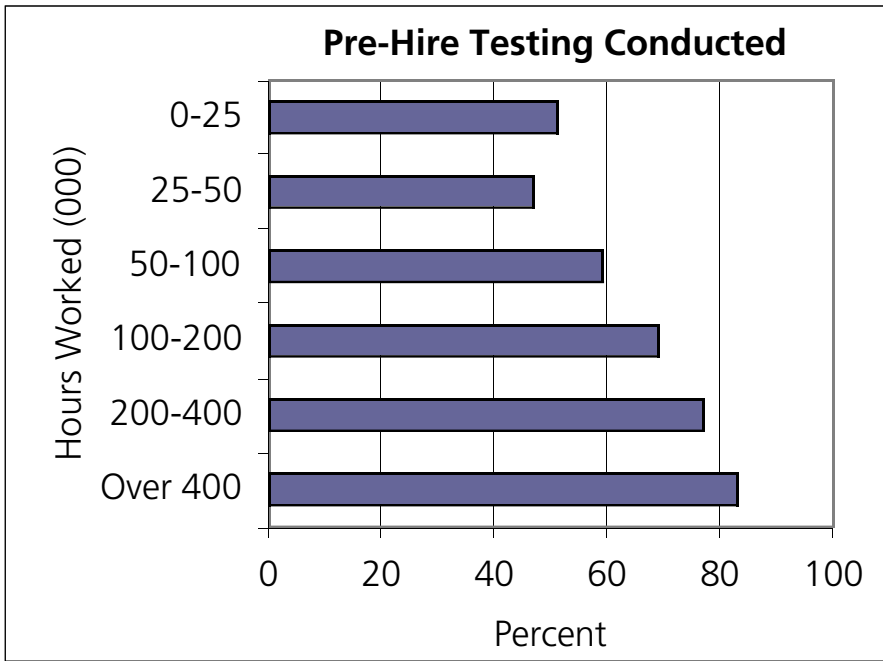
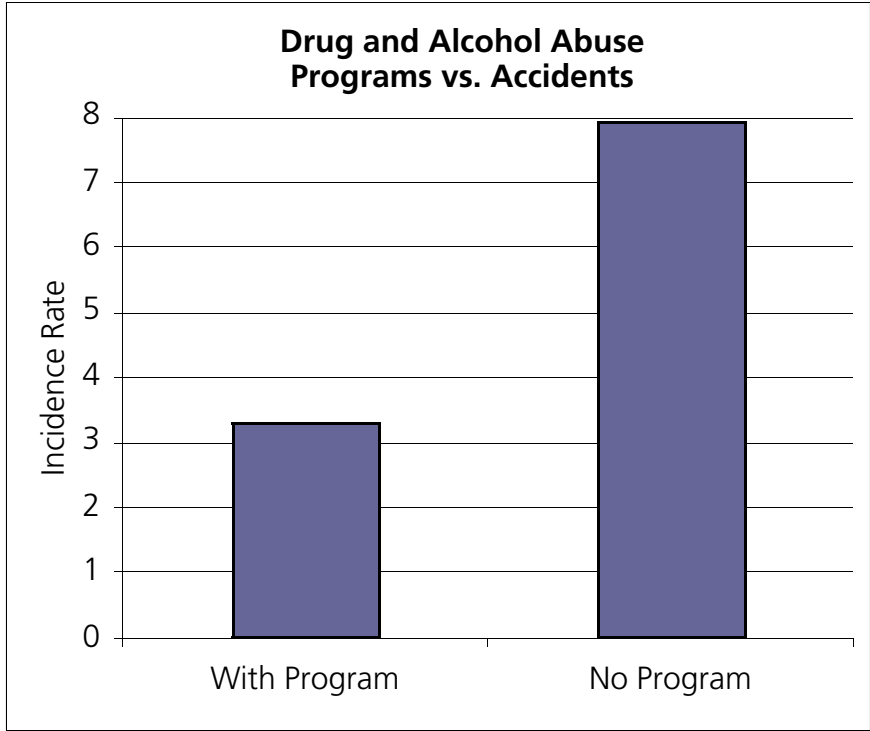
The number of companies reporting that they had a formal program for drug and alcohol abuse continues to increase and is now 65 percent.

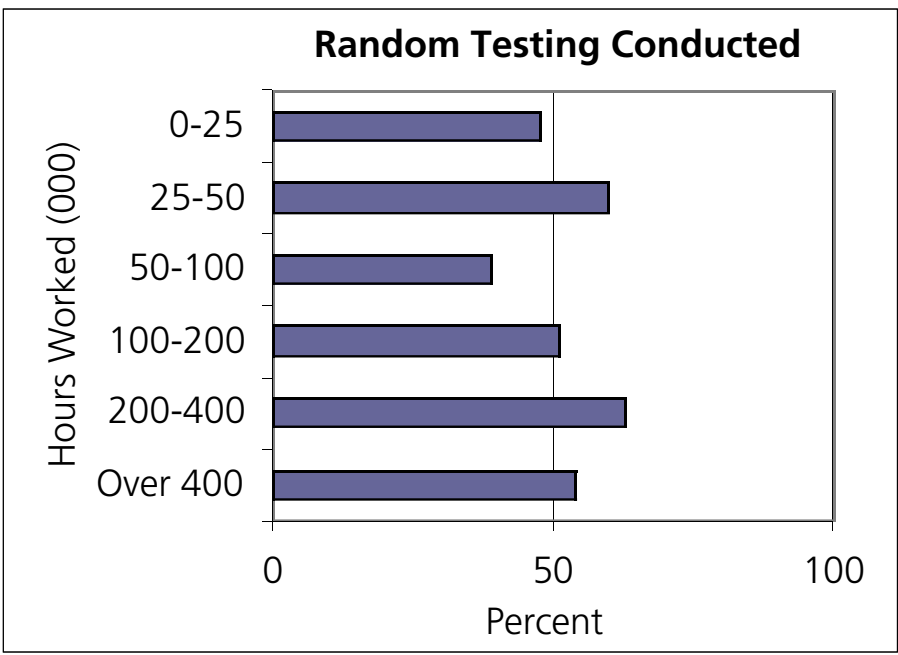
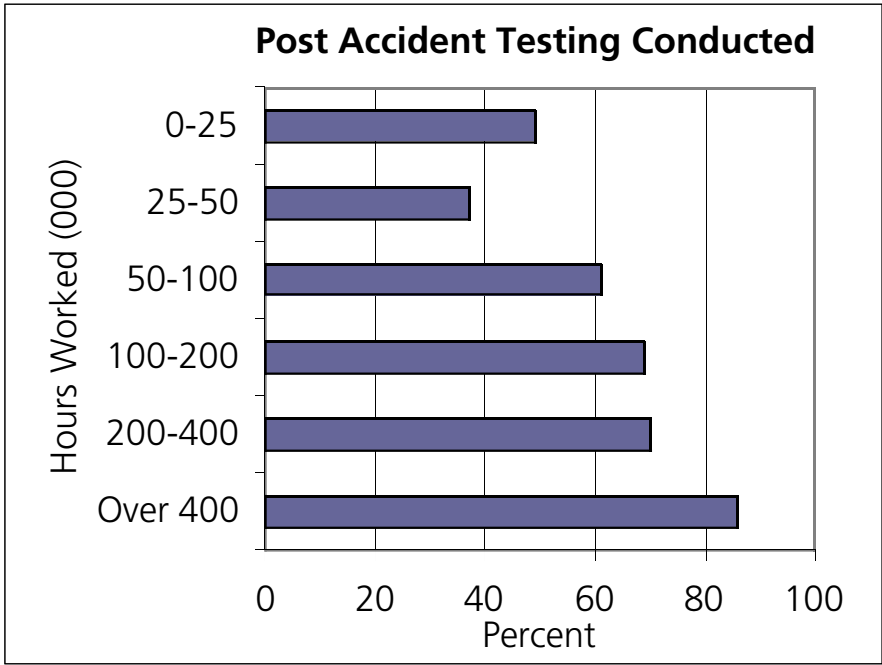
The companies that reported having a drug and alcohol policy accounted for 85 percent of all reported man-hours.

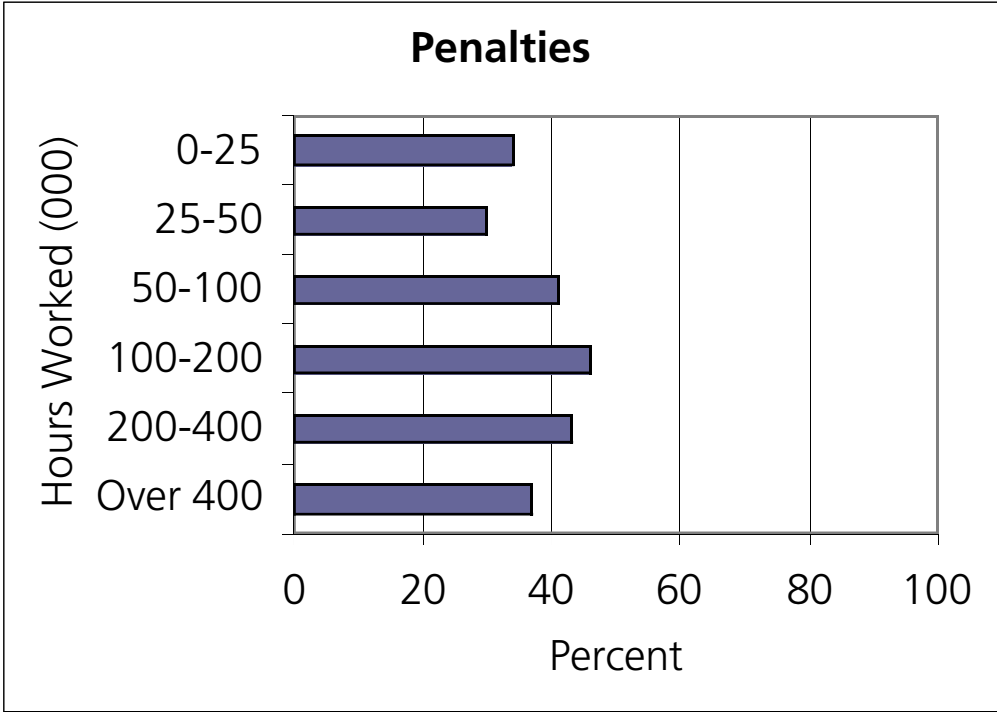
Overall, the number of positive responses increased for all size categories when compared to previous years. However, in the two chapters with the largest number of responses (about 15 percent of the total), a majority of contractors did not report having a drug and alcohol program.

Companies with a formal program for drug and alcohol abuse had a lost workday incidence rate less than half that of contractors with no program.



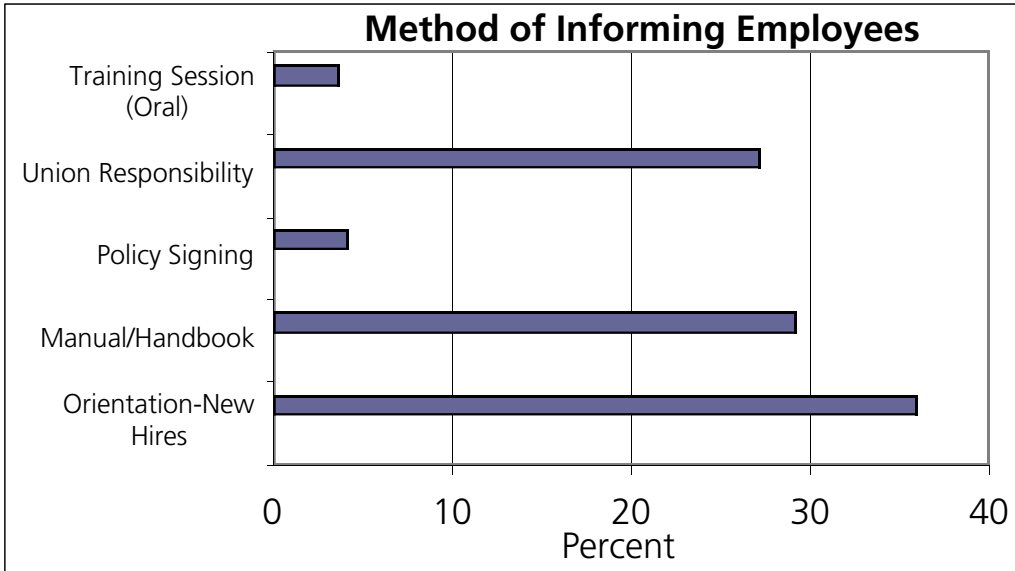






**Method of Informing**

There were a variety of methods of informing employees of drug and alcohol abuse policies with an orientation program for new workers most common. More than 20 percent of companies with a drug and alcohol abuse program relied upon the union or a manual/handbook to communicate the policy to workers.



### Most Common Injuries

More than two-thirds of contractors reported cuts to be the most common injury. Some eye injuries may also get categorized as cuts. Back strain was also frequently noted.

