ALBERTA

Report to the Minister of Justice and Solicitor General
Public Fatality Inquiry

Fatality Inquiries Act

WHEREAS a Public Inquiry was held at the Provincial Court

in the Town (City, Town or Village) of Cochrane (Name of City, Town, Village), in the Province of Alberta,

on the seventh day of December, 2015 (year), (and by adjournment

on the ninth day of December, 2015 (year)),

before A. J. Brown, a Provincial Court Judge,

into the death of Stephen Murray Gibson (Name in Full) 46 (Age)

of RR 2, Crossfield, AB T0M 0S0 (Residence) and the following findings were made:

Date and Time of Death: January 31, 2014, 5:15 pm

Place: Hamilton Farms, 274132 RR 33, Cochrane, AB

Medical Cause of Death:
("cause of death" means the medical cause of death according to the International Statistical Classification of Diseases, Injuries and Causes of Death as last revised by the International Conference assembled for that purpose and published by the World Health Organization – *The Fatality Inquiries Act*, Section 1(d)).

Multiple Injuries as a consequence of entanglement in mechanized crank shaft, at work.

Manner of Death:
("manner of death" means the mode or method of death whether natural, homicidal, suicidal, accidental, unclassifiable or undeterminable – *The Fatality Inquiries Act*, Section 1(h)).

Accidental

Circumstances under which Death occurred:

Summary:

1. With his employer, Robert Hamilton of Hamilton Farms, Mr. Gibson was processing grain from a silo through a roller and moving the processed grain by auger into a cattle feed containment area.
2. The power source for the auger became disconnected and the auger, plugged with grain.
3. Mr. Gibson began to clear the auger manually.
4. A part of his clothing caught in the unshielded power take off (PTO), the drive shaft powering the grain roller; he was pulled into the equipment and suffered fatal injuries.

Circumstances:

1. Hamilton Farms is a husband and wife cattle, grain and hay operation, with approximately 350 calves, 1500 acres of grain and 800 acres of hay. Robert Hamilton was raised on a cattle and grain family farm and obtained a certificate in agriculture (livestock production and mechanics) from Olds College, where he met his wife, Gail. Gail Hamilton was born on a Manitoba dairy farm and studied Animal Health Technology at Olds College. As Mr. Hamilton's family farm was not large enough for him to stay, the couple found agriculture sector employment and worked toward a goal of establishing their own farm in time.
2. The beginnings of Hamilton Farms came in 1981 with the purchase of 30 Angus cows; both Hamiltons continued their respective full time employment and developed their cattle operation after work for many years. Eventually, they built the farm to a size that required their full time attention; at the same time, they struggled to afford additional full time help: their three sons helped out when not away at school; a retired neighbour helped with haying and seeding; an Edmonton firefighter came and helped with seeding and harvest and his brother also helped at busy times. But, apart from Gail Hamilton's sister who alternated between full and part time, doing bookkeeping and office accounting, the main operation consisted of Robert and Gail Hamilton and one additional year round full time position, the position to which Steve Gibson was hired on October 1, 2013.
3. Raised on a New Zealand dairy farm, Steve Gibson had 23 years of cattle ranching experience in Canada and Australia. Before starting work for Mr. Hamilton, Mr. Gibson had been a working manager for cattle operations since 1996; for two years in Australia, he was a member of the company's Occupational Health and Safety (OHS) Committee.
4. In the four weeks leading up to his death, Mr. Gibson had not had a day off, as it was a very busy time of year, with winter feeding and calving.
5. On January 31, 2014, Mr. Gibson and Mr. Hamilton were working together processing whole grain for cattle feed. This involved a two-step operation: first, filling up a silo with whole grain; and, then, processing the whole grain through a roller and transferring it by use of an auger into a cinder block containment area.
6. The grain roller, a stationary piece of machinery, was powered by a PTO (Power Take Off), a piece of equipment commonly used on farms, essentially a drive shaft; the PTO in turn was powered by a tractor. In the past, the Hamiltons had purchased the grain already rolled and delivered, but in an effort to reduce costs, decided two years earlier to roll their own grain; to that end, Mr. Hamilton bought from a neighbour a 40- or 50-year old grain roller and PTO. The roller had three safety shields on it; the PTO, although it would originally have had a safety shield, at the time Mr. Hamilton acquired it, did not. No manual came with the equipment, either.
7. January 31, the light was failing and a stiff wind blowing as Mr. Hamilton and Mr. Gibson worked to finish the grain rolling work. The wind was blowing the grain before it hit the ground in the containment area so Mr. Hamilton set a large hay bale up on the side of the containment, as a wind block; he had not positioned the bale quite right and it toppled

down and disconnected the auger power cord. Deprived of its power source, the auger became almost immediately plugged with grain.

8. Mr. Gibson turned off the PTO from the tractor and began to clear by hand the jam in the auger. He then went to the tractor, started the PTO and returned to the auger, once more reaching up to clear grain; before Mr. Hamilton's horrified gaze, part of Mr. Gibson's clothing caught on the unshielded PTO and drew Mr. Gibson into the machinery, killing him instantly.
9. Farming is hard and hazardous work. In 2016, the most recent Canadian Agricultural Injury Reporting publication, Agriculture-Related Fatalities in Canada, cites the following statistics:
    a. "92% . . . of the agriculture-related fatalities in Canada [2003 - 2012] were work-related." (p. 15)
    b. " . . . 86% of those killed in agriculture-related injury events were actually engaged in agriculture-related work." (p. 15)
    c. "70% . . . of agriculture-related fatalities were machine-related. The leading machine-related mechanisms of fatal injury were machine rollovers, machine runovers and machine entanglements." [Emphasis added.] (p. 15)
    d. "When analyzing the top 5 machine-related mechanisms of injuries over time [2003 - 2012], fatality rates due to rollovers experienced a decrease on average of 3.6% annually, fatality rates due to entanglements increased an average of 6.2 % annually, fatality rates from being pinned/struck by a machinery component decreased an average of 7.8% annually, motor vehicle collision fatality rates increased an average of 2.8% annually and runover fatality rates decreased by an average of 2.3% annually." [Emphasis added.] (p. 16)
10. The PTO is a particularly hazardous piece of farm machinery:
    a. "The Power Take-Off (PTO) shaft is an efficient means of transferring mechanical power between farm tractors and implements. This power transfer system helped to revolutionize North American agriculture during the 1930's. It is also one of the oldest and most persistent hazards associated with farm machinery." (1991, Dennis J. Murphy, Pennsylvania State University Fact Sheet Safety-33, Pennsylvania Cooperative Extension Service, p.1)
    b. "Of the 29 deaths [1990-2009] due to being entangled in a piece of machinery the most common type was a power-take-off (PTO) with 9 deaths." (Alberta Centre for Injury Control and Research, Agricultural-Related Injuries in Alberta, p. 22)
    c. "The machine most frequently involved with entanglement fatalities [1990 - 2008] was power take off (PTO) accounting for 30%." (Canadian Agricultural Injury Reporting (CAIR), Agricultural Fatalities and Hospitalizations in Ontario 1990-2008, 2011, p. 15)
11. The day after this Fatality Inquiry's second court day, the Alberta Government passed the Enhanced Protection for Farm and Ranch Workers Act, which came into effect January 1, 2016; with this enactment, paid non-family member farm and ranch workers gained the protection of the Occupational Health and Safety Act and the Workers Compensation Act. Application of the Occupational Health and Safety Act to farm and ranch workers had been the principal recommendation of the 2008 Chandler Fatality Inquiry. Industry specific regulations and amendments to the Employment Standards Code and Labour Relations Code are expected in 2017, following extensive consultation with the industry.
12. Alberta Agriculture and Forestry has considerable educational and training resources for promoting safety on farms and ranches. But, use of such resources is still largely elective, except to the extent that OHS and WC compliance now requires it.

Recommendations for the prevention of similar deaths:

1. Farm safety training be made a compulsory component of all post-secondary agriculture programs, at least in graduation year but ideally in every year of a program. This may require a cross-ministry initiative, involving Advanced Education, Agriculture and Forestry, and Labour.
2. The Ministries of Labour and Agriculture and Forestry develop and implement a compulsory regime of annual safety certification of farm equipment, to include PTOs.

DATED May 8, 2017,

at Calgary, Alberta.

A. J. Brown
A Judge of the Provincial Court of Alberta