

# Worker fatally injured when struck with equipment

October 16, 2017

## **The contents of this report**

This document reports the Alberta Occupational Health and Safety (OHS) investigation of a fatal incident that occurred in October 2017. It begins with a short summary of what happened. The rest of the report covers this same information in greater detail.

## **Incident summary**

During the process of constructing a perimeter fence around an agricultural chemical supply facility, a worker sustained a fatal crush injury. The fatally injured worker was a ground worker positioning metal fence posts. A compact track loader operated by a co-worker, tipped forward as it was moving down a slope carrying a bucket of gravel in an elevated position. The loader bucket landed on top of the ground worker, pinning them to the ground. The worker sustained fatal injuries.

## **Background information**

### **Prime contractor**

1020610 Alberta Ltd. operating as PGA Crop Inputs (PGA). PGA operated as a supplier of crop inputs in the agricultural region surrounding the community of Grimshaw, Alberta since December 5, 2002. The PGA operation provided seeds, chemicals, fertilizers, soil nutrients, application systems and chemical tanks to the local agricultural sector. The registered office was located in Peace River, Alberta. The records office was located in Grimshaw, Alberta. PGA requested 1340726 Alberta Ltd. to install fence posts for construction of a chain link perimeter fence at the PGA facility, which commenced on September 25, 2017. PGA was a small company employing seven employees. The owner of PGA hired 1340726 Alberta Ltd. PGA and 1340726 Alberta Ltd. entered into a verbal agreement for 1340726 Alberta Ltd. to erect a perimeter fence on the PGA work site, for the purposes of securing a new liquid chemical tank farm.

### **Contractor**

1340726 Alberta Ltd. was registered on August 1, 2007 and provided operational services involving graders, backhoes, dump trucks and smaller mobile equipment. The most recent provision of services by 1340726 Alberta Ltd. included pouring cement pads, building access roads, placement of buildings, clearing brush and trees. The registered office was located in Grimshaw, Alberta. The records office was located in Grimshaw, Alberta. There were two employees of 1340726 Alberta Ltd. The Operator/Labourer represented 1340726 Alberta Ltd. in doing the fencing work and was senior position of authority to Admin/Sales worker in the fence construction project which commenced in September 2017. The Admin/Sales worker assisted

the Operator/Labourer and commenced work with the Operator/Labourer in October 2017 for the erection of the perimeter fence.

### **Admin/Sales worker (deceased worker)**

Was employed as Admin/Sales worker with PGA. A letter of Employment on September 14, 2017 sets out this capacity and with a commencement date of employment of September 18, 2017. The Admin/Sales worker possessed a Class 5 Alberta Operator's Licence and had completed WHMIS/MSDS, and TDG training at PGA on September 19, 2017. The task that was being performing at the time of the incident was that of a field labourer. The Admin/Sales worker possessed 29 days' experience with PGA at the time of incident.

### **Operator/Labourer**

Was employed intermittently as a contractor with PGA during the two years immediately preceding the incident. In general, the tasks at PGA included pouring cement pads, building access roads, placement of buildings, clearing brush and trees. The occupation at PGA at the time of incident was that of a contracted Operator/Labourer, with most recent tenure at PGA as having commenced on April 25, 2017. The task at the time of the incident was that of an Operator/Labourer of a compact track loader. Operator/Labourer possessed a Class 1 Alberta Operator's Licence and held 30 years' experience operating various trucks, graders backhoes and mobile equipment at the time of incident. Twelve of these 30 years (2002-2013) were at a rig-moving company.

### **Operations Manager**

Was employed as an Operations Manager for PGA for three years immediately preceding the incident with a start date of October 7, 2014. The Operations Manager possessed an Alberta Drivers Licence. They possessed 40 years' work experience with a focus in the pulp & paper industry and had completed a variety of courses and training at PGA. The duties of an Operations Manager at the time of incident were with administration and ordering of chemical products.

## Equipment and materials

### Perimeter fence

Approximately 200 galvanized metal poles (Figure 1) for a perimeter fence measuring 1.83 metres (m) (6 feet) and 3.81 centimetres (cm) (1.5 inches). Two workers, one using a shovel on the ground and one worker operating the compact track loader, were involved in the work.



*Figure 1. The fence posts were aligned north to south in the area where the incident occurred.*

*A. The galvanized metal poles that were set in posts holes, to which chain link fence would be attached.*

## Mobile equipment

The mobile equipment used for the project was a 2012 New Holland Model C232 Compact Track Loader (Figure 2). The unit had a build date of Thursday, May 17, 2012 and a lift capacity of 1018 kilograms (kg) (2240 pounds). The bucket specifications were 2.13 m (84 inches) with a volume capacity of 0.58 m<sup>3</sup> (20.5 cubic feet). The 2012 New Holland Model C232 Compact Track Loader was owned by L & L Campbell Farms Ltd. of Grimshaw, Alberta.



*Figure 2. Perspective of the compact track loader on the east side of the fence. (Not representative of position of the machine at time of incident, or immediately post incident).*

- A. *This model of compact track loader had been obtained by the employer PGA as the configuration of the loader with a tracked system provided more stability than 'wheeled' loaders.*

## Sequence of events

The perimeter fence project began on approximately September 25, 2017.

The incident date occurred approximately three weeks later on October 16, 2017.

Execution of the job scope included the following steps: Property line pins were located, and posts were installed one foot inside the property line of the PGA facility. Posts were placed at

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ends and middle of a straight run of fence, and a string line was run between these posts by the Operator/Labourer and the Admin/Sales worker.

The string line was used to align where the post holes were drilled, which was executed using the compact track loader equipped with an auger. The 3.81 cm (1.5 inches) diameter galvanized posts that would provide support for the chain link fence were to be placed in the holes.

Uncrushed 'pit run' gravel was placed in the holes by hand using a shovel to 'set' the posts by the Admin/Sales worker. The string line was then used to level – 'align the height' - of the posts to 1.83 m (6 feet). The compact track loader bucket was applied to push down the fence posts to the correct 1.83 m (6 foot) height.

The bucket on the compact track loader was to be placed at a point at the middle of the 213.36 cm (84 inch) bucket on the top of a fence post. This point was not the leading edge of the bucket but rather was a point located towards the base of the bucket closer to the operator's compartment. This point was to be used to enable better leverage to facilitate setting of the fence post.

On approximately September 25, 2017, at the start of the project, the fence construction job scope was discussed between the Operator/Labourer and the Admin/Sales worker.

Neither worker wore personal protective equipment (PPE) while constructing the fence. Hard hats, high visibility vests and steel toe boots were not required by PGA.



*Figure 3. Perspective facing northwest indicating the fence posts running north – south. The depression running parallel along the east side of the fence indicates non-level terrain.*

*A. Non-level terrain.*

On October 16, 2017, the Operator/Labourer and the Admin/Sales worker were engaged in the task of positioning and tapping in a line of fence posts as part of the fencing project. The Operator/Labourer while operating the compact track loader approached a fence post intending to tap it in in order to set the post for future chain link installation.

The Admin/Sales worker was standing on the west side of the post when the Operator/Labourer drove the compact track loader in a forward direction towards the line of the fence post holes. There was a depression (non-level area) along the east side of the fence (Figures 3, 4 and 5).



*Figure 4. Perspective facing northeast, indicating the slope and depression into which the compact track loader was proceeding (from east to west) towards the line of fence post holes, which ran north to south.*

- A. The depression at the bottom of the slope was a contributor to a decrease in the load stability of the compact track loader.*





Figure 5. The depth of the depression, measured post-incident, was approximately 30.48 cm (12 inches).

- A. The depression in the terrain, in combination with the compact loader hydraulic arms being in an elevated position while carrying a bucket-load of gravel when the compact track loader was in a forward motion on a downward slope resulted in instability of the compact track loader thereby allowing it to tip forward.

The unbalanced compact track loader with a raised bucket tipped forward and struck the Admin/Sales worker who was standing next to the fence post. The bucket landed on top of the Admin/Sales worker, trapping them and causing a fatal injury. The compact track loader came to rest in a near vertical position on its bucket, the tracks at the rear end of the unit being lifted off the ground after it tipped forward. The Operator/Labourer was trapped in the operator compartment of the compact track loader and could not exit as the operator's door was at the front of the compact track loader.

At approximately 9:01 a.m., the Operator/Labourer telephoned the front desk of PGA from inside the operator compartment of the compact track loader and requested assistance from the front desk staff in the office. The Operations Manager went from the office to the incident scene and then returned to the office to retrieve keys for a Kubota M6 tractor. The intent was

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to use the Kubota M6 equipped with a front-end loader attachment to raise the bucket of the compact track loader off the Admin/Sales worker.

At approximately 9:02 a.m., the Operator/Labourer called 911 from inside the compact track loader.

The Operations Manager requested a member of the public who was at the front counter operate the Kubota M6 tractor and lift the compact track loader bucket off of the Admin/Sales worker.

At approximately 9:09 a.m., the Royal Canadian Mounted Police (RCMP) were notified of the incident by emergency medical services (EMS).

The member of the public lifted the compact track loader bucket off of the Admin/Sales worker by use of the Kabota M6 tractor.

The Operations Manager called 911 and the Grimshaw Fire Department (GFD) were advised of the incident.

At approximately 9:16 a.m., the GFD attended the scene and commenced Cardio Pulmonary Resuscitation (CPR) on the Admin/Sales worker.

At approximately 9:17 a.m., EMS arrived on scene and took over CPR from the GFD.

At approximately 9:34 a.m., EMS reassessed the condition of the Admin/Sales worker where it was determined to discontinue resuscitation.

At approximately 9:37 a.m., the Admin/Sales worker was pronounced deceased.

### **Completion**

A review for enforcement action was completed on November 22, 2018, and it was determined that the file would be referred to Alberta Justice for review. The entire file was sent to Alberta Justice on January 8, 2019. Charges were laid on September 5, 2019. On February 16, 2021, the Operator/Labourer pled guilty to contravention of Section 2(2)(a) of the *OHS Act* for failure to protect the health and safety of another worker present by failing to ensure that, while operating a loader in the proximity of the other worker, that the other worker was not injured by the loader. The Operator/Labourer was ordered to pay a fine of \$70,000, including a 20 per cent Victim Fine Surcharge, and was placed on 24 months of probation. All charges laid against 1020610 Alberta Ltd. operating as PGA Crop Inputs were withdrawn.

This investigation was completed on April 9, 2021.

**Signatures**

ORIGINAL REPORT SIGNED

April 9, 2021

Lead Investigator

Date

ORIGINAL REPORT SIGNED

April 9, 2021

Manager

Date