Investigation Report

Fatality - Worker Run Over

By Grader

June 24, 2013

F-OHS-043937-C9699

March 2015
The contents of this report
This document reports OHS’ investigation of a fatality incident that occurred in June 2013. It begins with a short summary of what happened. The rest of the report covers this same information in much greater detail.

Incident Summary
On June 24, 2013, a grader operator (Kidco operator) employed by Kidco Construction Ltd. (Kidco) had shown up at the Brookfield Residential (Alberta) LP worksite located at the Auburn Bay development area in Calgary Alberta. Work for the operator had previously been cancelled due to adverse weather conditions associated with the rain and heavy flooding that occurred in June 2013.

A motor grader (grader) owned by Blackhawk Construction Inc., was parked on the east side of the southbound lane of 52 Street SE. It was blocking a section of the roadway scheduled for sweeping, oiling and paving by Standard General Inc. personnel. The driver of the Standard General Inc. oil distributor truck (oiler driver) told the Kidco operator that the grader required relocation. The Kidco operator had briefly operated this particular grader three days prior and volunteered to assist the oiler driver to move the grader.

Due to a starter relay problem with the grader, the Kidco operator proceeded to start the grader by shorting across the starter terminals while standing between the left rear tires, adjacent to the engine compartment. When the grader started, it ran over the Kidco operator, resulting in fatal injuries.

Background information
Brookfield Residential Properties Inc. (Brookfield), established in 2011, is a leading North American land developer and homebuilder with operations in eleven major markets across North America. In May of 2013, Brookfield had contracted with Standard General Inc. to perform road base preparation and paving. Marmot Concrete Services Limited was contracted by Brookfield to install curbs and gutters, in the Auburn Bay subdivisions. At the time of the incident, some of this work was occurring on the southbound lane of 52 Street SE and Auburn Bay Boulevard SE (Figure 1).
The map shows the location of the Marmot Concrete Services Limited and Standard General Inc. roadway project located on 52 Street SE between the Auburn Bay and Mahogany development areas. The red arrow shows the approximate location of the incident at the southbound lane of 52 Street SE. The green arrow shows the location of the Auburn Bay development area and the yellow arrow shows the location of the Mahogany development area.

Standard General – Calgary, is a major contractor in land development and road construction in key transportation infrastructure and networks around the greater Calgary areas. The company’s services include preparation for and installing deep and shallow utilities; road building and providing full spectrum project management for many civil engineering projects. Standard General had been hired by Brookfield to oversee paving work on the southbound lane of 52 Street SE.

Marmot Concrete Services Limited (Marmot) is a Calgary based company that specializes in concrete maintenance, recovery/revitalization and new developments. Marmot focuses on servicing the needs of private land developers, the City of Calgary and the neighboring municipalities. Marmot was hired by Brookfield to oversee the preparation and installation of curbing and gutters along the southbound lane of 52 Street SE prior being paved by Standard General.
Kidco Construction Ltd. (Kidco) is a Calgary based multi-service earthmoving contractor company specializing in earthworks, underground, foundation excavation, trucking, paint shop and heavy hauling. Kidco was subcontracted to Marmot Concrete Services Limited to build berms and perform the subgrade work in the Auburn Bay project prior to the installation of curbing and gutters by Marmot.

Blackhawk Construction Inc. (Blackhawk) is a Calgary based construction company that specializes in finishing for paving crews, final placement of gravel for parking lots, placement and grading of recycled asphalt, and grading and cleanup at worksites. Blackhawk was hired by Marmot to build berms for the curbs, gutters and sidewalks adjacent to the extension of the southbound lane of 52 Street SE. This was work that was similar to the work undertaken by Kidco Construction Ltd.

The Kidco operator was employed in his second work season with Kidco. Kidco’s working season typically runs from March until December, weather permitting. The Kidco operator’s position at the Auburn Bay site was lead hand grader operator. Prior to employment with Kidco, the operator worked for Volker Stevin in the same capacity for approximately 10 years. When hired on with Kidco, the Kidco operator had undergone safety orientation and was supervised until he was able to work independently.

One of the Kidco policies indicated that employees cannot operate non-company equipment unless authorized to do so. Kidco safety personnel confirmed that this is a company policy enforced by site supervision.

The Blackhawk Construction Inc. owner/operator established the business in April 2007. Prior to starting his own company, the Blackhawk operator had worked for various construction companies over the course of 35 years, primarily as a grader operator. The Blackhawk owner/operator was the exclusive operator of the grader used at the Auburn Bay project site.

The Standard General oil distributor truck driver (oiler driver) had nine years’ experience working for Standard General Inc. After a sweeper truck removes dust and debris from the asphalt, the oiler driver’s job consists of applying a coating of oil onto the asphalt prior to the final asphalt layer’s application onto the roadway surface.

**Equipment used**

**1993 John Deere Model 772BH Motor Grader**

The 1993 John Deere Model 772BH motor grader (grader), S/N: DW772BH540404, was purchased by Blackhawk in August 2011 (Figure 2). The grader has 1 front steering axle and 2 rear driving axles. The operating weights of the vehicle with standard equipment and attached scarifiers (rear claws) are 5166 kg (11 390 pounds) on the front wheels and 10,358 kg (22 840 pounds) on the rear wheels. The length of the Model 772 BH motor grader, with attached
scarifiers, is 9.22 m (30 feet, 3 inches). The unit’s moldboard is 3.65 m (12 feet) wide with a 152 mm (6 inch) cutting edge.

Figure 2

*Blackhawk Construction Inc. 1993 John Deere Model 772BH motor grader. The red arrow shows the engine compartment. The yellow arrow shows the scarifier. The green arrow shows the moldboard.*

**Sequence of Events**

The Marmot and Standard General curbing, gutters and paving projects contracted by Brookfield began in May 2013. During the week of June 17, 2013, the Calgary area and much of southern Alberta experienced exceedingly heavy rainfall and flooding. The adverse weather conditions were very disruptive to the project site resulting in work shutdowns at the Auburn Bay/52 Street SE worksite and several other Marmot sites in the Seton and Cranston residential development areas and sites in northwest Calgary.

During the month prior to the heavy rains and flooding, Blackhawk personnel had been working exclusively for Marmot at several of the Marmot worksites. The Blackhawk owner/operator had been working at the Auburn Bay site along with three Blackhawk Construction Inc. water truck drivers. The water truck drivers had been in shutdown for two weeks due to the weather. The Blackhawk owner/operator was the exclusive operator of the grader and had been working at the
Marmot site with the grader for about a week. The Kidco operator was performing similar tasks in a related John Deere 770BH motor grader at the Auburn Bay/52 Street SE project.

A week before the rain started, the Blackhawk operator began to experience starter relay issues with his grader. The grader would not start when the ignition key was turned in the key switch. In order to start the grader, the Blackhawk operator would open the engine compartment on the left side of the grader (Figure 3) and then start the engine by shorting across the starter terminals (Figure 4). The grader would start and the owner/grader operator would be able to make normal use of the unit. When finished with the grader, the Blackhawk operator would shut down the unit by turning the key to the off position.

On Tuesday, June 18, 2013, the Blackhawk operator parked his grader on the west side of the southbound lane of 52 Street SE at the turn off lane from 52 Street SE onto Auburn Meadows Avenue SE. It was the Blackhawk operator’s intention to leave the grader out of service until such time as repairs could be affected on the relay for the starter. The rain and flooding continued through the remainder of the week resulting in road closures throughout the city. The local John Deere dealership and other parts suppliers closed temporarily due to these conditions. The heavy rains resulted in the Blackhawk personnel staying off the job at the multiple Marmot worksites.

On Friday, June 21, 2013, the Kidco operator called the Blackhawk operator at home and advised him that a trenching company, preparing to set up for the installation of a gas pipeline by Atco Gas, had requested that all of Marmot’s equipment, including the equipment belonging to the subcontractors be moved away from the west side of the southbound lane of 52 Street SE. Kidco supervision had called in the Kidco operator to move his company’s equipment and he advised the Blackhawk operator that he had already moved the Kidco equipment.

A Marmot foreman moved the trimmer and double smooth drum packer owned by Marmot. The Kidco operator stated that he did not know if the grader needed to be moved but if it did, would the Blackhawk owner/operator mind if the Kidco operator moved the Blackhawk grader.
Figure 3

Left rear section of the Blackhawk Construction Inc. 1993 John Deere Model 772BH motor grader. The green arrow shows the position of the starter motor and starter terminals. The red arrow shows where the Kidco grader operator positioned himself between the left rear wheels to start the engine by shorting across the starter terminals.
Figure 4

Close up photograph of starter motor located in the left rear section of the John Deere Model 772BH motor grader engine compartment behind two of the filter canisters. The green arrow shows the starter motor casing. The red arrow shows the positioning of the starter relay terminals.

The Blackhawk operator stated that he would rather come out to the site and move the grader himself but the Kidco operator stated that it wasn’t necessary as he could move the grader for him.

The Blackhawk operator advised the Kidco operator that the grader starting procedure was problematic, but the Kidco operator told the Blackhawk operator that he was as qualified as anyone to move the Blackhawk grader, was aware of how to deal with starter issues and he would just be moving the vehicle across the street. The Blackhawk operator allowed the Kidco operator to move the Blackhawk grader as this activity would only take approximately two to three minutes. The Kidco operator successfully relocated the grader to the opposite side of the road.

On Friday, June 21, 2013, the Marmot Vice President of Operations instructed all of his superintendents and foremen that the company and its subcontractors would not be working the weekend and to advise all of the employees to stay home. On Sunday, June 23, 2013, the Marmot Vice President of Operations called the superintendents again and advised that the superintendents and foremen would be meeting at the Marmot office on Monday, June 24 at 7:00
a.m., to discuss what their next plan of action would be and, until determined, to ensure that everyone was instructed to stay home.

On Sunday, June 23, 2013, the Marmot foreman sent a text message to six of the Marmot employees advising that the projects were on hold. The Marmot foreman also sent text messages to the Kidco operator and to the other Kidco and Blackhawk employees advising that the Marmot worksites were shutdown and that everyone from Marmot, Kidco and Blackhawk were on hold and were to stay home until further notice.

The Standard General crew working at Marmot’s 52 Street SE and Auburn Bay project worksite were not affected by the site shutdown as their portion of the project was to go forward with the continuance of the paving of the southbound lane of 52 Street SE.

On the morning of Monday, June 24, 2013, the oiler driver started his day by heading into the Standard General shop to acquire his vehicle. He arrived at the shop at approximately 6:30 a.m., saw that his oil distributor truck was ready and drove it over to the job site at 52 Street SE.

The oiler driver had been instructed by Standard General that a certain area on the south bound lane of 52 Street SE had to undergo roadway surface oiling and that was his responsibility that morning.

The oiler driver usually arrives at a job site and his first task is to get everything moved out of the way. The sweeper then shows up to get the job sites clear of debris and then the oiler driver proceeds with getting the roadway oiled in preparation for surface paving.

When the oiler driver arrived at the 52 Street SE work area, he observed a John Deere motor grader, parked on the east side of the roadway, in the way of where he had to apply the oil to the road surface. As he continued driving toward his work area, he observed an individual down the road near the Kidco and Marmot equipment. This individual was the Kidco operator whom the oiler driver had never met before.

The oiler driver drove over to where the Kidco operator was standing near the Kidco and Marmot equipment to inquire as to whether the grader down the road belonged to this individual’s company and whether he was going to relocate it.

The oiler driver stated that the Kidco operator was very friendly and that they had a friendly conversation for approximately 20 minutes. He asked the Kidco operator if he knew who owned the grader that was located approximately half a block away from where they were conversing.

The Kidco operator told the Standard General oiler driver that he knew who owned the grader. The Kidco grader operator stated that it wasn’t his grader but he could move it so that the oiler driver could proceed with his work. The conversation continued for a few more minutes and the Kidco operator then asked the Standard General oiler driver to give him a ride over to the grader.
The Kidco operator then stood up on the running board of the truck and they then drove down to the parked grader. As they were approaching the parked grader, the Kidco operator stated that there was a problem with the Blackhawk grader but he could get it started in about two minutes.

When the truck came to a stop near the right hand side of the grader, the Kidco operator got off the truck’s running board and told the Standard General oiler driver that it would take him a minute to get going.

At this point, the Standard General Project Coordinator drove up behind the oil distributor truck in a pickup truck and the oiler driver told the Kidco operator that he had to speak with his supervisor. The oiler driver exited his vehicle, walking over to his supervisor’s pickup truck, while the Kidco operator proceeded around the rear of the grader to the left hand side.

The oiler driver was standing adjacent to the Project Coordinator’s pickup truck talking with him for approximately 4 minutes when he peripherally observed a person being dragged by the grader. The oiler driver told the Project Coordinator that the Kidco operator had just run over someone and instructed him to immediately contact 911. The oiler driver then realized that the grader was moving down the road in a slightly curving direction with no one present in the cab. He then told the Project Coordinator that the Kidco operator must have ran himself over.

The oiler driver ran over to try and find the Kidco operator and realized the grader was still moving down the road. The oiler driver ran over to the grader and climbed up into the cab, stopped the vehicle and shut it down (Figure 5). The oiler driver then climbed out of the grader and went over to where the Kidco grader operator was on the ground.

The oiler driver stated that he was unable to get closer than approximately 1.5 meters (5 feet) to where the Kidco grader operator was down due to the shock of the situation. He immediately ran over to the Project Coordinator’s pickup truck. The Project Coordinator was on the telephone communicating with the 911 operator.

The oiler driver went over to the side of the Project Coordinator’s pickup truck, the Kidco operator was on the ground over on the far side of the pickup. The oiler driver then ran to the rear of the pickup truck and saw that the Kidco operator was caught up in the left hand scarifier at the rear of the grader. He informed the Project Coordinator that the Kidco operator was deceased.
Figure 5

Location on 52 Street SE where the Blackhawk Construction Inc. 1993 John Deere Model 772BH motor grader was brought to a halt and shut down by the Standard General Inc. oil distributor truck driver. The red arrow shows the arced path that the grader travelled before shut down. The green arrow shows the starting point from the right rear of the vehicle at the right scarifier and the harrow mark caused by the right scarifier. The yellow arrow shows the left scarifier. The orange arrow shows the left rear tire print on the non-oiled road surface. The blue arrows show the non-oiled portion of 52 Street SE blocked by the parked grader prior to the incident.

Due to the stress of the situation, the oiler driver told the Project Coordinator that he was unable to stay at the incident site. He then got into his truck and went down to the south end of the job site. As the oil distributor truck driver approached the end of the job site, he observed the ambulance arriving at the site.

Calgary EMS, Calgary Police Service, Medical Examiner personnel and OHS attended the site. The Kidco operator was pronounced deceased at the site by Calgary EMS. The Calgary Police Service, Collision Reconstruction Unit produced an accident reconstruction schematic.
Completion

A preliminary review of the file was arranged with Alberta Justice on February 25, 2015. On March 6, 2015, Alberta Justice reviewed the case and determined the case did not support any charges under the Occupational Health and Safety Legislation.

The file was closed on March 31, 2015.

Signatures

Original Report Signed __________ March 18, 2015 __________
Lead Investigator Date

Original Report Signed __________ March 18, 2015 __________
Manager Date

Original Report Signed __________ March 23, 2015 __________
Director Date