

Investigation Report
Worker fatally injured falling from truck
October 16, 2018

Report No-F-OHS-155652-57996
November 2020
Page 1 of 8

The contents of this report

This document reports Occupational Health and Safety's investigation of a fatal incident that occurred in October 2018. It begins with a short summary of what happened. The rest of the report covers the same information in much greater detail.

Incident summary

Two workers were in the process of loading a truck of sucker rods for delivery. Upon realizing that one of the bundles needed to be replaced, one of the workers climbed on to the load to assist with moving the misplaced load. The worker lost their footing, slipped and fell to the ground where they sustained a severe head injury. The worker was sent to hospital where their injuries proved fatal.

Background information

Arrow Reload Systems Inc. (Arrow Reload) is a part of the Arrow Group of Companies which was first incorporated in British Columbia (BC) in 1929. Arrow Reload has developed service focused transportation solutions with a broad range of customers, hauling a wide variety of products.

The Arrow Reload facility in Sherwood Park consists of a 27 acre yard which handles steel, lumber, building materials, bulk and equipment.

121663 Alberta Ltd. operating as Prime Staffing Services (Prime Staffing) has been a temporary labour provider since 1978. Prime Staffing provides general labour and semi skilled labour mainly to the warehousing, transportation and construction industries.

Prime Staffing provided general labour workers to Arrow Reload.

The worker was a labourer who worked for Prime Staffing. The worker started on July 18, 2018, and was present at Arrow Reload for a total of 22 shifts. The worker had been present at the Arrow Reload site in May and June of 2018 as well as for a single day in August 2018.

The worker returned to Arrow Reload on September 24, 2018, and worked through October 16, 2018. The worker had attended various pre-work meetings with respect to the work site requirements and specific tasks and duties. Various duties were conducted dependent on the specific daily requirement.

The supervisor was a forklift operator who worked for Arrow Reload. The supervisor had received internal training for forklift operation and rigging. On October 16, 2018, the supervisor was operating the forklift and providing assistance and direction to the worker.

Equipment and materials

Work site

The Arrow Reload yard is located at 38–53309 Range Road 232 in Sherwood Park (Figure 1).

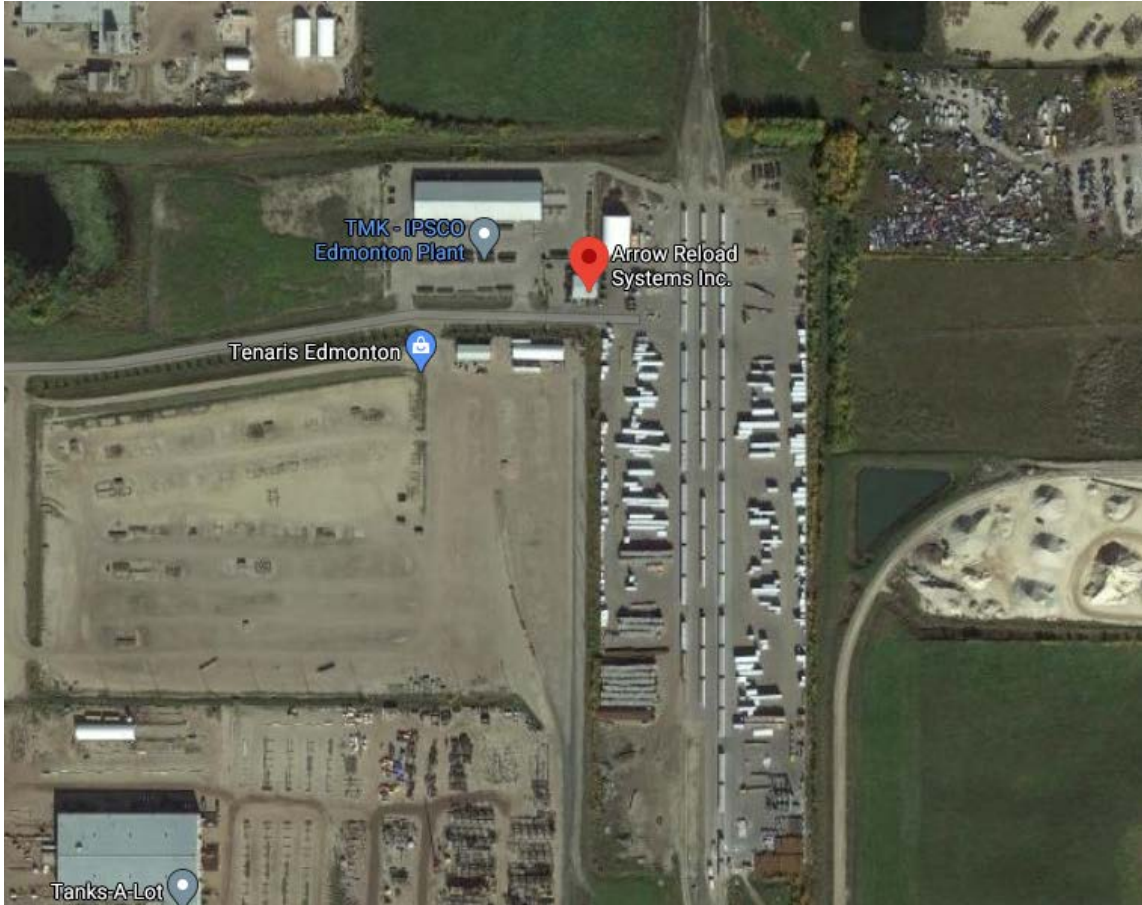


Figure 1. Arrow Reload yard. Photo taken from Google maps.

Manac trailer

The Manac trailer (trailer 307) was a multi-axle B-train (Model 18228A000) with a gross vehicle weight rating (GVWH) of 39 010 kilograms (kg). Trailer 307 consisted of two attached sections. The front section was approximately 12.2 metres (m) long and the rear section was approximately 12 m long. The decks of the trailers were approximately 1.39 m high. The worker and the supervisor were loading trailer 307 at the time of incident.

Sucker rod

Sucker rod was a steel rod which was threaded at both ends and was used in the oil industry. The sucker rods were connected to join the surface and the downhole components of a reciprocating piston pump in an oil well.

Trailer 307 was loaded with nine bundles of 7.6 m long sucker rods on the front section and nine bundles of 7.6 m long sucker rods on the rear section.

The sucker rods were stacked three bundles high, on the rear section (Figure 2). The height of both the trailer and bundles of sucker rods was approximately 2.36 m



Figure 2. Trailer 307. Photo taken at Arrow Reload yard.

A. Incorrect bundle of sucker rods. The bundle was to be removed and replaced with a correct bundle.

Hyundai forklift

The 160D-7A Hyundai forklift (forklift) was being used to lift the sucker rod bundles with the assistance of the pipelift fork attachment.

Pipelift fork attachment

The forklift was utilizing a Fortis Manufacturing (Unit SD-555-01) 12.2 m pipelift fork attachment (boom) with a rated load capacity of 4.5 metric tonnes (MT). The bundles of sucker rods were moved by strapping the bundles to the boom utilizing synthetic fibre slings (Figure 3).



Figure 3. Forklift with boom. Photo taken at Arrow Reload yard.

A. Boom

T-Bar

A commercially manufactured Sucker Rod Lifting T-Bar (T-Bar) was used to hook underneath the bundles of sucker rods. The T-Bar included a 0.59 m bar with an upper T-bar section of 0.5 m and a lower T-bar section of 0.78 m (Figure 4).



Figure 4. T-Bar resting on sucker rod bundles. Photo taken at Arrow Reload yard.

Sequence of events

On Tuesday October 16, 2018, at approximately 6:30 a.m., Prime Staffing provided a van to transport workers from the Prime Staffing office in Edmonton to the Arrow Reload yard in Sherwood Park. The worker was among a group of Prime Staffing labourers who had been requested for Arrow Reload.

At approximately 7:00 a.m., Arrow Reload provided the Prime Staffing labourers with their daily assignments. The worker donned the required personal protective equipment (PPE) which included safety footwear, high visibility clothing and a hard hat.

At approximately 7:30 a.m., the supervisor and the worker were requested to load trailer 307 (Figure 2) with a load of sucker rods and prepare it for transport. The supervisor provided a verbal explanation of the task and assisted the worker with rigging the first bundle. The supervisor operated the forklift (Figure 3), and the worker rigged the bundles using the T-Bar, which was inserted into a centre slot on each bundle (Figure 4). Each trailer section was loaded with bundles of sucker rods (three bundles wide and three bundles high) for a total of 18 bundles.

The supervisor and the worker returned to the office where the trailer paperwork identified that one bundle was on the truck that was not to be loaded.

Two bundles, including the incorrect bundle of sucker rods (Figure 2), needed to be removed from the trailer. The correct bundle would be returned to the trailer and the incorrect bundle would be replaced.

At approximately 9:45 a.m., the supervisor moved the forklift and boom into place approximately 0.5 m above the bundle, which provided enough room to allow the T-bar to be placed into the bundle.

The worker accessed the trailer from the south side, climbed up to the top of the bundles of sucker rods and walked north toward the boom. The worker may have lodged their foot in-between the rods (irregular channels existed between the stacked rods within the bundles), and in an attempt to correct their position, the worker slipped and fell. The worker fell approximately 2.36 m to the pavement surface striking their head.

First aid was administered at the work site and at approximately 9:50 a.m., an Arrow Reload forklift operator called Emergency Medical Services (EMS). At approximately 10:04 a.m., EMS transported the worker to the University of Alberta Hospital in Edmonton.

On Wednesday October 17, 2018, the worker succumbed to their injuries and was pronounced deceased at the University of Alberta Hospital.

Completion

A review for enforcement action was completed on September 10, 2020, and it was determined that the file would be referred to Alberta Justice for review. The entire file was sent to Alberta Justice on September 22, 2020. The Crown did not recommend any charges as there was not enough evidence to support the charges as put forward.

Final Report

Signatures

ORIGINAL REPORT SIGNED

December 4, 2020

Lead Investigator

Date

ORIGINAL REPORT SIGNED

December 4, 2020

Manager

Date

ORIGINAL REPORT SIGNED

December 4, 2020

Director

Date