Agricultural Injuries

Comprehensive national report provides valuable information
A great deal of the impact my crew and I have on workplace safety arises out of our informal interactions. The importance of watching out for one another, and of coaching each other every day, cannot be overstated.

Employees are much less at risk of being injured when they are conscientious about the safety aspects and requirements of a job. It’s true that the risk is substantially reduced when the employee is properly trained, and when appropriate procedures and safeguards are in place. However, even the best-trained, best-equipped and most highly motivated employee will sometimes encounter a new situation or make a simple human error. The last line of defense at that point is often a co-worker’s willingness and ability to intervene and help out. The co-worker might simply lend a hand for a few minutes or give someone a friendly reminder about wearing personal protective equipment. Sometimes it involves more serious action, even interceding to stop co-workers completely when there is an immediate risk of injury. Each of us really does need to be “our brother’s keeper.”

I have intervened when a fellow working with a sledge hammer was so eager to get the job done that he attempted to climb onto the top rung of a handrail to get a better angle. When he was reminded that this wasn’t safe, he immediately recognized his mistake. I have seen a new worker who was still in training remind his trainer and co-workers about the need to maintain three-point contact on a ladder when taking tools to a scaffolding platform. In both cases the workers involved were experienced and safety-conscious, but they experienced a moment of carelessness. And they benefited from having someone else looking out for them.

Before we can effectively offer this kind of protection to each other, though, we need a “nurturing” environment. Employees have to know that their safety concerns will be taken seriously. This goes beyond recognizing their basic rights and responsibilities, such as the right to refuse unsafe work. They have to feel free to point out all of their safety concerns to their supervisor and others, and they need to know that those concerns will be addressed. They also have to be free to ask about anything they don’t understand. This requires a lot of trust between supervisors and employees, and among co-workers. Building that trust is an important and long-term component of the supervisory role. It requires ongoing attention and effort.

Communication is the most important tool for building and maintaining trust – which is the key to creating a safe workplace. We all need to be able to communicate with each other about hazards, and about unusual aspects of our jobs and work areas. We also need to be willing to listen to each other and learn from each other, not only about hazards but also about ways to improve our practices.

The person who knows best what a job entails is the person who is actually doing it. This is especially true when we are talking about the safety aspects of a job or a work location. Therefore, effective supervisors or senior employees must be available to provide coaching as needed, but also to listen and learn, openly and willingly. Someone else might have a different idea, and that idea might be a better one!

Every worker shares the same safety goal – we don’t want to be hurt, and we don’t want to see anyone else get hurt. The way to achieve this goal is to watch out for – and listen to – each other. And to intervene if necessary.

Lorne Shewfelt is a shift supervisor at TransAlta’s Wabamun plant.
Alberta’s CENTENNIAL

CHECK OUT HIGHLIGHTS OF ALBERTA’S LABOUR MARKET OVER THE PAST 100 YEARS.

Have you ever wondered what it was like to work in Alberta in the early 1900s? What types of occupations were available? What the wages were like? The working conditions? And how have things changed since then? A new fact sheet with answers to these questions and more will be featured each month throughout 2005 at www.alis.gov.ab.ca/centennial. You can also order a copy of the Alberta Centennial Workforce poster.

For more information about the plans to celebrate Alberta’s centennial year, visit www.albertacentennial.ca.

BACKPAIN DONT TAKE IT LYING DOWN

Back Education Project

A new Back Education Project is designed to share current knowledge about how best to treat an aching back. Years ago, sufferers of this common ailment were often told to lie in bed and get lots of rest. But today most health care professionals believe that being active is the key to getting better faster.

Even when your back is painful, you can participate in low-impact exercise without strain (for example, walking, swimming, riding an exercise bike, dancing or yoga). Ultimately the success of any treatment depends on the patients’ willingness to take an active role in their recovery.

The founding partners of the annual Heads Up campaign (Human Resources and Employment – Workplace Health and Safety, Alberta Construction Safety Association, Alberta Hotel Safety Association, Manufacturers’ Health and Safety Association and WCB-Alberta) have temporarily diverted their sponsorship dollars to kick-start the Back Education Project. The funds will be used to inform Albertans about back pain – through radio advertising, posters, displays, advertisements and articles in health-related publications.

>> FACTS ABOUT BACK PAIN

- In 2004, claims for back pain made up more than 26 per cent of all lost time claims reported to WCB-Alberta.
- Although back pain can cause a great deal of misery, serious or permanent damage is rare. >>
The most common cause of back pain is strain of the muscles and ligaments that support the spine and of the facet joints that connect the vertebrae (backbones).

Muscle and ligament strain is usually due to overexertion and lifting, but poor posture, inactivity, muscle tension, poor muscle tone and being overweight can also contribute.

Activity is good for your back because it:
- develops your muscles and stretches tight muscles and joints
- keeps you flexible and prevents your working parts from seizing up
- gives you stronger bones
- makes you fit by giving your heart and lungs a workout
- makes you feel good by producing natural chemicals that reduce pain

For more information, go to www.wcb.ab.ca.

Study of Serious Workplace Injuries Yields Mixed Results

The latest findings of the Liberty Mutual Research Institute for Safety, based in Chicago, are both good and bad. Although the cost of workplace injuries continues to soar, the ranking of the top nine causes of workplace injuries has remained the same for the past five years. According to a November 2004 news release from Liberty Mutual, this stability in the information about causes of injury gives safety managers a clear picture of what they need to do. “Understand why your employees get hurt and address these sources rather than the latest safety fads,” says Dr. Tom Leamon, director of the research institute.

The top 10 workplace injuries in 2002 were:

<table>
<thead>
<tr>
<th>INJURY TYPE</th>
<th>PERCENTAGE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Overexertion</td>
<td>26.6</td>
</tr>
<tr>
<td>Falls on same level</td>
<td>12.5</td>
</tr>
<tr>
<td>Bodily reaction</td>
<td>10.8</td>
</tr>
<tr>
<td>Falls to lower level</td>
<td>9.2</td>
</tr>
<tr>
<td>Struck by object</td>
<td>8.9</td>
</tr>
<tr>
<td>Repetitive motion</td>
<td>5.7</td>
</tr>
<tr>
<td>Highway incident</td>
<td>5.2</td>
</tr>
<tr>
<td>Struck against object</td>
<td>4.7</td>
</tr>
<tr>
<td>Caught in or compressed by equipment</td>
<td>3.8</td>
</tr>
<tr>
<td>Assaults</td>
<td>0.9</td>
</tr>
<tr>
<td>All other</td>
<td>11.7</td>
</tr>
</tbody>
</table>

For more information, go to www.libertymutual.com. These figures from the U.S. are comparable to the data on injuries in Canadian workplaces.

Support for Disabled Farmers

The Canadian Farmers with Disabilities Registry is a national organization that promotes farm safety and provides resources and encouragement to disabled farmers and their families. Although this group has been active in several provinces since 1997, a provincial affiliate in Alberta has only recently been organized. Called Disabled Farmers of Alberta, this group now has approximately 12 volunteers available to visit families and provide information about ways to cope.

For more information, visit www.fwdcanada.com or contact Carl Palmer, national chair, phone (902) 847-9420, carl.palmer@ns.sympatico.ca.

For more information, go to www.wcb.ab.ca.
A worker in a live plant is welding two pieces of handrail steel together to replace a broken handrail section in a piperack. The work is being done on the ground level, 4 metres away from the piperack, a treater and a pump— all of them containing or processing flammable substances.

What needs to be done to make this hot work situation safe? What does the Occupational Health and Safety Code require under these circumstances?

The Code (see sidebar on page 7) states:

- A gas test must be taken before any hot work is performed.
- The tests must be repeated at regular intervals appropriate to the hazards involved.

Some employers make the potentially dangerous mistake of referring to the Canadian Electrical Code classification requirements for hazardous and non-hazardous locations to determine when to take a gas test. In other words, they might think the welding example given above is safe because the worker is located in a non-hazardous zone as described by the CEC. However, the CEC’s hazardous and non-hazardous classifications are not a distance parameter for doing hot work. The hot work requirements, which are separate from the classification requirement, must be followed when doing any kind of hot work in a location where flammable substances are stored, handled, processed or used.

Explosive atmospheres can be...
heavier or lighter than air, and can easily travel a great distance beyond the classified zone. There can be an explosive atmosphere in a pit or low-lying area, or in a high piperack that is well away from what the CEC identifies as a hazardous zone.

Flammable substances may leak out from gaskets, pump or compressor seals, vents on storage tanks and piping that has been worn through, corroded or eroded.

Verleen Barry is a lead investigator and occupational health and safety officer with the Alberta government.

WEB LINKS

KNOW THE CODE
SECTION 169, LOCATED IN PART 10, Fire and Explosion Hazards, requires the employer to ensure that hot work is not begun until:

- procedures have been implemented to ensure continuous safe performance of the hot work, and
- testing shows that the atmosphere does not contain
  - a flammable substance in a mixture with air, in an amount exceeding 20 per cent of that substance’s lower explosive limit for gas or vapours, or
  - the minimum ignitable concentration for dust

When hot work is performed, sections 162, 163 and 164 must also be followed. That is, the employer must have in place procedures and precautionary measures to ensure that flammable substances stored, handled, processed or present at a work site will not ignite unintentionally.
was raised on a farm.” Many Canadians voice those words with pride, bringing to mind a happy and healthy childhood spent in wholesome rural surroundings. Farms can be great places to grow up, but they also can be dangerous for children and teenagers.

On average, young people living on farms and ranches are twice as likely to suffer injuries as urban youngsters. In 2004, of 13 persons killed in farm-related incidents in Alberta, five were under 18.

These sorts of statistics have spurred several Alberta communities and schools to offer programs for youngsters that stress the importance of safe play and work around the farm.

Teaching farm safety in schools

A program called Safety Smarts has been offered since 1998 by the Alberta Farm Safety Centre in Raymond (http://abfarmsafety.com), with government and industry support. This program reached 5,835 students at 57 southern Alberta elementary schools, including Hutterite colony schools, in 2003-04. This year’s figures are expected to be similar.

April Brower, a certified teacher, presents the Safety Smarts program. She delivers 45- to 60-minute farm safety presentations to mainly rural schools (Cardston is the largest). The program includes interactive games, toys and safety messages adapted to students’ ages. Where possible, Brower visits schools once a year to deliver safety messages to individual classes, each age-appropriate and related to that grade’s curriculum. For instance, Grade 3 classes learning about sound are reminded how farm noise can damage hearing. Often, says Brower, who grew up on a farm and lives on a ranch, the children tell stories of farm injuries involving family members, and this becomes grist for discussion.

An hour is not much time to delve into the many dangers that lurk around farms, which include the grain bins, irrigation canals or dugouts, livestock pens, chemical supplies and farm machinery such as tractors, augers and power takeoffs. But if students gain a greater awareness of possible hazards and safe ways to respond, even spending this short amount of time can be very worthwhile.

“Hopefully the children will retain a good safety attitude,” Brower says. “After all, they will be our future farmers.”

Laura Wills, a teacher at Coutts Community School, believes the Safety Smarts message is getting through. As well, she says, the information students glean “finds its way into rural homes. I feel it does make an impact on the safety of our rural families.”

That sort of feedback has encouraged the Farm Safety Centre to seek corporate support to hire two more teachers and expand the program as far north as Wetaskiwin this fall.
Alberta government resources

The Farm Safety office of Alberta Agriculture, Food and Rural Development has available a range of resources designed to help prevent injuries to children living on farms. For example, the department tells farm families that children performing chores on the farm are less likely to place themselves in danger if they are knowledgeable about an activity, and if they have the strength and capability required to handle the task.

“Relate the task to a child’s mental and physical development,” says Laurel Aitken, farm safety coordinator with Alberta Agriculture. “What one 12-year-old can do, another 12-year-old can’t. Assess your child’s ability to do the task.”

Along with others, Aitken emphasizes that there’s more to farming than work and chores. “Your farm is your workplace,” she says. “It’s also your home. It’s sometimes difficult to separate the two.”

Setting up designated play areas and impressing upon small children how important it is to stay inside those areas can prevent incidents such as children being crushed or run over by vehicles or machinery. Older children, who often ride ATVs or horses, also need to be supervised.

Safety day camps

More and more communities are signing up for the Rural Safety Rules Day Camps, which are typically attended by up to 130 children, aged 6 to 15. First organized in 1998, the camps were the brainchild of High River public health nurse Jan Fawcett. United Farmers of Alberta and The Co-operators Insurance joined as sponsors who provide planning and organizational support, while Alberta Agriculture supplies educational resources.

Darla Borbely, member relations program manager for United Farmers of Alberta, stresses that while help is provided, communities must take the initiative. Often local agricultural societies or 4-H groups spearhead the rounding up of additional funding, snacks, handouts, local sponsors and, significantly, the 60 to 80 volunteers needed to run a four-hour camp. Some of the volunteers tend six stations that typically contain interactive safety displays covering small and large machinery, livestock, environmental health, including pesticides and electrical hazards, and other health concerns such as eye, ear and skin protection.

Several Alberta communities and schools offer programs for youngsters that stress the importance of safe play and work around the farm.

Again, a first-hand account by someone who has experienced a farm injury often delivers a jab of reality. Mike Sidoryk, general manager of the Lloydminster Agricultural Exhibition Association, found that was true when he helped organize a camp last year. The keynote speaker for the camp was a young man who had been paralyzed in an incident involving a hay bale falling off a truck. “After he spoke, you could see a change in the kids,” Sidoryk explains. “They took it more seriously.”
While young people are the prime target of these programs, organizers say the benefits extend to parents and other adults. “You’re never too old to learn,” says Borbely. “When someone is teaching or demonstrating to the kids, it often reminds the adults of what they’ve been doing wrong.”

United Farmers of Alberta supports one camp each year in each of its nine Alberta districts, and the demand for camps currently exceeds availability. Fortunately, reinforcements are on the way. Fertilizer producer and supplier Agrium Inc. has teamed up with Progressive Farmers, a Wisconsin-based farm cooperative that sponsors the Farm Safety Day Camps program across North America. Last year, Agrium and Progressive Farmers supported 27 camps attended by 4,500 young people in Ontario, Manitoba, Saskatchewan and British Columbia. This year, Agrium is helping to extend the program to Alberta.

Farmers today face tremendous economic pressures and temptations to cut corners. But Laura Nelson, manager of the Farm Safety Centre, tells them they cannot set safety aside. If they do, they are not only risking injury but also setting a bad example for the next generation. In her view, teaching children when they are young and as they are forming their attitudes is worth the extra effort.

Fertilizer producer and supplier Agrium Inc. has teamed up with Progressive Farmers, a Wisconsin-based farm cooperative that sponsors the Farm Safety Day Camps program across North America. Last year, Agrium and Progressive Farmers supported 27 camps attended by 4,500 young people in Ontario, Manitoba, Saskatchewan and British Columbia. This year, Agrium is helping to extend the program to Alberta.

Farmers today face tremendous economic pressures and temptations to cut corners. But Laura Nelson, manager of the Farm Safety Centre, tells them they cannot set safety aside. If they do, they are not only risking injury but also setting a bad example for the next generation. In her view, teaching children when they are young and as they are forming their attitudes is worth the extra effort.

Fertilizer producer and supplier Agrium Inc. has teamed up with Progressive Farmers, a Wisconsin-based farm cooperative that sponsors the Farm Safety Day Camps program across North America. Last year, Agrium and Progressive Farmers supported 27 camps attended by 4,500 young people in Ontario, Manitoba, Saskatchewan and British Columbia. This year, Agrium is helping to extend the program to Alberta.

Farmers today face tremendous economic pressures and temptations to cut corners. But Laura Nelson, manager of the Farm Safety Centre, tells them they cannot set safety aside. If they do, they are not only risking injury but also setting a bad example for the next generation. In her view, teaching children when they are young and as they are forming their attitudes is worth the extra effort.

Fertilizer producer and supplier Agrium Inc. has teamed up with Progressive Farmers, a Wisconsin-based farm cooperative that sponsors the Farm Safety Day Camps program across North America. Last year, Agrium and Progressive Farmers supported 27 camps attended by 4,500 young people in Ontario, Manitoba, Saskatchewan and British Columbia. This year, Agrium is helping to extend the program to Alberta.

Farmers today face tremendous economic pressures and temptations to cut corners. But Laura Nelson, manager of the Farm Safety Centre, tells them they cannot set safety aside. If they do, they are not only risking injury but also setting a bad example for the next generation. In her view, teaching children when they are young and as they are forming their attitudes is worth the extra effort.

Fertilizer producer and supplier Agrium Inc. has teamed up with Progressive Farmers, a Wisconsin-based farm cooperative that sponsors the Farm Safety Day Camps program across North America. Last year, Agrium and Progressive Farmers supported 27 camps attended by 4,500 young people in Ontario, Manitoba, Saskatchewan and British Columbia. This year, Agrium is helping to extend the program to Alberta.

Farmers today face tremendous economic pressures and temptations to cut corners. But Laura Nelson, manager of the Farm Safety Centre, tells them they cannot set safety aside. If they do, they are not only risking injury but also setting a bad example for the next generation. In her view, teaching children when they are young and as they are forming their attitudes is worth the extra effort.

Fertilizer producer and supplier Agrium Inc. has teamed up with Progressive Farmers, a Wisconsin-based farm cooperative that sponsors the Farm Safety Day Camps program across North America. Last year, Agrium and Progressive Farmers supported 27 camps attended by 4,500 young people in Ontario, Manitoba, Saskatchewan and British Columbia. This year, Agrium is helping to extend the program to Alberta.

Farmers today face tremendous economic pressures and temptations to cut corners. But Laura Nelson, manager of the Farm Safety Centre, tells them they cannot set safety aside. If they do, they are not only risking injury but also setting a bad example for the next generation. In her view, teaching children when they are young and as they are forming their attitudes is worth the extra effort.

Nordahl Flakstad is an Edmonton writer and communications consultant.

Resources

WEB LINKS

www.agric.gov.ab.ca/$department/deptdocs.nsf/all/aet623 Alberta Agriculture, Food and Rural Development, Farm Safety Program Resources

www.nagcat.org North American Guidelines for Children’s Agricultural Tasks

www.gov.mb.ca/agriculture/farmsafety/farmer/pdf/farm_family_safety_and_heal.pdf Farm family safety from Manitoba

http://research.marshfieldclinic.org/children/ National Children’s Center for Rural and Agricultural Health and Safety (US)

www.fs4jk.org Farm Safety Just 4 Kids (US)

OTHER

Heritage Agricultural Society, Jeannette Smith and Judy Kesanko, c/o The Multicultural Heritage Centre, Box 2188, Stony Plain, AB T7Z 1X7, phone (780)963-2777, JMSmith@psd70.ab.ca

- Farm Safety Is Not a Game, grades 4-6
- Wheel of Misfortune, grades 7-9

A memorable lesson on the dangers of the power takeoff. When the instructor turns on the machinery, a dummy attached to the power takeoff gets shredded. Photo courtesy of United Farmers of Alberta.

FARM SAFETY FOR KIDS

Due to their size and inexperience, children and youths are especially vulnerable to injury. Be sure your child has the ability and the proper training to complete a task or run equipment. Then supervise that activity as appropriate.

Teach your child to use proper personal protective equipment as well as tools and equipment that are properly sized, and to take special care when working at heights or lifting heavy loads (they shouldn’t lift anything heavier than 15 per cent of their body weight).

Using a checklist of hazards, take your child on a walkabout to point out where the dangers are located on your farm. For example:

- grain storage, flow and handling, including augers
- machinery (riding on or being near it)
- confined spaces
- toxic chemicals
- electrical equipment and outlets
- animals (kicking, head-butting, stepping)
- irrigation systems, dugouts and wells
- poorly ventilated or dusty surroundings
- noise that is too loud and/or too long

Be aware of, and make children aware of, the places on the farm where it is not safe to play. Fencing off designated play areas is a good idea.
New Partners in Health and Safety
Welcome to two new Partners in Health and Safety:
- Alberta Safety Council for Seniors Housing, Wetaskiwin
- University of Alberta, Faculty of Extension, Edmonton

Partners in Health and Safety have exemplary health and safety management systems and are recognized as leaders in their industry. Through a Memorandum of Understanding, Partners commit to taking a proactive role with the Alberta government’s Workplace Health & Safety office in promoting workplace health and safety throughout Alberta. The MOU outlines the Partners’ role in maintaining effective health and safety management systems and helping others improve theirs – and in promoting the concept of Partnerships.

Change in Certifying Partner
The Alberta Safety Council for Seniors Housing relinquished its role as a Certifying Partner on January 5, 2005, following 11 years of excellent service in this role. The Alberta Association of Safety Partnerships has assumed the role of Certifying Partner for this industry sector. The Alberta Safety Council for Seniors Housing is now a Sponsoring Partner and will co-sign Certificates of Recognition for their membership along with the Alberta Association of Safety Partnerships and Alberta Human Resources and Employment.

Quality Assurance Standards
To maintain an existing Certificate of Recognition or receive one for the first time, an auditor must meet or exceed a set of Quality Assurance standards that have been in effect since January 1, 2002. Certifying Partners check for the following criteria when completing a Quality Assurance review of an audit (certification, re-certification and maintenance audits of regular, medium and small employer programs as well as auditor qualification audits):

- From start to finish, the on-site audit data collection did not exceed 45 days (unless prior approval was given).
- The Certifying Partners received the audit not more than 45 days following the last day of on-site activities. (Otherwise, the audit is considered “stale” and will be rejected. The auditor will need to re-audit that employer.)
- The auditor conducted the appropriate number of interviews (in accordance with the interview sampling standard).
- The interview sampling is representative of the organization being audited (adequate representation of management, supervisors, workers and contractors, including full-time, part-time, casual and shift workers).
- A representative number of worksites were visited during the audit.
- The auditor’s use of the audit instrument was appropriate, the validation techniques (documentation, interviews, observation) were followed, and there were no errors in the calculation of scores.
- Supporting documentation required by the Certifying Partner (for example, organizational chart, interview sampling summary) is included with the audit.
- The auditor has provided a sufficient quantity and quality of notes to clearly justify the point(s) awarded or not awarded.
- Strengths and suggestions for improvement are clearly stated.
- There are no contradictions in the auditor’s notes, scores or statements about strengths and suggestions for improvement.
- Certification and re-certification audits meet the scoring requirement for achieving a Certificate of Recognition (a minimum score of 80 per cent overall with no less than 50 per cent in any of the eight elements).

If there are deficiencies, the Certifying Partner contacts the auditor, who has a maximum of 30 days to make the required corrections.

For more information, go to www.whs.gov.ab.ca/partners/publications/pdf/InfoSheet6.pdf or contact your Certifying Partner.
Ask the average Albertan to list the three most hazardous occupations, and chances are he or she will tell you construction or mining, or perhaps forestry or police work. It’s unlikely that this average Albertan will mention agriculture.

However, a recently published report from the Canadian Agricultural Injury Surveillance Program shows that agriculture is the country’s third most hazardous occupation – behind only mining and logging. The report also found that children and older farmers were among the groups most at risk.

First national data-gathering system

The Canadian Agricultural Injury Surveillance Program is Canada’s first coordinated national system of gathering and reporting data on agricultural injuries and fatalities. CAISP, which was developed and is funded by the Canadian Agricultural Safety Association, has produced other reports, but Agricultural Injuries in Canada for 1990-2000 is the first to bring both fatality and hospitalization data from across Canada under a single cover, says project head Dr. Rob Brison.

Comprehensive fatality and injury numbers for agriculture aren’t available from the sources used for other industries. This is because in most provinces, including Alberta, agricultural work isn’t regulated by occupational health and safety legislation. Also, most farm workers are family members and therefore aren’t required to have workers’ compensation coverage. “You could say we’re the only game in town for comprehensive farm injury stats,” says Brison, a professor of emergency medicine at Queen’s University.

In the 1990-2000 report, CAISP drilled down further into the data, not only using base numbers from hospitals and coroners across the country but also asking respondents to fill out reports detailing the circumstances surrounding the injury or death. The depth of this information, combined with the report’s 10-year time frame, allows for the identification of patterns and trends, explains Kathy Belton, Alberta’s representative on the CAISP board. “This is a richer data base that can tell the people who develop prevention programs specifically who was hurt, how they were hurt and the circumstances surrounding the event,” says Belton, co-director of the Alberta Centre for Injury Control and Research at the University of Alberta. Organizations can use that information to develop effective prevention programs.

Providing information for governments and other organizations was a major objective of the report, Belton says. In Alberta, the information will be used, for example, by Alberta Agriculture, Food and Rural Development, farm safety organizations and regional health authorities where agriculture is a major industry.

The numbers

The numbers presented by the CAISP report are disturbing. On average, 114 people are killed each year on Canadian farms, and another 1,500 are hospitalized for their injuries. There were 1,256 agricultural industry
fatalities nation-wide between 1990 and 2000, and 14,987 non-fatal injuries requiring hospitalization.

Furthermore, those numbers don’t actually provide the whole picture, says Catherine Isaacs of the Emergency Medicine and Injury Research Department of Queen’s University. “In terms of non-fatal injuries, the CAISP numbers only include incidents where a person was hospitalized for at least one day. They don’t include emergency room treatments, treatment by family doctors or injuries that were treated on site.”

Even more disturbing are the numbers involving two high-risk groups: senior farmers (see sidebar) and children (see “Early Intervention” article in this issue). During the period covered by the CAISP report, 109 children between the ages of one and six died in agricultural accidents across Canada, 23 of them in Alberta. According to Dr. Brison, “Pre-school children on the farm are at a 50 per cent higher risk of fatal injuries than the national average for same-aged children from all causes.” CAISP statistics show that the three most common causes of death for farm children are being run over as a bystander, falling off a machine and then being run over, and drowning. Boys are three to four times more likely than girls to sustain serious injury. “One of the things we hope to do with this report is increase the awareness of the risk children are at on farms, especially pre-school children,” says Brison.

OCCUPATIONAL HEALTH & SAFETY MAGAZINE • MAY 2005

YOU WON'T FIND 70-YEAR-OLDS WORKING on most Alberta job sites, but you’ll find them on farms and ranches. In fact, says Dr. Don Voaklander in his recent study of older farmers, “people would show up on injury data sheets who were in their late 80s and early 90s.”

Because farms are family-run businesses and because some older farmers can’t find anyone willing to take over, they often work past the normal retirement age in other industries, says Voaklander, a professor of Community Health Services at the University of Northern B.C. in Prince George. As people age their physical abilities diminish, so older farmers are at high risk of injury. Canadian Agricultural Injury Surveillance Program statistics show that although farmers over 60 represent only 13.2 per cent of the Canadian farming population, they suffer 34.6 per cent of all fatalities and 23.8 per cent of agriculture hospitalizations. In Alberta in 2002, 38 per cent of farm fatalities were people 59 and older, according to Agriculture, Food and Rural Development statistics. Tractor rollovers were the most common cause of death, followed by being pinned or hit by machinery.

“Older people can’t move as fast as they did or react as quickly to changes in the environment,” says Voaklander. And because their recuperative powers are weaker, a serious injury for a younger farmer can be fatal for an older one.

Older farmers should take these precautions:

- Increase light in low visibility areas.
- Remain hydrated, particularly in hot weather.
- Take regular rest breaks, as fatigue leads to injury.
- Try not to work alone, and ask for help with labour-intensive tasks.
- If you do work alone, keep in touch by cell phone or radio.
- Use rollover protection and seatbelts in tractors.
- Install non-slip flooring and handrails.
- Install gates and animal handling facilities that are easy to use.
The causes

The CAISP report found that the causes of deaths and injuries for all farm workers were remarkably consistent across the country. The fatality causes identified by the report, in descending order of frequency, are:

- rollovers of machines, especially tractors
- runovers by machines
- entanglement in machinery
- traffic collisions involving farm machine or animals
- animal-related injuries, such as being thrown from a horse
- being pinned or struck by a machine
- being struck by an object, such as a hay bale
- drowning, most often in dugouts and wells
- falls from something other than a machine
- toxic substances, such as gases in manure storage areas

In terms of hospitalizations, the six main causes are:

- animal-related injuries
- entanglements
- falls from something other than a machine
- being pinned or struck by a machine
- falls from a machine
- being struck by an object

Tractors are the machines most often involved in rollover incidents, responsible for 45 per cent of all work-related fatalities and 13.4 per cent of hospitalizations, according to the report. Between 1990 and 2000, 236 Canadians were killed in tractor rollovers.

Machine rollovers are the number one cause of death in all provinces except Alberta, Saskatchewan and Manitoba. In Alberta, being pinned or struck by a machine accounted for 19 per cent of fatalities, double that of Canada’s rate of 9 per cent. In Alberta, 50.8 per cent of machinery/vehicle-related fatalities involved a tractor, compared with 60.9 per cent nationally.

Dr. Brison says it will take further research to determine the reasons for these anomalies, but adds, “When you compare statistics province by province, you expect that by chance some province may have a pattern that will pop up. We don’t know without further research if this is statistically significant.”

Isaacs notes, though, that the rate of backwards tractor rollovers in Alberta is four times lower than it is in Ontario, Quebec and B.C., where tractors are commonly used to haul logs out of woodlots and forested areas. In the prairie provinces, further research may show that larger-sized tractors and the generally flat terrain in grain farming areas are associated with lower rollover rates, Isaacs suggests.

Across Canada, statistics show that fatalities have remained relatively unchanged over 11 years, with some years trending up slightly and others trending down.

U of A’s Belton hopes program providers will use the CAISP information to design more effective safety measures. “We need to create an awareness of risk among the general public,” Belton says. “Injuries, farm-related or suffered by anybody, should not be seen as accidents. This report clearly shows that they are predictable and therefore preventable.”

Norma Ramage is a freelance writer and communications consultant living in Calgary.

Resources

WEB LINKS

- www.caisp.ca
  Agricultural Injuries in Canada for 1990-2000
- www.statcan.ca/english/agcensus2001/first/profiles/10injured.htm
  StatsCan 2001 report on agricultural injuries
- www.agric1.gov.ab.ca/$department/deptdocs.nsf/all/agdex8272
  Safety for Aging Farmers
  Agriculture Injuries and Deaths in Senior Farmers, from the Canadian Agricultural Injury Surveillance Program
Wild animals seem to be able to go from deep sleep to complete alertness in an instant, but most humans need some time to clear their heads before beginning each day. That sluggish, disoriented feeling we sometimes experience upon waking is called “sleep inertia.”

Researchers have shown that sleep inertia is characterized by measurable levels of impaired performance and reaction time, reduced memory ability and an impairment of the ability to make decisions. Since making a decision can involve complex skills such as gathering information, assessing it and the options for action, and then actually taking action, the impaired or reduced functions caused by sleep inertia can have significant effects on safety. For example, think of a firefighter or paramedic responding to a call and making decisions. Or of a worker who must drive or operate some type of equipment immediately upon waking.

Australian researchers have found that within the first three minutes of waking a person’s ability to make decisions can be as low as 51 per cent of his or her best decision making ability before sleep. Even 30 minutes after waking, the same study showed, decision-making performance may still be 20 per cent below optimum levels.

Factors influencing the degree of impairment caused by sleep inertia include:

- How abruptly you are wakened. If you wake normally the effects of sleep inertia appear to last less than five minutes, but if you wake up suddenly you may experience the effects of sleep inertia for 30 minutes or more.
- The point you are at in the sleep cycle when you wake up. If you awaken from a period of deep sleep you may feel more sluggish and not be able to perform at your optimum level.
- Whether you are sleep deprived. If you have not had enough sleep during the preceding days or months, you will be more greatly affected by sleep inertia. When you are tired, your brain can play some unusual tricks. You could do the wrong thing or think you have performed a task that has not really been completed.
- The type of task you are performing. Sleep inertia has a greater effect on performance accuracy than on reaction time.

What to do

To “get started” upon awakening, you might wash your face in cold water or drink coffee or tea. Like bright lights, loud noises and physical exercise, these methods of waking up or “alerting” seem to have a positive effect. Caffeine, whether from coffee, tea, pop, or candy, makes you feel more alert but takes about 30 minutes to enter the bloodstream and the effects end after two to three hours.

Be aware that sleep inertia can affect a worker’s performance. The Australian researchers recommended that emergency service workers not engage in any critical decision making or in tasks such as driving for at least 20 minutes after waking.

And finally, one of the best ways of reducing the effects of sleep inertia is to get lengthy periods of quality sleep.

Ray Cislo, P.Eng., B.Sc.(H.K.) is a safety engineering specialist at Workplace Policy and Standards, Alberta Human Resources and Employment.

WEB LINKS

- www.aaafoundation.org/pdf/wakeup.pdf
  Wake Up! (brochure), AAA Foundation for Traffic Safety
Health and safety is sometimes a problem for companies with fewer than 10 employees, and complying with the province’s new Occupational Health and Safety Code (which fills a large binder) is often difficult for them. Even getting the health and safety message out to the province’s small and medium-sized businesses – which employ over 1.4 million people – can be difficult. But a new small business/provincial government partnership is leading the way.

Alberta Human Resources and Employment, working closely with the Canadian Federation of Independent Business, has developed the Health and Safety Tool Kit for Small Business, available in booklet form or by downloading a PDF from the Internet. Small and medium-sized businesses now have a concise guide to making their day-to-day operations safer.

Sharon Chadwick, a best practices specialist with Alberta Human Resources and Employment who spearheaded the development of the tool kit with the CFIB, says, “It provides small businesses with some key information about their responsibilities for health and safety. In a user-friendly and simple way, it outlines parts of the OHS Code that are applicable to everyone and provides examples, as well as sample forms that employers may use.”

Each industry, and in fact every company, is different and has its own specific dangers and hazards. Hazards in a restaurant are different from those in a small factory or dry-cleaning establishment. People can even get hurt in an office. The tool kit helps small firms identify specific areas of the new code that apply to them. Small businesses, which often involve only two or three people, obviously don’t have safety departments, coordinators or consultants. Still, they need to be conscious of health and safety issues.

The 48-page, colour-coded booklet provides basic background information, checklists and examples that companies can use as is or adapt to their own situation. Although the kit clearly does not replace the Occupational Health and Safety Act, Regulation and Code or exempt companies from the legislation, it provides solid information in six key areas:

- Responsibilities under the Legislation
- Communication and Worker Training
- Hazard Assessment and Control
- First Aid
- Workplace Violence
- Emergency Response
The tool kit fits right into the game plan of a company like Behrends Bronze Inc., a small foundry in Edmonton that produces high-end signage and casting in bronze, brass and aluminum for customers in Canada and the United States. Owner Gen Russo puts a heavy emphasis on safety, noting the company has never had a serious incident in 52 years of operation.

Russo says, “You do as much as you can in terms of training and policies that make sure safety is a concern for everyone. I see this new tool kit helping us do that. We need to keep up with changes in the legislation. We don’t want to be left behind. And we want to do it right.”

Corinne Pohlmann, CFIB director for Alberta/NWT, worked closely with Chadwick in putting the tool kit together. She says, “It is not always easy for small businesses to comply with the new code. A small business has a lot to do and, by definition, doesn’t have a lot of resources. One person can wear several hats. This new kit should help the majority of small and medium firms understand their health and safety requirements and provide simple, practical checklists to help them comply.”

“It’s part of our mandate to make small businesses safer and make them aware of this new resource,” Pohlmann adds. “There are a lot of companies out there and some don’t even know what provincial safety legislation requires them to do. Our field managers are always out visiting small companies and they are helping to distribute the Health and Safety Tool Kit for Small Business. It is also great

WHAT TO ASK WHEN LOOKING FOR HAZARDS

Is your working environment a building, office, yard, laboratory, trench, roof, delivery van?

How suitable are the things you are doing for the task?
Are they easily accessible?

How might people be hurt:
- directly by equipment, machinery and tools?
- indirectly through noise, fumes, radiation, etc.?
- by using chemicals and/or other materials (paints, solvents, fuels, toner, oils, plastics, acids, pesticides, gases, biological samples, wastes)?

Are workers using equipment and materials correctly?

An excerpt from the Health and Safety Tool Kit for Small Business.
to see the government be so positive and proactive when it comes to partnering with us to get the safety message out.”

Chadwick, too, is happy with the success of this partnership with the Canadian Federation of Independent Business. She notes, “We had people waiting for it to arrive and the response and feedback so far has been excellent. We welcome comments, suggestions and any other feedback to make the next edition even better. We need to continue to work together to promote health and safety in every workplace.”

Alf Cryderman is a freelance writer and editor based in Red Deer.

THE TOOL KIT WILL HELP small businesses identify specific areas of the legislation that apply to their workplace. All employers – even those who hire only one or two people – are legally responsible for providing a safe and healthy place to work. The only exemptions are farmers and ranchers (see accompanying article about a similar resource for them), domestic workers, people working at home and workers in federally regulated industries such as banks (which have their own legal requirements).

For example, in Section 3 of the tool kit, “Hazard Assessment and Control,” employers learn that they must:

■ assess a work site and identify existing or potential hazards (checklist provided)
■ prepare a written and dated hazard assessment, including the methods used to control or eliminate the hazards identified. A properly completed checklist is acceptable as a written hazard assessment
■ where possible, involve workers in the hazard assessment
■ make sure workers are informed of the hazards and the methods used to control the hazards

Section 4, “First Aid,” lists these responsibilities for employers:

■ provide first aid services, supplies and equipment
■ ensure that the services, supplies and equipment are located near the work site they serve and are maintained, available and accessible during all working hours
■ communicate first aid information to workers
■ ensure arrangements are in place to transport injured or ill workers from the work site to the nearest health care facility
■ ensure that first aid providers are trained
■ ensure that injuries and acute illnesses are reported to the employer and recorded, and that records are kept confidential (sample form provided)

WHAT’S IN THE HEALTH AND SAFETY TOOL KIT FOR SMALL BUSINESS?

WHERE TO GET YOUR COPY OF THE TOOL KIT...

The first printing of 5,000 copies came off the presses in January 2005. The booklet is available from the Workplace Health & Safety Contact Centre (1-866-415-8690 toll free or (780)415-8690 in Edmonton), the Canadian Federation of Independent Business in Edmonton (780)421-4253 and on the web at www.whs.gov.ab.ca/publications/pdf/SMB001.pdf.
Fine Allocation under Section 41.1

SOME CONCERNS HAVE RECENTLY been expressed about section 41.1 of the Occupational Health and Safety Act, which allows judges to take an innovative approach to sentencing a defendant for violations of occupational health and safety legislation. Under this relatively new provision, a judge can order that funds be dedicated to certain projects such as education or improvements in industry standards. There is apparently a perception that specific organizations may have the power to impose fines or that these organizations have lobbied to receive fine money. This is not accurate.

Creative sentencing is not an alternative source of funding for industry organizations. Each section 41.1 order arises from the unique circumstances of the case. In deciding whether a section 41.1 order will be imposed, the sentencing judge first determines the appropriate total penalty. Then – most often in response to recommendations by the prosecutor or defence counsel – the judge considers whether money should be made available for creative sentencing purposes. If so, the judge determines what amount is appropriate and to what organization it will be ordered payable.

The Crown is currently establishing specific guidelines for recommending that a judge consider creative sentencing and identifying the types of projects and groups that should be eligible for creative sentencing funds. To date, the current limitations on eligible recipients of section 41.1 funds mandate that there is no actual or perceived conflict of interest between the accused and the recipient of the funds, that all recipients are not-for-profit organizations and that recipients agree to be subject to any inquiries regarding their viability and accountability.

It is anticipated that creative sentencing orders under section 41.1 will further develop into instrumental tools in occupational health and safety matters. It is also anticipated that the Crown will be asking for more, rather than fewer, limitations on such orders.

To suggest topics for future columns, please send a message to Tamara.Trull@gov.ab.ca or Brian.Caruk@gov.ab.ca.

Tamara Trull is a Crown Prosecutor in the Occupational Health and Safety Prosecution Unit of Alberta Justice.
As Lanny Wilson describes it, you could hear a pin drop when the presenter talked about the danger from overhead electrical wires and explained safe clearance distances at the Planting the Seeds for Safety seminar in Taber early this year. This audience was hungry for information, says Wilson, a member of the Alberta government’s Partnerships team.

Farm machines are bigger than ever before and are driven on fields and roads crisscrossed by wires. Every year farm workers are electrocuted when they inadvertently come into contact with an overhead power line. Like other farm incidents and fatalities, electrocutions are easily preventable when workers know the hazards and how to avoid them. But agriculture is not regulated by government, and farmers are not bound by occupational health and safety regulations. Farmers are therefore often not aware of the hazards. For this attentive farm community audience, the information about clearance distances was new and potentially life-saving.

This is just the response hoped for by seminar sponsor Rogers Sugar, a Canadian sugar-beet processing company with facilities in Vancouver, Montreal, Toronto and Taber. Management at the Taber plant recognizes the integration of farm, industry and community life in rural areas. A farm or industrial incident in which someone is injured or dies affects everyone. Doug Emek, general manager at the plant, emphasizes the company’s reliance on its 300 beet growers and decries the large number of unnecessary injuries and loss of life in his community.

“We depend on farmers,” Emek says. “Without them, we can’t do business.” Education, Emek hopes, can reduce the annual toll of farm deaths; for example, the beet grower who was electrocuted when an irrigation pipe he was lifting contacted an overhead wire and the workers who have been pulled into grain augers. Tragically, he notes, many farm fatalities are children.

With cooperation from the Alberta Association for Safety Partnerships and local employers, Rogers Sugar launched the Planting the Seeds for Safety seminar in 2004 to promote health and safety to the Taber community. The free, day-long event was planned specifically for farmers and their families, and provided practical guidance to staying safe on the farm. The following year, a highly successful 2005 seminar addressed a range of health and safety issues and practices, including electrocution, environmental protection, WHMIS, pesticides, insecticides and survival first aid.

Wilson cites an “unbelievable” turnout at the 2005 seminar as just one example of Rogers’ exceptional influence in the sphere of agricultural health and safety. “The extent to which the company is working with the agricultural community is unprecedented,” she says. “Rogers is the first of the 70 companies and organizations involved in the Partnerships program to undertake a farm safety initiative. They have really bought into the concept of using their influence and are making a fantastic effort.” The seminar is Rogers’ newest project in taking the health and safety message and information beyond the plant; numerous other activities demonstrate management’s conviction that “keeping people safe has to do with keeping people aware.”

The heart of the matter: corporate responsibility

Since 1996 when Rogers was awarded its Certificate of Recognition, the company has lowered its lost-time

Profile

by Juliet Kershaw
claims rate from 5.29 per 100 person-years worked to 1.99, and its severity rate from 85.29 days lost per claim to 43.88. Cultural change takes time, but Emek is seeing a pay-off. The plant’s health and safety program has ingrained vigilance among employees and contractors alike, and management continues to push the boundaries of corporate responsibility. The Planting the Seeds seminar extends the benefits of health and safety awareness to the community at large.

The company’s health and safety program has evolved over nine years from a top-down concept directed by head office to an employee-ownership culture born at the Taber plant and now mimicked at Rogers’ other processing facilities. At all plants, the Partnerships audit protocol is used to measure the effectiveness of their safety programs, says Wayne Larkin, health and safety coordinator at Rogers Sugar in Taber.

Over time, employees and contractors have bought into the concept of keeping themselves safe at work and at home, and of personal responsibility. Education and training are integral to the program, though formal training “is only a start to ensuring employees are well trained,” Larkin says. On-the-job training is ongoing, with safety meetings supplemented by videos, films and speakers. But the most effective method of injury prevention is ensuring workers’ dedication to keeping the workplace safe. “Training and coaching never stop,” Larkin says. “You can never let your guard down. It takes everyone working as a team to identify hazards and controls. No one person can do that.”

Emek likens the Taber plant to a family. “Everyone is starting to mesh together. We approach issues together, and we listen and address employees’ concerns.” Management applies the same values and expectations to its contractor base. Trucking contractors are most in evidence during six weeks in fall when they deliver the beets for processing. As many as 1,000 trucks a day arrive and deposit their cargo at the plant. Processing continues for an intense 130 days, and then maintenance crews service the equipment. In a new initiative, Rogers is mentoring these contractors by providing safety trainers while they work towards achieving a Certificate of Recognition – a credential that the company expects all its contractor to either have or be working towards.

**Taking health and safety home**

Emek had a personal epiphany about the importance of injury prevention ten years ago when engaged in his annual chore of putting up Christmas lights. Each year, Emek describes, “I’d climb onto the roof of my house and creep along the icy edge of the roof, attaching lights.” That year while clinging to the roof he suddenly realized, “If I fell, I’d be a quadriplegic, or I’d be dead.” Emek recognized that workers who are careful about health and safety at work don’t necessarily take that awareness home with them. Rogers goes to great lengths now to communicate the message that injury prevention is as important at home as at work.

It seems that Rogers’ in-house and outreach efforts have struck an appreciative chord. Both Emek and Larkin take the safety of their employees and their families personally. “Doug and I are available 24/7 to talk to them, so they don’t feel alone.” And that kind of commitment is inspiring others to follow their example.

Juliet Kershaw is an Edmonton-based writer and editor and a former editor of this magazine.
As I sat with folks who run the Workplace Health & Safety website (Alberta Human Resources and Employment), I couldn’t help but smile at the old joke about the guy who walked into a workplace and said, “I’m from the government and I’m here to help!” Most of us have a healthy skepticism about the potential for government to interfere in our lives, no matter how well intentioned their efforts might be. However, I am happy to report that here in Alberta we do have a wealth of information available on the provincial government’s main Workplace Health & Safety website (www.whs.gov.ab.ca).

For the last year or so I have been trying to tell readers about private sector initiatives that are using the Web to better serve customers here in Alberta. Of course, private sector means for profit, and we still recoil at having to pay a fee for use of Internet resources. As a result, most Internet material is either biased towards a particular product or service (like advertising) or it is advertising supported.

The big exceptions are governments at all levels as well as professional associations, labour organizations and the like who have a mandate (and receive member dues) to provide information to their particular public or publics.

On the Alberta government’s Workplace Health & Safety website, you will find the entire Occupational Health and Safety Act, its Regulations and the related Code – and all are guaranteed to be up-to-date. But there is much more than legislative information at this site. Also included are:

- a complete listing of the publications and audio and video resources available from WHS, many of them in full text versions online
- a growing listing of e-learning programs and up-to-date news on new and ongoing Work Safe Alberta initiatives
- everything you need to know about the Partnerships and Certificate of Recognition programs, which are instrumental in ensuring safe work systems in large and small organizations
- all the news about work-related fatalities, and a clear statement about prosecutions, including government policies and thumbnails of all prosecutions in the last decade

I was particularly interested in two fascinating items that I have not seen elsewhere.

➀ WHS HAS A CALL CENTRE (called a Contact Centre). Have a question? Have a concern? Need to confirm your understanding of a regulation? Pick up the phone and you can speak to an advisor (toll free in Alberta at 1-866-415-8690). If you have a situation outside of regular business hours that you think is an emergency, an answering service will take your call and forward your message to the correct official on duty, 24/7.

➁ IF YOU CLICK ON THE BANNER for Work Safe Alberta’s Information Sharing Network that appears on the site’s home page, you will find not only a listing of news items and a calendar of upcoming events, but also the locations of hundreds of documents relating to everything from biological hazards through WHMIS, as well as information on best practices, mentorship, Partnerships, joint worksite health and safety committees and other related programs. Organized by topic, these pearls come not just from WHS but from many of the provincial leaders in health and safety. Most major industries have a professional association that provides key health and safety information to their members. Now, you can access a great deal of that information directly from the Information Sharing Network.

Kudos to the Workplace Health & Safety staff, who have fulfilled their information dissemination mandate in spades.

Bob Christie is a partner at Christie Communications Ltd., a multimedia development company in Edmonton. Bob supplies most of the Web link resources for the articles in this magazine.
The following information about deaths caused by work-related incidents or exposure is published to remind readers of the importance of workplace health and safety. In many cases the investigation into these fatalities is continuing. Final investigation reports are filed at the Alberta Government Library – Labour Building Site and can be reviewed there or at www.whs.gov.ab.ca/fatalities.

To protect personal privacy, the fatality descriptions do not include the names of the deceased.

Most work-related incident fatalities that fall under provincial jurisdiction are investigated by Workplace Health & Safety. In general, highway traffic, farm, disease or heart attack fatalities are not investigated.

The following fatalities have been or are being investigated.

A 55-year-old warehouse worker who was carrying materials up a staircase fell through an open side railing and suffered fatal head injuries.

A 40-year-old yard crane operator suffered critical head injuries in a 1.7-metre fall from the deck of a trailer and died in hospital several days afterwards. The incident occurred in the materials storage yard outside a metal fabrication shop.

A 55-year-old road maintenance equipment operator died after being struck on the head by the drive cable of a ferry, which had sawed through an anchor point. The equipment operator was providing communication between a worker on the ferry and the driver of a tractor while the cable was being replaced.

A 20-year-old labourer became entangled in an unguarded pulley on a rock crusher in a gravel pit and was fatally injured. The labourer had six months of experience.

A 25-year-old mechanic’s helper died when spilled gasoline created vapours that ignited inside a shop. The incident occurred while a gas tank on a one-ton truck was being lowered in order to repair a brake line.

A 26-year-old floorhand (roughneck) died from a fall of approximately 10.6 metres while being lowered from the derrick of a drilling rig. The floorhand’s fall arrest harness became detached from the hook of the tugger winch.

A 25-year-old service rig worker (derrickman) died in a fire that occurred at a lease site during a snubbing operation. The derrickman was pulling and racking double joints of tubing in the monkey board above the rig floor. When a pipe that was being pulled broke, there was a sudden release of flammable gases.

LIFITING AND CARRYING HEAVY PIPE

THE PROBLEM
Workers may be required to carry awkward and heavy pipes over various ground conditions, including ice, snow, mud and loose gravel.

A SOLUTION
A compact track machine with proper attachments supports the pipe safely.

BENEFIT
Workers guide the pipe rather than carrying it. This avoids back and shoulder injuries, and increases productivity.

SHOE INSERTS AND ANTI-FATIGUE MATTING

THE PROBLEM
Workers stand on an extremely hard surface for many hours every day, and placing anti-fatigue matting everywhere can be expensive.

A SOLUTION
Energy-absorbing shoe inserts may help, as may anti-fatigue matting that is worn on the feet (for example, Ergomates; see illustration at www.ergomates.ca).

BENEFITS
Workers will likely experience less leg and back pain, and productivity may increase.
Health care professionals agree staying active is key.