

FACE Investigation 90C0063

SUBJECT: Carbon Monoxide Kills 65 year-old Rancher in Colorado.

SUMMARY:

A 65 year-old rancher died inside a converted semi-truck trailer after being exposed to carbon monoxide from the exhaust of a portable gasoline engine-powered generator. The exhaust from the generator was vented to the outside with flexible ductwork placed through a small hole cut into the side of the trailer. On the night of the incident, the victim is thought to have pulled the generator away from the wall to refuel it, subsequently pulling the end of the exhaust tubing through the wall and into the trailer. The victim is thought to have pushed the generator back against the wall without noticing the displaced ductwork, started the generator and gone to bed to watch television. The victim was found by his wife the next morning when he failed to return home.

The Colorado Department of Health investigator concluded that, in order to prevent future similar occurrences, employers should:

- * locate all gasoline-powered engines outside of any space utilized for work or living quarters;
- * ensure that all users of gasoline powered engines are properly trained in their use and the hazards of carbon monoxide in a confined space;
- * survey the work-site to identify hazards;
- *inform all employees of possible hazards.

INTRODUCTION:

On December 22, 1990, a 65-year-old self-employed rancher died of carbon monoxide poisoning from the exhaust of a gasoline engine-powered electric generator.

A routine screening of state death certificates by the Colorado Department of Health (CDH) for work related fatalities prompted the investigation of this fatal injury. The work site was visited and reports were obtained from the local sheriffs department and the county coroner.

The victim in this incident is an independent rancher who had been ranching for over 40 years.

INVESTIGATION:

On December 22, 1990 a Colorado rancher died inside a converted semi-truck trailer after being exposed to carbon monoxide emitted from a portable gasoline engine-powered generator. The victim had converted a semi-truck trailer into a temporary office/living quarters for use at a construction site on his ranch. Electrical power was supplied by a portable gasoline engine-powered generator located inside the trailer. The exhaust from the generator was vented through flexible ductwork to a small hole cut into the side of the trailer. On the night of the incident, the victim is thought to have pulled the generator away from the wall to refuel it. During this movement, the exhaust ducting was pulled through the wall and into the trailer. The victim then pushed the generator back against the wall, apparently without noticing the displaced ductwork, started the generator, and went to bed to watch television. The victim was found by his wife the next morning when he failed to return home.

CAUSE OF DEATH:

The cause of death was determined at autopsy to be carbon monoxide poisoning. Laboratory studies indicated a carbon monoxide level of 54%.

RECOMMENDATIONS/DISCUSSION:

Recommendation #1: Locate all gasoline powered engines outside of any space utilized for work or living quarters.

Discussion: In this incident, the generator could have been located on the outside of the trailer and the power cord inserted through the wall. This would have eliminated the potential for hazardous fumes to accumulate inside trailer from the generator.

Recommendation #2:Employers should conduct a job site survey on a regular to identify potential hazards, implement appropriate control measures, and provide subsequent training to employees that specifically addresses all identified site hazards.

Discussion: Businesses of all sizes should evaluate the tasks done by workers and the environmental conditions that they work in to identify all potential hazards. The employer should then develop and implement a safety program addressing those hazards identified, provide specific as well as general training in safe work procedures and implement appropriate control measures.

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