

Investigation Report
Worker fatally injured by a steer while loading cattle
August 17, 2017

The contents of this report

This document reports Occupational Health and Safety's (OHS) investigation of an incident when a worker was fatally injured by a steer while loading cattle into a cattle liner in August 2017. It begins with a short summary of what happened. The rest of the report covers this same information in greater detail.

Incident summary

Cattle at a feedlot were being moved from pens through a series of gates and chutes to be loaded into a cattle liner. The driver of the truck/cattle liner followed three steers up a chute and into the cattle liner. One of the steers turned around and followed the truck driver back down the ramp and chute to a closed gate. The truck driver was pinned against the gate by the steer and sustained a fatal crushing injury.

Background information

Coro View Farms Ltd. (Coro View Farms) was incorporated in Alberta in 2001. Coro View Farms was considered a farming and ranching operation under the Alberta Farming and Ranching Exemption Regulation Section 2(1)(b), the raising and maintenance of animals or birds [AR 27/95 s2:SA 2015 c19 s6]. Family members and waged non-family members worked at Coro View Farms. The incident involved workers who were waged non-family members.

Coro View Farms was a 5000 head cattle feedlot operation where young cattle were fed and raised to market size. The cattle were then shipped from the feedlot to processing facilities in Alberta. The feedlot kept the cattle in a series of pens of different sizes as needed. Alleys, gates and chutes were used to allow and control movement of cattle between pens and ultimately into trailers of different sizes for transport to other locations. The feedlot was located at 36506 Range Road 115, Coronation, Alberta. Workers were directed and supervised by one of the owners.

The truck driver (driver 1) was a waged non-family member and employed by Coro View Farms for approximately four years (2013 - 2017). Driver 1 was the fatally injured worker. Driver 1 had many years of driving experience, including semi-trailer units, and had an Alberta Class 1 driver's licence. Driver 1 had some experience in working with cattle. Driver 1 was responsible for setting up the tractor unit and semi-trailer cattle liner at the loading area. The load distribution in the cattle liner was the responsibility of driver 1. Driver 1 used the size, weight and number of cattle to be loaded as the guide to determine which compartment inside the cattle liner the cattle were to be placed. The owner provided verbal direction and in-person training to driver 1 regarding handling cattle and accompanied driver 1 on multiple trips. Following that, driver 1 drove one truck/cattle liner and a second more experienced driver in a second truck/cattle liner was sent on the same trip prior to any solo trips.

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The feedlot herd health worker (worker 1) was employed by Coro View Farms for approximately seven years (October 2009 - October 2012 and August 2013 - August 17, 2017). Worker 1 had verbal and in-person training from the employer regarding cattle handling and movement. On the date of the incident, worker 1 was responsible for moving selected cattle between pens, setting up gates, weighing the cattle and organizing groups of cattle for the loading sequence as directed by driver 1.

The pen rider (worker 2) was employed by Coro View Farms for approximately three weeks and had 20 years of experience in working with cattle and 12 years in hauling cattle in a cattle liner. Worker 2 had verbal and in-person training from the employer regarding cattle handling and movement for the Coro View Farm's cattle liner. On the date of the incident, worker 2 was responsible for assisting worker 1 in moving selected cattle between pens, setting up gates, weighing the cattle and organizing groups of cattle for the loading sequence as directed by driver 1. Worker 2 sometimes worked with cattle on horseback. Worker 2 was on foot during the time the cattle were being moved on the day of the incident.

The truck driver – contractor (driver 2) had 40 years of experience in operating trucks and other equipment and had an Alberta Class 1 licence. Driver 2 had over 40 years of experience in working with cattle on a family farm. Coro View Farms had contracted with driver 2 for approximately one year to haul cattle and other materials as needed. Driver 2 had hauled a cattle liner previously and was shown how to load cattle for the cattle liner involved in the incident by driver 1. On August 16, 2017, driver 2 was scheduled to haul gravel in a gravel truck to locations on Coro View Farms property. Driver 2 also assisted with loading cattle if needed, and was in the loading area on the day of the incident.

Equipment and materials

Cattle liner

2017 Wilson cattle liner, model PSDCL-402

The Wilson cattle liner was ordered from Golden West Trailer Sales & Rentals (Golden West Trailer) in Moose Jaw, Saskatchewan (SK) on August 23, 2016, and was picked up by Coro View Farms on November 21, 2016, in Moose Jaw. The cattle liner was inspected on November 21, 2016, by Saskatchewan Vehicle Standards and Inspection at Golden West Trailer and no defects were noted on the inspection form. Coro View Farms registered and insured the cattle liner in Alberta on November 22, 2016. (Figure 1)



Figure 1. Coro View Farms' semi-tractor and Wilson cattle liner parked at the feedlot loading area.

- A. Semi-tractor*
- B. 2017 Wilson cattle model PSDCL-402*
- C. Feedlot loading area*

The cattle liner was 16.2 metres (m) in length, 2.4 m in width and 4.1 m in height (53 feet in length, 8 feet wide and height of 13.5 feet as per standard industry measurements) (Figure 2A). The cattle liner had three axles and a semi-trailer coupling to a truck tractor unit. The cattle liner had five interior compartments with gates and ramps connecting and controlling the location of cattle loaded inside (Figure 2B). Placement of the cattle inside a cattle liner was based on size and weight in order to balance the load. Cattle were loaded into the nose compartment first (Figure 2D) and then the remaining compartments. Cattle loading into the nose compartment had to pass through the top deck where gates were in place to swing behind the cattle to prevent them from turning around and leaving the cattle liner.

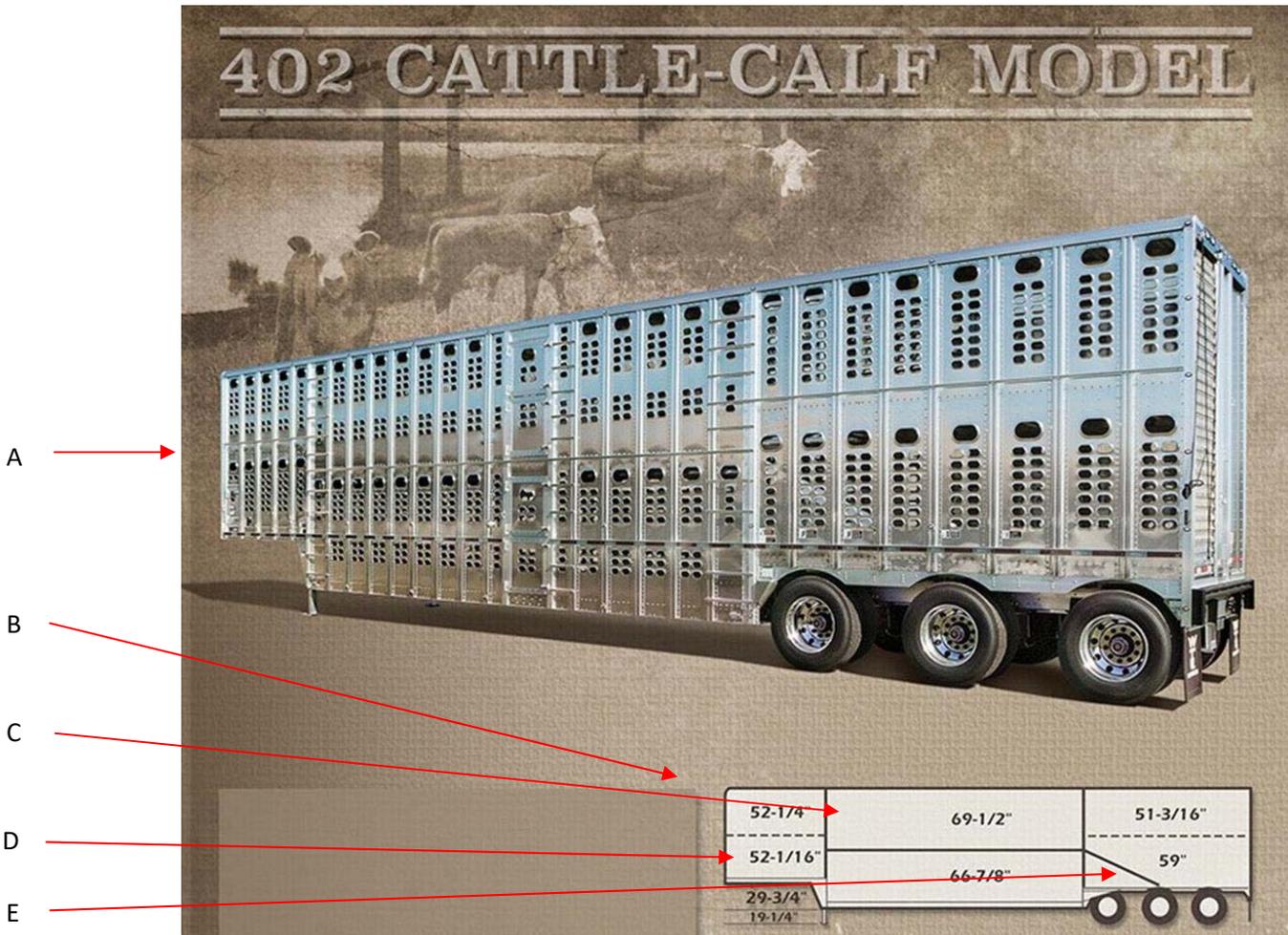


Figure 2. Copy of photograph from Wilson Livestock Trailers Brochure dated 2016 showing exterior of 402 Cattle-Calf Model cattle liner and drawing of interior compartments of the cattle liner.

- A. Photograph of exterior of cattle liner
- B. Drawing of interior compartments of cattle liner
- C. Location of top deck compartment
- D. Location of nose compartment
- E. Location of interior ramp

Cattle feedlot loading area

Coro View Farms had multiple pens and alleys (pathways between pens) for restricting and managing the movement of cattle.

A weigh scale (Figure 3A) was located next to the truck loading chute and was used to weigh cattle prior to loading. The loading area was used to gather, select, weigh and then load cattle in the correct groups to ensure a balanced load.

Alleys were travel paths for cattle and workers and had multiple gates along their lengths. A semi-circular solid sided pen called the “tub” (Figure 3C) had an interior solid swing panel (Figure 3B) that directed cattle into a paired set of single file chutes (Figure 3D). The chutes led to a single chute (Figure 3F) which accessed the rear loading door and ramp for the cattle liner. A sliding gate (Figure 3E) blocked the cattle from climbing the single chute until it was pulled out of the way by a worker. Individual cattle or small groups were given access to the ramp by a worker moving the gate as needed. When the cattle reached the top of the loading ramp, the gates and ramps inside the cattle liner were operated by a worker, usually the driver.

Cattle being unloaded from a cattle liner moved in the opposite direction and the same gates, chutes and pens were used in reverse order to that of loading



Figure 3. Loading area of Coro View Farms feedlot. Photograph provided by Coro View Farms.

- A. Weigh scale house
- B. Swing gate in tub
- C. Tub cattle enclosure
- D. Paired single file cattle chutes
- E. Slide gate
- F. Single file chute to rear of cattle liner

Cattle

A group of three steers (castrated males) were selected from a larger group for loading in the front compartment (nose) of the cattle liner. One of the steers had horns and was selected for loading first into the nose compartment rather than another compartment to prevent damage to the cattle liner from the horns.

Sequence of events

On August 16, 2017, in the evening, the owner sent a text to worker 2 to start work the next day at approximately 11:00 a.m. to assist worker 1 with loading cattle for 12:00 p.m. and then to continue with regularly scheduled work for loading cattle at 2:30 p.m.

On August 17, 2017, worker 1 arrived at work at approximately 7:30 a.m. and entered the feedlot office. The owner left a note with directions for the workday on the office table. Worker 1 read the note and proceeded with the tasks as listed.

From approximately 10:30 a.m. to 11:00 a.m., worker 2 arrived at work and joined worker 1. Cattle were selected from the large feedlot pens, moved to holding pens, then put through a weigh scale and returned to holding pens, pending loading into the cattle liner. Records of each individual animal's size and weight were kept.

At approximately 11:30 a.m., driver 1 arrived at the worksite with the truck and cattle liner and parked at the loading location (Figure 1). Driver 1 spoke with worker 1 and worker 2 about the groups of cattle, their weight and the order in which the cattle would be loaded.

At approximately 11:55 a.m., driver 2 arrived at the feedlot with the gravel truck and parked near the feedlot office. Driver 2 left the gravel truck and walked over to the feedlot office to see if the owner was there. The owner was not at the office, and driver 2 walked over to the cattle loading area.

At 11:57 a.m., worker 1 noted the time and told driver 1 that the loading would start with the first group of cattle. Worker 1 and worker 2 walked through the loading area along the alleys and set the multiple gates into position for loading operations.

The first group of cattle was moved through the alleys and gates towards the tub. Workers used a series of swinging gates which they stood behind to encourage or "push" the cattle through each section of the alley. Gates were latched in the closed position once the cattle passed through into the next section (Figure 4 and Figure 5).



Figure 4. Alley with gates closed to control cattle movement.



Figure 5. Alley leading to tub with gates partially open to show their location.

The tub had solid walls (Figure 6A) and the swing gate was also solid (Figure 6B). The tub had raised vertical stops that connected with a latch mechanism (Figure 6C) on the swing gate so workers could allow one-way movement of the swing gate as needed. Cattle entered the tub, and the tub swing gate was moved in a clockwise direction to allow room for the cattle. When all the cattle were in the tub, the last gate on the alley was closed.



Figure 6. Interior view of tub and location of swing gate.

- A. Perimeter of tub
- B. Swing gate – moved in clockwise or counterclockwise direction as needed
- C. Vertical stops to set swing gate position

Once in the tub, worker 1 and worker 2 used the solid swing panel in a counterclockwise direction to push all three cattle into a paired set of single file chutes (Figure 7) and towards the chute leading to the cattle liner back door.



Figure 7. Paired single file chutes.

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A slide gate was located between the paired chutes and the chute leading up to the cattle liner back door. The slide gate had a solid bottom panel and four rails (Figure 8B and Figure 8C). The sliding gate rested on wheels on a rail and was operated by a pull rope (Figure 8A). The rails and wheels were worn and effort was needed to move the gate.

The slide gate at the bottom of the chute was open and the three cattle passed through the gate and up the chute into the cattle liner.



Figure 8. Slide gate in open position at bottom of loading chute/ramp to cattle liner.

- A. Rail and wheels
- B. Pull rope
- C. Slide gate

Driver 1 closed the slide gate (Figure 9).



Figure 9. Slide gate in closed position. View from inside paired single file chutes.

Driver 1 followed the cattle up the chute and into the cattle liner (Figure 10).



Figure 10. Chute and loading ramp leading to cattle liner. View from interior of chute.

The chute leading to the rear of the cattle liner had solid panels with oval cutouts so cattle were visible from outside the chute (Figure 11C). A ramp with cleats and a railing for workers was on the outside of the cattle loading chute (Figure 11D). A spring loaded door that opened one-way into the cattle chute was in place at the top of the worker access ramp (Figure 11B and Figure 12).



Figure 11. Photograph of exterior of loading chute ramp.

- A. Cattle liner
- B. Spring loaded door
- C. Oval cutouts in solid sides
- D. Worker access ramp

The spring loaded door was also considered an emergency escape route from the cattle liner or chute (Figure 11B and Figure 12).

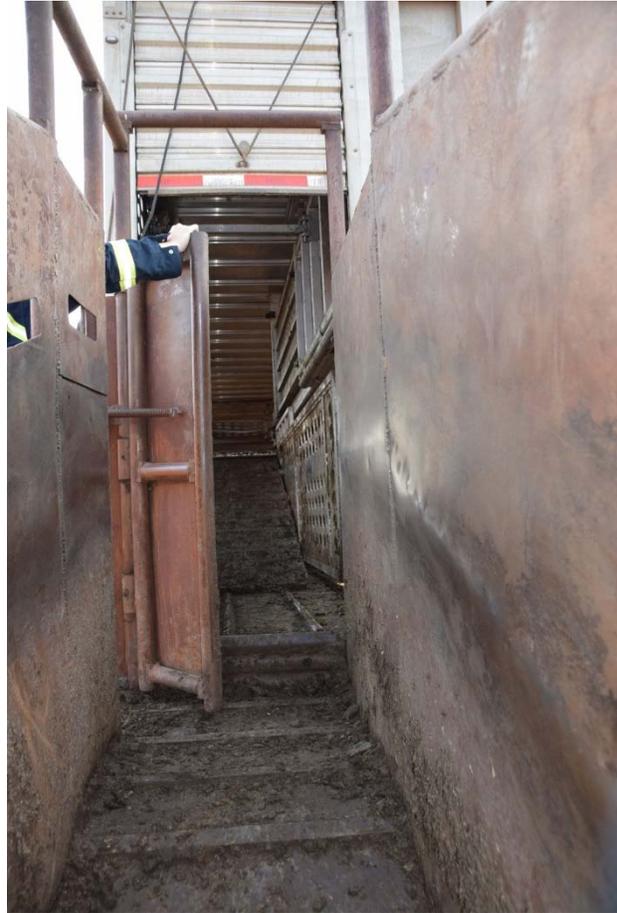


Figure 12. Spring loaded door at top of loading chute/ramp.

Worker 2 saw driver 1 walk up the ramp. Driver 2 walked towards the left side of the cattle liner and saw driver 1 standing at the top of the ramp leading to the top deck inside the cattle liner. Driver 1 and the cattle were visible through the airflow vent openings in the side of the cattle liner.

Cattle were moved up the ramp located on the driver's side of the cattle liner (Figure 13), across the top deck (Figure 14) and towards the nose compartment (Figure 14A).



Figure 13. Interior ramp of cattle liner.

A



Figure 14. Top deck of cattle liner

A. Nose compartment

The nose compartment gate was in the elevated position (Figure 15A) and the nose compartment ramp (Figure 15B) was in the lowered position to move the cattle into the nose compartment. The nose ramp and a gate across the nose ramp were counterweighted so that opening the gate lowered the ramp and shutting the gate raised the ramp.



Figure 15. Nose compartment with gate open and ramp lowered.

- A. Nose compartment gate in elevated position*
- B. Nose compartment ramp in lowered position*
- C. Top deck compartment*

A gate the width of the interior of the cattle liner was located approximately halfway along the top deck and mounted on the passenger side (Figure 16). The midgate could swing in two directions, forward and back.



Figure 16. Midgate on top deck in open latched position.

A. Midgate

The midgate was used to swing behind the cattle and keep them from turning back (Figure 17). Immediately following the incident, the midgate was found locked in place to the passenger side of the cattle liner's wall and pinned in place (Figure 16A)



Figure 17. Midgate on top deck in position when used to push cattle towards nose compartment.

The latch on the driver's sidewall operated automatically and would latch the midgate in either direction (Figure 18).



Figure 18. Latch for midgate on driver's side of cattle liner wall.

The gate located at the top of the cattle liner entry ramp would swing rearward only. It was found locked in place to the driver's side of the cattle liner wall (Figure 19 and Figure 20).



Figure 19. Gate at interior ramp in open locked position.

A. Interior ramp gate



Figure 20. Gate at top of interior ramp deck.

The interior ramp gate was operated by a pin with a pull release (Figure 21A). A structural brace on the inside of the cattle liner was a stop tab to prevent the ramp gate from going forwards at the top and bottom of the gate (Figure 21B). Unlatching the interior ramp gate required several actions to unlock, push or pull into closed position and to latch into closed position.

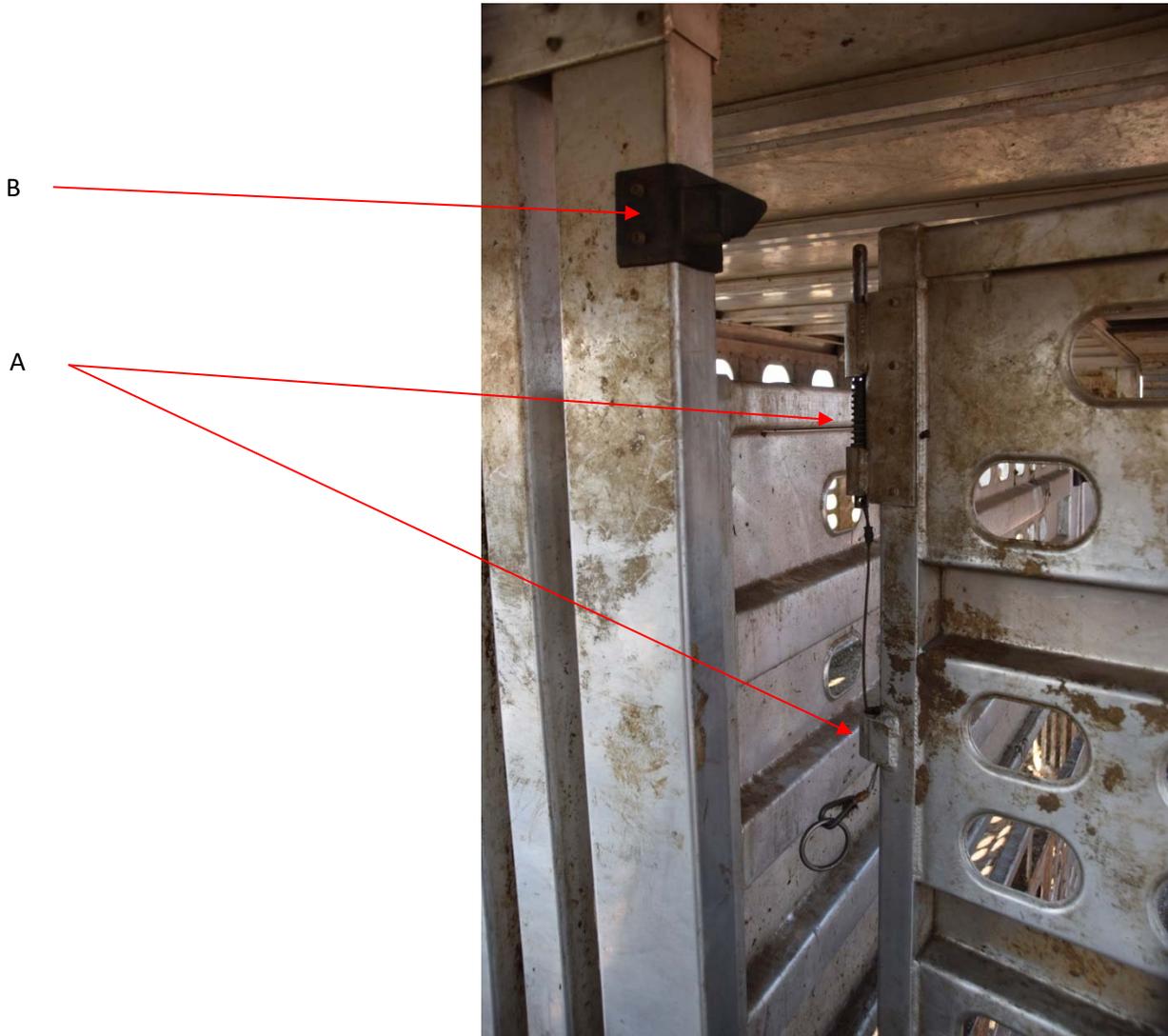


Figure 21. Interior ramp gate with pull release and structural brace with gate stop tab.

- A. Pin latch with pull release*
- B. Structural brace with top stop tab*

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Worker 1 and worker 2 walked back to the tub and opened the gates and headed back to the holding pens in preparation to gather the next group of cattle. Worker 1 and driver 2 heard driver 1 yelling at the cattle, a normal practice.

Worker 1 and driver 2 heard driver 1 change tone of voice and believed that it indicated distress or alarm. Driver 2 saw driver 1 turn and run down the loading ramp inside the cattle liner (Figure 22A) towards the rear door (Figure 22B).

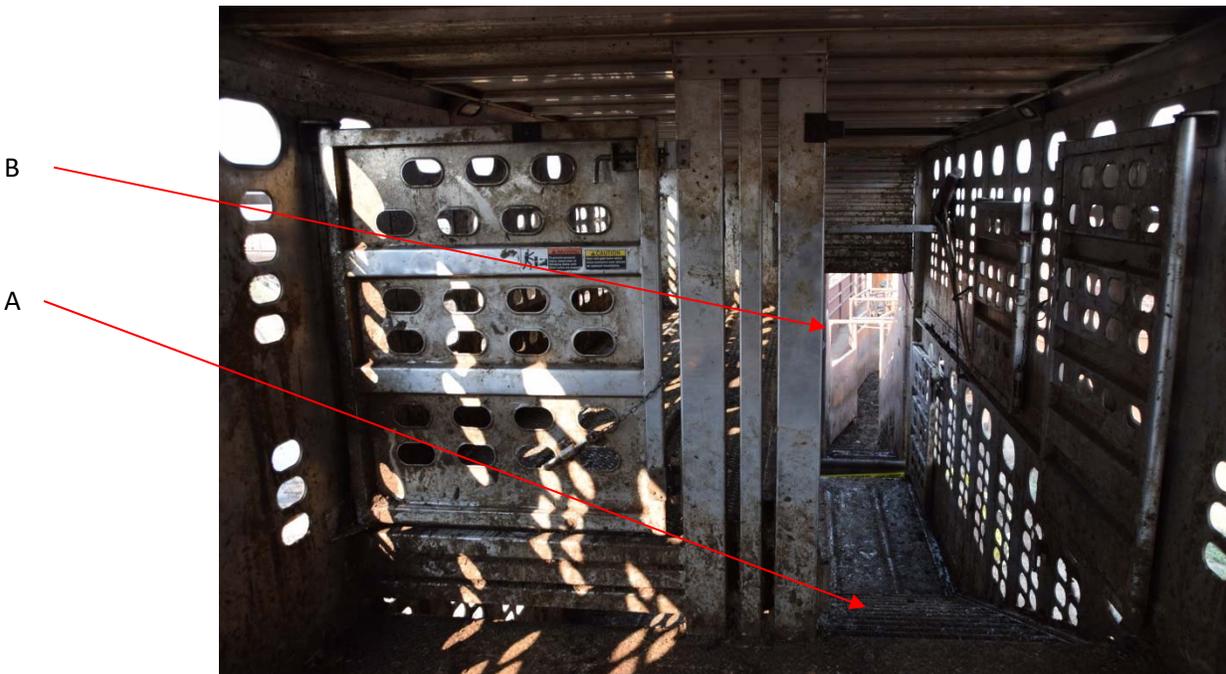


Figure 22. Interior cattle liner ramp facing the rear door and towards the loading chute/ramp.

- A. Cattle liner interior ramp
- B. Cattle liner rear door

Driver 2, worker 1 and worker 2 saw driver 1 run down the chute (Figure 23B) to the closed slide gate (Figure 22C) with the horned steer following immediately behind. The horned steer ran into driver 1 and repeatedly head butted driver 1 against the gate. Driver 1 tried to move into a corner of the slide gate and chute railing while standing. The two remaining steers followed the first steer down the ramp.



Figure 23. Loading ramp/chute looking towards slide gate. Photograph provided by Coro View Farms.

- A. Cattle liner*
- B. Loading ramp/chute*
- C. Slide gate where worker was injured*

Driver 2 ran to assist driver 1 and opened the slide gate. Worker 1 saw driver 1 fall to the ground. The three cattle ran over top of driver 1 as they passed through the now open slide gate. Worker 2 opened and closed gates along the alley to allow the cattle to escape and prevent them from returning to the area by the slide gate.

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At 12:07 p.m., worker 1 called 911 for emergency assistance, was agitated, could not remember the address and ended the call. Worker 1 immediately phoned the owner to report the incident. Owner 1 phoned 911 at 12:08 p.m. and drove from another location on the worksite to the cattle loading area. Worker 2 and driver 2 provided first aid to driver 1. Owner 1 arrived at the cattle loading area and then went to the property driveway entrance to flag the ambulance to the correct location.

Driver 1 was conscious and initially able to talk. Emergency Medical Services (EMS) (Consort location) arrived and took over care of driver 1. Driver 2 travelled in the ambulance with driver 1 to Stettler Hospital and Care Center. Driver 1 became unresponsive during transport by EMS and was pronounced deceased at Stettler Hospital and Care Centre. The death was reported to the Office of the Chief Medical Examiner (OCME) in Calgary by hospital staff.

At 3:50 p.m., OCME contacted the Royal Canadian Mounted Police (RCMP) in Coronation to report the incident. RCMP attended the incident site at 4:20 p.m. At 4:28 p.m., RCMP contacted OHS to report a workplace fatality.

Completion

A review for enforcement action was completed on April 18, 2019, and it was determined that prosecution or an administrative penalty were not appropriate based on the circumstances surrounding this incident.

This investigation was closed on June 20, 2019.

Final Report

Signatures

ORIGINAL REPORT SIGNED

September 26, 2019

Lead Investigator

Date

ORIGINAL REPORT SIGNED

September 23, 2019

Manager

Date

ORIGINAL REPORT SIGNED

September 30, 2019

Director

Date