



THE LONG HAUL: SUSTAINING GROWTH AND SAFETY AT TRAXALL

9-L11-4-001
JANUARY 2011



Professor Robert Hickey, School of Policy Studies, Queen's University, wrote this case with advice from Professor Vic Pakalnis, Department of Mining Engineering, Queen's University and Marcel Pouliot, Vice President Safety & Industrial Services, Trimac. While loosely based on actual events, the case is fictitious and is intended as a case for classroom study and analysis. It is not intended to illustrate either effective or ineffective management practices.

Copies of this case and a list of other cases available may be obtained from

Materials Management Department
Queen's School of Business
Queen's University
Kingston, Ontario, Canada
K7L 3N6

THE LONG HAUL: SUSTAINING GROWTH AND SAFETY AT TRAXALL

9-L11-4-001
JANUARY 2011

INTRODUCTION

The Great Recession has been good for Traxall Trucking Services. While operating revenues have not recovered to pre-2008 levels, Traxall has taken advantage of the economic downturn to implement its acquisition strategy. Traxall recently completed acquisitions of two trucking companies, Hammel Hauling and Sarnia Chemical Cartage, which will give it a dominant position in the niche market of petro-chemical trucking services.

Hammel Hauling still has the culture of a “Mom and Pop” trucking company, but it has grown into a big player connecting Sarnia’s chemical companies to feedstocks in Alberta and to customers in Ontario and Quebec and in the U.S. from New York to Chicago. Sarnia Chemical Cartage, spun off from a large U.S.-based trucking company in the early 1970s, has performed reliably, if unremarkably, since then.

As the VP Human Resources at Traxall, Jesse Lewis has been brought in to resolve what is starting to look like a breakdown of operations following the acquisitions. Traxall’s CEO, John Clark, has given him the following mandate. “Jesse, I know these were good acquisitions. We did our due diligence and bought a dominant position in this market for a bargain price. Ms. MacPherson and her team have a great growth strategy, but Operations seems to be having a harder time with this one. *I need you to figure out the source of the problems and come up with a plan to get us back on track. Specifically, what kind of human resource and employee relations issues are there? What strategic human resource plan do we need to merge the operations of these two companies?*”

THE TRUCKING INDUSTRY

Trucking is a service industry that is vital to every sector in the economy. Virtually every consumer product at the retail level has been handled by a truck at several points along its value chain. Performance in trucking is driven on the demand side by economic activity and on the supply side by flexible and efficient operations. Shippers, ranging from producers like auto manufacturers to retailers like Home Depot, rely on trucking companies to get their goods to market. But shippers are also usually very powerful customers in this relationship, often demanding, and getting, cut rates in a competitive service industry environment. The power of shippers increased during the recession when there were more trucks available and less freight to move. Carriers slashed prices in an effort to retain shrinking volumes. Thin profit margins turned into two years of sizeable losses for most carriers. These conditions made the industry ripe for restructuring through mergers and acquisitions.

Private carriers are trucking operations for a company whose primary business is not transportation, but who operate their own fleet of trucks. For example, a retail food company such as Loblaw's may operate its own trucking services from distribution warehouses to retail stores. Since the deregulation of the trucking industry, a number of large companies have outsourced logistics and transportation services to third-party trucking companies. This segment of the industry is called "for-hire" carriers, since they will take freight from a number of different shippers. While private-carrier operations do compete with for-hire carriers, the restructuring of the industry has been concentrated in the for-hire segment.

The current environment for transportation in general and trucking in particular has shown slow but promising improvements over the past year. The for-hire trucking industry hit a low point in 2009 when freight volumes had declined by 12 per cent compared to pre-recession figures. Improvements were slow but steady over 2010, with fourth quarter volumes up 7.7 per cent compared with the average for 2009. Much of these improvements may be due to seasonal factors rather than real economic recovery. Containerized goods from China and factories in the Far East arrive at West Coast ports between May and September. The containers are typically loaded onto rail cars for long-distance shipping and then transferred to trucks that bring the goods to distribution centres and ultimately to store shelves by early November.

Projections for international freight shipments are a key concern for Canadian trucking companies. The passage of Free Trade agreements and the increase of cross-border trade with the U.S. meant a sharp rise in North-South truck traffic. The recession not only resulted in a sharp drop in international trade, but it is not clear whether economic recovery will result in restoration of US.-Canada trade volumes. Canada's loss of US market share to China means less trade, less economic activity, and ultimately, fewer trucks for Canada. One possible exception is Canada's commodities sector. Economic forecasts predict strong US demand for Canadian natural resources and related petro-chemical products.

The trucking industry comprises several distinct sub-sectors that reflect distinct service markets. The largest trucking segment, comprising more than 80 per cent

of the industry, is truckload (TL) freight. TL carriers transport large shipments (a load fills an entire trailer) from the point of origin to the destination with no intermediate stops or handling. While there are a few very large TL carriers in North America (e.g. JB Hunt, Werner), the low cost of entry means the industry is saturated with small-scale entrepreneurs. Because TL operations do not need an expensive network of terminals or any technology more sophisticated than a cell phone, the cost of entry is a used, long-haul truck – about \$40,000. Many aspiring entrepreneurs enter the industry, but most do not survive.

About half of the TL segment handles general freight, the types of goods and materials that can be loaded into a container or regular trailer. The other half of the truckload market includes heavy haulers and specialized carriers. These include tanker trucks, bulk commodities, temperature-controlled, flatbeds, or similar specialized freight. The key competitors for this segment of the trucking industry are railroads, pipelines, and barges.

The less than truckload (LTL) segment of the freight industry includes courier services and networked, “hub and spoke” operations that consolidate freight from several different shippers. Labour costs are generally far higher in the LTL segment than in TL operations. Generally this is because LTL freight is more labour-intensive, involving pick-up, consolidation, routing, deconsolidation, and delivery. Freight is handled at every node of the transportation network. Another cost factor in the LTL segment is that most workers are represented by a labour union, the International Brotherhood of Teamsters.

Capital costs are considerable and include terminals where freight can be sorted and consolidated for delivery. Computer systems and sales forces are more critical in the LTL segment to handle the diversity of shipments and customers. Because of the higher fixed costs of operations, LTL carriers are targeting more premium, time-definite cargo, a niche previously controlled by air freight carriers. The demand for “time definite” services has coincided with the popularity of “just-in-time” production and inventory practices. LTL companies that are able to deliver on a time-definite basis have a real competitive advantage in the quality of their services.

THE ACQUISITIONS

Since 2007, Traxall has completed eight acquisitions, mostly in Quebec and Ontario. The growth strategy has been two-fold: to increase market share and add volume with little incremental cost increase. First, in terms of increasing market share, Traxall has been careful to avoid a “bigger is better” approach to its growth strategy. Instead, the due diligence process involves a detailed market analysis to identify and target specialized niches. In this regard, Traxall has focused growth in two market niches: aerospace, and petro-chemicals.

Much like the transportation industry in general, Traxall’s operations are roughly 80 per cent TL and 20 per cent LTL. Traxall has two large freight distribution centres, sometimes referred to as “break-bulk” operations. One terminal is in

Mississauga, and the second is just outside of Montreal. The aerospace acquisitions were efficiently integrated into the company's existing terminal network.

The acquisition of the petro-chemical companies, Hammell and SCC, has achieved the first goal of the growth strategy, increasing market share. However, these operations have not been effectively integrated into Traxall's existing structure of operations. Frank Klein, VP Operations, has voiced strong concerns as to whether integration is appropriate or achievable. Still, given the market growth potential for this specialty sector, John Clark feels that control of market share may be worth the increase in costs.

Table 1 presents data related to trucking services for Sarnia's petro-chemical sector. Private carriers – that is, fleets of trucks owned and operated by refineries and other manufacturing operations – constitute the vast majority of the market. However, trucking services in this sector are trending away from private carriers to more outsourced for-hire carriers. For example, Northern Lights Energy, a petro-chemical company with a significant refining operation in Sarnia recently outsourced all of its in-bound and out-bound transportation services. Given the hazardous material and nature of this specialty market niche, small-scale and single-truck independent operators are not able to be competitive in this market.

Table 1: Operating statistics for Sarnia's petro-chemical trucking services

	Revenues	Operating Margin	Trucks	Employees
Private carriers	\$70 million (est.)	?		300 (est.)
SCC	\$7.5 million	96%	35	80
Hammell	\$5 million	92%	30	40
Bulk Freight Inc.	\$5 million	98%	?	?
Chem-sure	?	?	2	5
Thorp and Sons	\$1,000,000	?	5	8

TRAXALL TRUCKING SERVICES

John Clark brought the support of a large private-equity firm with him when he became CEO of the company five years ago. Since his arrival, Traxall has pursued an aggressive growth strategy, targeting small, niche carriers. John especially likes to go after Mom and Pop operations that do not have the capital to grow on their own, a strategy that has proven successful. While restructuring charges have had a negative impact on profit margins, the company has captured dominant positions in several regional markets.

When Jesse spoke with John before getting started on this latest assignment, John advised him, “Jesse, sometimes the founders of these Mom and Pop outfits have a hard time letting go. The employees still think the guy running the show is sitting in the manager’s office.” Previous mergers have involved some adjustment, but nothing quite like the Hammel and SCC acquisitions. Clark added, “Look, let people know that change is mandatory, but success is one of several possible outcomes if they don’t get on board.” Jesse is not so sure that working out the merger problems will be that easy.

Karen MacPherson is the company’s VP Growth (Appendix A shows partial organization charts for Traxall and Hammel). She is in charge of doing due diligence and negotiating the buyout deals. She has worked hard to grow the company strategically, and she has had tremendous success. Revenues have more than doubled in the past five years, and the company is well positioned to post strong profits when the economy recovers. “Jesse,” she told him when he asked about the companies, “I focus on the numbers, not the people. What is the market share? What is the cost structure? Can our capital make this operation more profitable? How do people feel? Well, that’s your job. I’ve done my part.”

As noted, Traxall has been successful in integrating operations with previous acquisitions. Jesse asked Frank Klein what makes Hammel and SCC so different. “I got two words for you, Jess: ‘Nasty Cargo’. These companies primarily deal in chemicals – barrels of stuff that would scare the hell out of most people.”

“Freight is freight,” Jesse said, pressing him further.

“Oh no, not all freight is the same. I can’t mix this stuff in with our general freight. That would require a bigger change than I think you want to make. But if you want to go down that route, knock yourself out.”

Jesse listened more to Frank’s perspective, and he seemed to appreciate the time that Jesse was taking to understand the operational difficulties following acquisitions. “Chemical transport is a good segment to get into, but it does not fit with our existing operations. We cannot run the freight through our Mississauga LTL terminal.” When Jesse asked what he thinks is the best option going forward, the response was, “We have a foothold in this segment, and we should think about how to merge Hammel and SCC before we try to integrate them with Traxall’s general freight operations.”

HAMMEL HAULING

On paper, Hammel Hauling is an efficient, well-run company. Operating margins are top of the class, and labour costs are low. Hammel is a non-union, for-hire freight carrier that specializes in petro-chemical products. George Hammel founded the company with a single flat-bed truck in the early 1980s and has nurtured it into a fleet of 30 trucks.

Employees are loyal to George, and many have worked there for 20 years. He knows them all by name, and many are relatives. George has four children, three daughters and one son, but none of them is interested in the freight business. Running the business has not been easy, and he has more common sense than business sense. The current recession has hit Hammel hard. George is proud that

he has not had to lay anyone off, but the stress is showing on the company and on him personally. The trucks are old and needed upgrades ten years ago. He does not have a certified mechanic working for him. “We can change the oil and tires ourselves...,” he is fond of saying. If a truck breaks down he will call in a service contractor, but he tries to keep everything running without the extra maintenance costs.

The state of Hammel’s trucks has posed problems for the company’s “out of service” (OOS) rates. Trucks (and drivers) not deemed to meet safety standards can be taken out of service. The trucking industry is subject to a number of safety regulations by the Ministry of Transportation under the *Highway Traffic Act*. Every carrier operating in Ontario is issued a carrier safety rating. The ratings are based on the safety records including accidents, convictions, vehicle inspections, and facility audits. There are five categories in the safety rating index: Excellent, Satisfactory, Satisfactory – Unaudited, Conditional, and Unsatisfactory.

The company underwent a facility audit eight months ago. During the audit, personnel from the Ministry inspected records and documents and did a physical inspection of equipment. The audit did not go well. Hammel failed the audit and was issued a Conditional Safety Rating. A follow-up audit is scheduled for one month from now. Hammel must pass the next audit to be considered for an improved safety rating.

These safety ratings are recorded and made public through the Commercial Vehicle Operators Registration (CVOR) certificate.¹ Carriers are responsible for all drivers and vehicles in their operation. These responsibilities include:

- employing qualified and licensed drivers;
- monitoring the safety performance of drivers, including hours of service;
- resolving driver safety issues when identified;
- keeping vehicles in good, safe condition at all times;
- ensuring load security;
- ensuring daily and annual inspections are completed;
- keeping records on file (e.g. vehicle repairs, kilometres travelled per year).

Copies of Hammel’s and SCC’s CVORs are included in Appendix B. Provincial averages for out-of-service rates were 25 per cent in 2010. That means that on average, Ministry personnel conducting inspections found out-of-service defects in 25 per cent of vehicles and drivers inspected. There appear to be some differences in the CVORs, and this will likely have implications for how Jesse facilitates the merger of the operations.

Most convictions are related to the condition of the vehicles, although there have been a couple of convictions for not having the proper placards for the hazardous materials on board. Hammel’s drivers have an OOS rating that might be a concern. Trucking company’s with higher turnover among drivers tend to have more serious

¹ Commercial Motor Vehicle Operators’ Registration (CVOR) and Carrier Safety Record (CSR) Public Guideline. Ontario Ministry of Transportation.

problems with driver OOS rates. Hammel has not had much turnover, but record-keeping is not one of the company's strong points. This behaviour is also practised by the drivers.

"The company has been good for my family," George recalls. "One daughter is a school teacher, two are nurses, and my son just graduated from Western. Not bad for a truck driver, don't you think?" George had no regrets about selling the company, but he does care about the welfare of his employees. When Karen MacPherson told him that Traxall was interested in buying his company, he only wanted to make sure they would keep his employees. "You have to keep everyone who wants to stay," and he made sure that was written into the sales agreement.

When George hired a second person to work on the dock in 1984, Bobby White became the Dock Foreman. Things have changed a lot at the company since it was a small operation. Some of the growing pains have been hard on Bobby. "Instead of moving product, I spend all night pecking at the keyboard. The drivers need a paper bill of lading anyway, so the computer just turned out to be more hassle than it was worth. We don't really use any high-tech stuff in this operation.

"Don't get me wrong, I think George is the best, but his methods are a little old for the age of Google. He likes to tell me, 'If you don't know where everything is and where it needs to go, you shouldn't be in the freight business.'" Bobby added, "That may have been the case with five accounts and a half-dozen drivers, but Hammel has grown beyond the point where we know every customer by name. Sharon (the sales manager) still does, but the rest of us, not so much."

In contrast to most truckload, long-haul operations, George has guaranteed his road drivers an hourly base combined with a mileage bonus. This gave him the flexibility to have road drivers help with local deliveries or dock operations. For the drivers, this means that the long waits they sometimes experience loading or unloading at customer facilities do not come out of their pockets. This is especially important for the sometimes unpredictable border crossings, where drivers can get right through one time and spend six hours in line the next.

When Traxall announced plans to change the driver compensation system to a per cent of revenues per loaded mile, the road drivers were up in arms. Of the twenty road drivers, five quit on the spot and the other fifteen all threatened to leave if the company went through with its plans. In sympathy, George even called Traxall and spoke to Jesse about the issue. "Yeah, it costs a little a more, but you won't find more loyal road drivers anywhere. I would like to see you try to service the Flying J account using unreliable owner operators."

SARNIA CHEMICAL CARTAGE

Sarnia Chemical Cartage is a well-established and well-managed company. The economic downturn caught the company shortly after it had invested in new capital to expand its fleet. Had it held off on fleet renewal, SCC would be cornering this market rather than Traxall.

SCC is a little more than twice the size of Hammel. It is unionized and tends to have slightly higher costs than Hammel for its LTL customers. On the TL side of its operations, its cost structure is lower than Hammel's. To reduce labour costs,

SCC has slowly been increasing the use of contractors and thus reducing the size of its unionized workforce. At this point, in contrast to Hammel, all truckload or long-distance trucking services are performed by independent contractors. Generally these are owner-operators, drivers who own their own trucks and operate much like a one-person trucking company. SCC has about 25 owner-operators with whom it contracts on a regular basis. For SCC, this arrangement provides complete flexibility in its line haul operations. There are few fixed costs because the company simply does not hire a contractor unless there is a freight shipment. The arrangement has worked well to reduce and contain costs without losing much by way of quality. The highly competitive nature of the truckload industry has meant a large supply of independent contractors for hire.

More recently, in the current collective agreement implemented two years ago, the company negotiated subcontracting language for its dock operations. The company has the right to subcontract dock work, provided no existing employees are laid off. Given the attrition through retirements and separations over the past two years, the company regularly has three to five contract employees on the dock. Having these “lumpers”, as they are called by the regular employees, has reduced fixed costs by introducing more flexibility in labour utilization.

Given SCC's higher labour costs, the company has consistently invested in new technology and equipment as a way to control costs. The company has invested in satellite tracking devices and advanced computer programs to improve customer service by providing load tracking and delivery time estimation. On the equipment side, SCC has invested in sophisticated engine diagnostics to continually monitor mechanical fault tolerances and help avoid costly breakdowns. SCC maintains a diagnostic and preventive maintenance shop at its Sarnia facility. The two mechanics, while adding to the company's fixed cost structure, are credited with keeping the carriers out-of-service rates low.

Through the use of on-truck computers and computerized delivery confirmation tablets, the company has developed an electronic system that charts hours of service, freeing drivers from spending ten minutes a day maintaining their paper logs. The latest software still in beta-testing is a GPS system that will chart the fastest delivery routes on a real-time basis through the GTA.

The health and safety record at SCC seems to be much worse than at Hammel, but Jesse is not quite sure why. The number of complaints to Ministry of Labour inspectors is off the charts. Three weeks ago, there was an incident at the Sarnia facility involving a chemical spill. Apparently, one of the contract workers put the forks of the lift truck through a barrel of benzene. No one was seriously hurt, but several employees had to go to the hospital for treatment. Complaints have increased over the past two years.

Table 2 presents data on the number of health and safety complaints filed by workers at Hammel and SCC, the number of injuries that provided lost-time workers' compensation, the average number of days off work per injury, and the compensation cost per injury. The transportation sector tends to be an industry with a higher incidence of occupational injury. Appendix C shows the proportion of workers in each industry in the federal jurisdiction and the incidence of injuries by those industries. In Ontario, the number of lost-time claims accepted by the

WSIB averaged 1.61 per 100 workers in 2008. According to the WSIB, the average duration of wage loss benefits in 2009 was 14 days.

Table 2: Health and safety complaints by workers at Hammel and SCC, 2001-2010

Year	Complaints		Lost-time injuries		Average days lost		Comp cost per injury	
	Hammel	SSC	Hammel	SSC	Hammel	SSC	Hammel	SSC
2010	0	42	3	0	60	-	\$52,000	-
2009	0	33	2	2	45	5	\$48,000	\$11,900
2008	1	20	2	0	30	-	\$46,000	-
2007	0	12	3	4	90	45	\$44,500	\$10,500
2006	1	15	1	1	60	2	\$45,000	\$10,000
2005	0	17	3	0	30	-	\$42,000	-
2004	0	11	2	2	60	2	\$39,000	\$9,200
2003	1	14	3	3	30	15	\$37,000	\$8,800
2002	0	11	2*	1	90	4	\$34,000	\$8,000
2001	0	12	3	2	30	10	\$32,000	\$7,500

Jesse spoke with the safety manager at SCC, Reg Peterson, about his concerns. Reg told him, “The union’s health and safety rep is kind of militant about health and safety on the job. I think his nephew was killed on a construction site when he was just 17 or 18 years old.” When Jesse pressed him about the increasing number of complaints he responded, “The health and safety rep is constantly calling MOL inspectors about everything. The chemical spill was a stupid mistake by one of our lumpers. We told the contractor not to send that guy back here.” Jesse heard from other sources that the joint health and safety committee is very active and vigilant about safety. The union has not turned any of its members in to management for taking shortcuts on safety, but Jesse has heard about mandatory “education sessions” for some employees who have poor health and safety records. Still, the rate of complaints and injuries doesn’t really add up, and looking at the data, Jesse also has questions about Hammel’s track record.

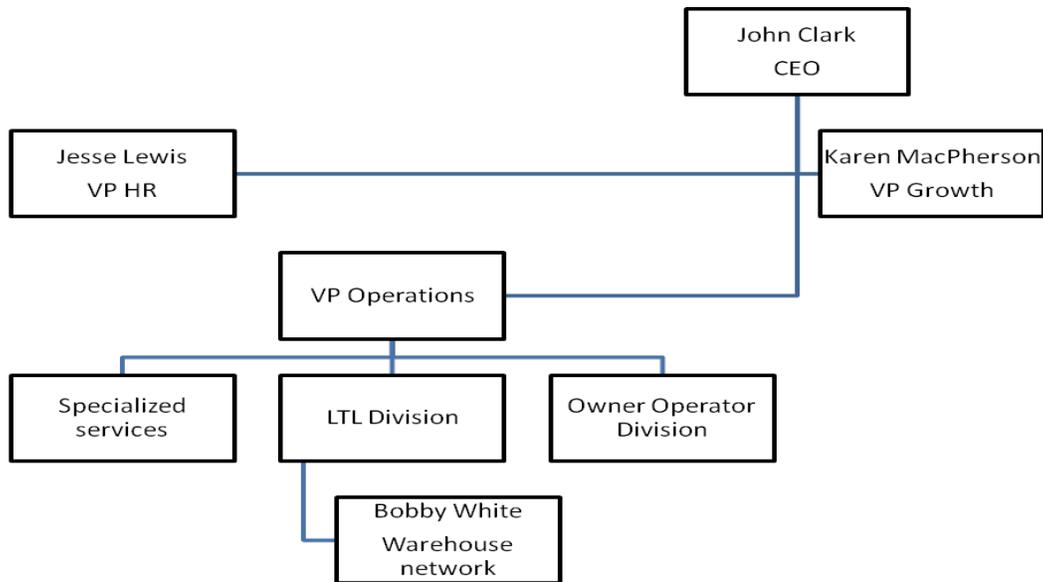
Another of Jesse’s concerns relates to the WSIB premium rates. The transport sector in general pays \$6.42 per \$100 of insurable earnings. This represents an 11 per cent increase over the last couple of years. SCC has reduced WSIB costs through the New Experimental Experience Rating (NEER) program. The safety manager at SCC is also very involved in the sector’s safety group. Hammel,

though, has not pursued any cost-containment measures to control ballooning WSIB costs.

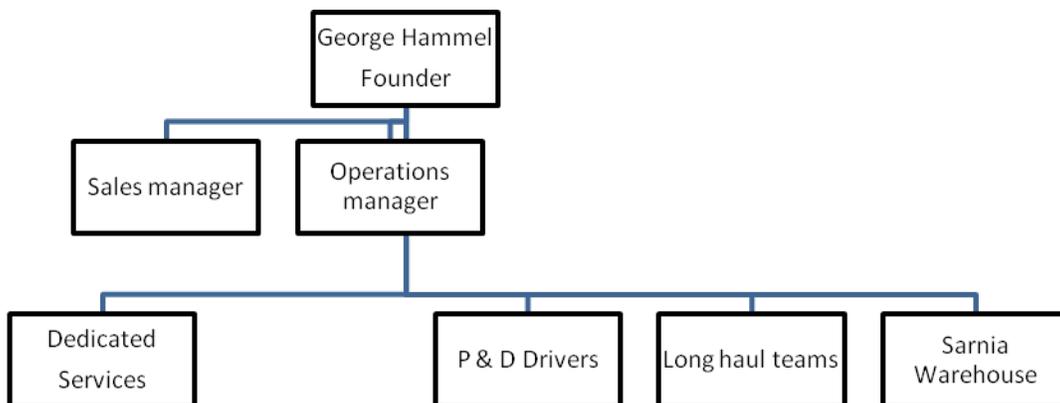
Assignment: Prepare a summary presentation for the executive team that identifies the problems related to employee relations and health and safety. Present a clear, strategic human resource action plan to make the growth strategy a success.

APPENDIX A

PARTIAL ORGANIZATIONAL CHART OF TRAXALL TRUCKING SERVICES



PARTIAL ORGANIZATIONAL CHART OF HAMMEL HAULING



APPENDIX B

PUBLIC ABSTRACT
COMMERCIAL VEHICLE OPERATOR SUMMARY

CARRIER INFORMATION

CVOR # :	443-22-6673	Licence #:	654321 ACT:TTA-MVT
Name :	Hammel Hauling	Operating As :	Hammel Hauling
Address :		Ontario:	Yes
(Mailing) :	Same as Above		
Operator Type :	For Hire		
Dangerous Goods: Yes		Commodity:	GENERAL FREIGHT
Recognized Authority:	No	Motor Vehicle Insp. Station:	No
CVOR Certificate Status: Registered		Original Certificate Issue:	1980 12 31
Total Travel Km:	1,342,078	ONTARIO Travel Km:	778,003
TOTAL ONTARIO Fleet Size:	30	ADJUSTED Fleet Size:	30

PERFORMANCE DATA (from 2008 03 06 to 2010 03 05)

SAFETY RATING: Conditional

Pointable ACCIDENTS: 2			
Accidents with Charges: 2		Accidents with Driver Condition: 0	
Accidents with Vehicle Defects: 2			
Safety Related CONVICTIONS: 20		Non Safety Related CONVICTIONS:	
Convictions Related to: Driver: 0	Vehicle: 18	Load: 2	Other: 0
Number of safety inspections: 20			
Number of safety inspections Out of Service: 10			
Out of Service Rates:			

Overall OOS: 35% Driver OOS: 20% Vehicle OOS: 50%

AUDIT: 2010 06 06 Fail

MINISTRY INTERVENTIONS (from 2008 04 06 to 2010 04 05)

Warning Letter (2009 03 10 and 2010 06 15)
Letter - Other
Interview (2010 06 06)
Sanction
Suspension

END OF SUMMARY For further explanation contact your local MTO office for an Abstract Glossary Ontario's Carrier Safety Rating and Commercial Vehicle Operator's Registration System Public Guideline

PUBLIC ABSTRACT
COMMERCIAL VEHICLE OPERATOR SUMMARY

CARRIER INFORMATION

CVOR # :	243-215-5489	Licence #:	6773587
Name :	Sarnia Chemical Cartage	Operating As :	SCC
Address :		Ontario:	Yes
(Mailing) :	Same as Above		
Operator Type :	For Hire		
Dangerous Goods: Yes		Commodity:	GENERAL FREIGHT
Recognized Authority:	No	Motor Vehicle Insp. Station:	No
CVOR Certificate Status: Registered		Original Certificate Issue:	1974 06 31
Total Travel Km:	4,552,963	ONTARIO Travel Km:	1,778,003
TOTAL ONTARIO Fleet Size:	35	ADJUSTED Fleet Size:	60

PERFORMANCE DATA (from 2008 06 01 to 2010 05 30)

SAFETY RATING: Excellent

Pointable ACCIDENTS: 0
Accidents with Charges: 0
Accidents with Vehicle Defects: 0
Safety Related CONVICTIONS: 0
Convictions Related to: Driver: 0 Vehicle: 0 Load: 0 Other: 0

Accidents with Driver Condition: 0
Non Safety Related CONVICTIONS:

Number of safety inspections: 40
Number of safety inspections Out of Service: 5
Out of Service Rates:

Overall OOS: 12.5% Driver OOS: 5% Vehicle OOS: 22.5%

AUDIT: 2009 08 15 Excellent

MINISTRY INTERVENTIONS (from 2008 06 01 to 2010 05 30)

Warning Letter
Letter - Other
Interview
Sanction
Suspension

END OF SUMMARY For further explanation contact your local MTO office for an Abstract Glossary Ontario's Carrier Safety Rating and Commercial Vehicle Operator's Registration System Public Guideline

APPENDIX C

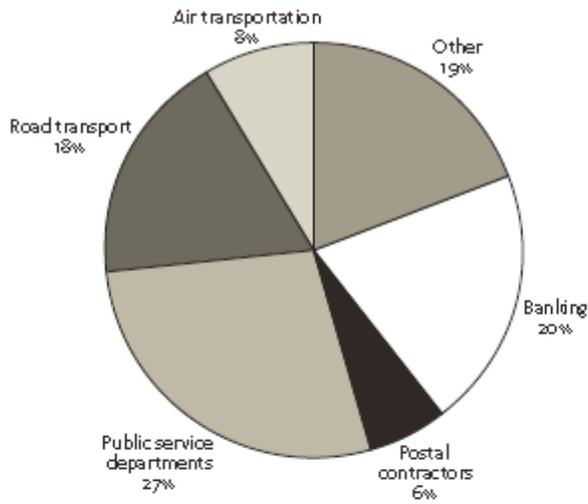


Figure 1: Federal jurisdiction workers, FTEs by sector

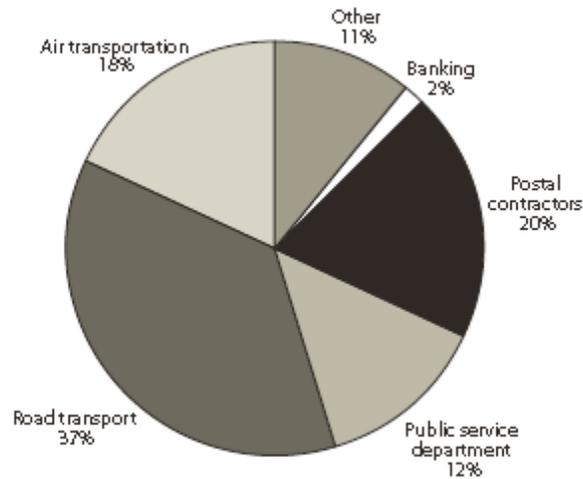


Figure 2: Federal jurisdiction workers, disabling injuries by sector

Source: Macdonald, D. (2010). Success is No Accident: Declining Workplace Safety Among Federal Jurisdiction Employers. Ottawa, ON, CAN: Canadian Centre for Policy Alternatives.