MISSOURI OCCUPATIONAL FATALITY ASSESSMENT AND CONTROL EVALUATION (MO FACE)

Eleven-Year-Old Farm-Boy Dies Following Tractor Accident

MO FACE Investigation #99MO022 **Date: September 2, 2005**

Type: Child Fatality/Machinery-Related

SUMMARY

On March 19, 1999, an eleven-year-old farm-boy died when the tractor he was operating overturned into a drainage ditch. The boy was returning from a pasture with the tractor and a homemade two-wheeled round-hay-bale trailer attached. He was operating an Allis-Chalmers WD, tricycle-front-end tractor on well-maintained gravel county road. He and his father had just dropped two round hay bales in their farm pasture. The father was driving a pick-up truck and had driven ahead of the son on the county road as they were returning from the pasture. The accident was not witnessed, but apparently the farm-boy lost control of the tractor as it neared a drainage ditch and culvert. The tractor veered off of the left side of the road and overturned into the ditch.

The MO FACE investigator recommends that to prevent similar occurrences all farmers and employers should:

- Provide tractors equipped with rollover protective structures (ROPS) and seat belts for use by all persons trained and certified to operate tractors.
- Ensure that workers are trained in and are aware of the potential hazards associated with operating farm machinery.

INTRODUCTION

The MO FACE investigator was notified of an occupational fatality at a farm site in Missouri on March 20, 1999. The MO FACE investigator traveled to the incident site on March 22, 1999. He met with the county coroner, visited with the farm-boy's grandfather, and inspected the tractor involved in the incident.

The farm family had lived in the area for more than 60-years. The grandfather, his son and his grandson all worked on the farm. In the past they had operated a sawmill, had row crops and now they mostly raised cattle. The farm-boy went to school during the day and would help feed the cattle and do other farm chores after school.

INVESTIGATION

The tractor the farm-boy was operating was a 1949 Allis-Chalmers WD with a tricycle front end. Attached to the tractor was a homemade round- hay-bale trailer. The boy's father had taught him how to operate the tractor earlier in the year and had just recently allowed him to operate it alone. According to his parents and grandparents he was very capable of operating the machinery and looked forward to driving the tractor every day. The boy and his father would haul two round hay bales to the cattle during the winter months. The father would haul one bale on the pickup while his son drove the tractor with one bale loaded on the trailer. The hay bales were stored in the barn located near the grandfather's home. From the barn the father and son would travel the driveway to the county road then approximately one-half mile on the county road to the pasture gate. They would drop the hay bales then, using the tractor and trailer, unwind the bales in the field. After the bales were spread out the father would

drive the pick-up and follow the son on the tractor back to the barn. On the day of the accident the father drove back to the barn ahead of the son. The son drove the tractor back onto the county road and proceeded back toward the grandfather's home. He had traveled approximately one-quarter mile when the tractor veered off of the left-hand side of the road and into a drainage culvert. The ditch had approximately one to two feet of water standing in it. The tractor and trailer rolled upside down pinning the farm-boy underneath the tractor and water. When the son did not return to the barn with the tractor, the father drove back towards the pasture looking for him. He saw the tractor overturned and immediately tried to rescue his son. Unable to get him out, he summoned a neighbor to call for assistance.

CAUSE OF DEATH

Asphixia due to drowning.

RECOMMENDATIONS/DISCUSSION

Recommendation #1: Provide tractors equipped with roll-over protective structures (ROPS) and seat belts for use by all persons trained and certified to operate tractors.

Discussion: The tractor involved in this incident was manufactured in 1949 when ROPS were not required. These safety features were not required until 1976 when OSHA standard 1928.51 went into effect. Though the standard did not require the retrofitting of all tractors manufactured before 1976, ROPS on tractors would greatly enhance the safety of the operator.

Unfortunately, the tractor involved in this incident was not equipped with a ROPS nor could it be retrofitted without redesigning the operators seat and equipping it with a seat belt. For a ROPS system to be effective, a seat belt must be used at all times. If a seat belt is not worn, the operator could be crushed not only by the tractor but by the ROPS as well. If the tractor is **NOT ROPS** equipped, a seat belt should not be worn.

Recommendation #2: Ensure that workers are trained in and are aware of the potential hazards associated with operating farm machinery.

Discussion: It is vitally important to teach and train all workers of the hazards associated with farm machinery. Historically most fatalities and injuries on farms are from working with farm machinery. When older equipment is used it should be retrofitted with the safety equipment available on newer machinery. Proven safety practices should be implemented and enforced when working on and around farm machinery.

ri Department of Health, in co-operation with the National Institute for Occupational Safety and Health (NIOSH), is conducting a research project on work-related fatalities in Missouri. The goal of this project, known as the Missouri Occupational Fatality Assessment and Control Evaluation Program (MO FACE), is to show a measurable reduction in traumatic occupational fatalities in the state of Missouri. This goal is being met by identifying causal and risk factors that contribute to work-related fatalities. Identifying these factors will enable more effective intervention strategies to be developed and implemented by employers and employees. This project does not determine fault or legal liability associated with a fatal incident or with current regulations. All MO FACE data will be reported to NIOSH for trend analysis on a national basis. This will help NIOSH provide employers with effective recommendations for injury prevention. All personal and company identifiers are removed from all reports sent to NIOSH to protect the confidentiality of those who voluntarily participate with the program.

SIGNATURES:

Thomas D. Ray
MO FACE Program Coordinator
Chief Investigator

MO FACE Dissemination List

NIOSH	NIOSH FACE Program
Alaska Department of Health and Social Services	AK FACE Program
California Public Health Foundation	CA FACE Program
University of Iowa	IA FACE Program
Kentucky Injury Prevention and Research Center	KY FACE Program
Massachusetts Department of Public Health	MA FACE Program
Maryland Division of Labor & Industry	MD FACE Program
Minnesota Department of Health	MN FACE Program
Nebraska Department of Labor	NE FACE Program
State of New Jersey Department of Health	NJ FACE Program
Ohio Department of Health	OH FACE Program
Oklahoma State Department of Health	OK FACE Program
Texas Worker's Compensation Commission	TX FACE Program
Washington Department of Labor & Industries	WA FACE Program
Wisconsin Division of Health	WI FACE Program
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AMEC
Missouri Police Chiefs Association
Children's Mercy Hospital
St. Louis City Medical Examiner Office
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Jackson County, Office of the Medical Examiner
Shelter Insurance Companies
Missouri Hospital Association
Safety Council of Greater St. Louis
MO Department of Elementary & Secondary Education
Missouri Farm Bureau
Missouri State Labor Council
Empire District Electric Company
Mine Safety and Health Administration
Safety Council of the Ozarks
Missouri Department of Mental Health
Missouri Department of Labor and Industrial Relations
Empire District Electric Company
North Central Missouri Safety Council
Safety and Health Council of Western Missouri & Kansas