Subject: Cattle Ranch Employee was Fatally Injured While Moving a One Ton Bale of Hay with a Tractor Mounted Front End Loader

FACE Investigation 90CO007

Introduction:

The Colorado Department of Health (CDH) in co-operation with The National Institute for Occupational Safety and Health (NIOSH),Division of Safety Research (DSR), performs Fatal Accident Circumstances and Epidemiology (FACE) investigations when a report of an occupational fatality is received. The goal of these investigations is to prevent fatal work injuries, in the future, by the study of: the working environment, the worker, the task the worker was performing, the tools the worker was using, and the role of management in controlling how these factors interact.

On February 20,1989, a 46 year old cattle ranch employee was fatally injured while moving a one ton bale of hay with a tractor mounted front end loader equiped with forks.

Contacts/Activities:

Under the terms of a cooperative agreement the Occupational Safety and Health Administration (OSHA), Area office, notified CDH of a work-related fatality. NIOSH, DSR was notified and a joint investigation was initiated. A meeting was held with the employer and the accident site was photographed. Reports were obtained from the county sheriff and the coroner.

Overview of Employers Safety Program:

The employer has been in the cattle business for forty seven years. The company employs three individuals.

The employer did not have an written safety program or hazard communication program. The operation being performed was a normal activity for the company and the victim.

Synopsis of events:

The fatal accident occurred on a Tuesday morning at approximately 1140 hours. The victim was using a model 2040 John Deere tractor, with a modified front end loader to move and place one ton bales of hay on a pickup for transportation to another location. The tractor was not equiped with rear wheel weights and the victim was experiencing some loss of traction due to poor weight distribution. While the victim was backing the tractor with a

bale on the forks he struck another bale on the ground. When the victim turned to look behind him he did not remove his hand from the loader's hydraulic controls and inadvertently continued to raise the bale. When the loader reached the upper lift limit the bale tumbled backwards off the forks and crushed the victim.

Cause of Death:

The cause of death was determined by autopsy to be massive internal hemorrhage from a blunt transection of the thoracic aorta and non displaced fracture of the lower thoracic vertebrae.

Recommendations/Discussions:

Recommendation #1: The tractor used to move bales should be equipped with a roll-over cage.

Discussion: In this instance, the tractor operator had no protection from a falling bale. A roll-over cage for this model and year of tractor is available.

Recommendation #2: Rear wheel weights should be installed on the tractor.

Discussion: Lifting of one ton bales with this tractor shifts the weight distribution forward and greatly diminishes the traction on rear drive wheels. This results in loss of vehicle control.

Recommendation #3: Employers should develop and implement comprehensive written safety programs. As part of this safety program, the employer should conduct regular training for all employees.

Discussion: This employer did not have a written comprehensive safety program. Rules and procedures addressing the hazards associated with work of this nature should be developed, implemented, and enforced. A risk assesment should be conducted on each task so that possible hazards can be identified and included in the safety plan.

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