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Global Effect of a Natural Disaster on a Lean Supply Network

Breaking News – Friday, March 11, 2011

On Friday, March 11, 2011 Mark Dolsen's clock radio came on at 6:00 AM as usual, but the familiar "Morning Edition" theme music was pre-empted by a breaking news story; earlier that day, on the other side of the world an earthquake had hit Japan. Mark was the General Manager of Operations at TRQSS, a Japanese owned automotive company in Tecumseh, Ontario Canada, and had been to Japan several times in the course of his career; so rather than dozing a few minutes longer, he sat up quickly and listened closely to the broadcast. As the report continued, it became apparent that this was not like one of the many earthquakes that regularly occur in that prone region; this one measured 9.0 on the Richter scale, and shook the city of Tokyo for a full five minutes. Remarkably, most of the buildings in that populous city remained relatively damage free, a testament to Japanese earthquake proof construction designs. However, the earthquake was responsible for the development of a huge tsunami emanating from its epicentre, just a few miles off the northeast coast of the main island of Honshu. The tsunami quickly made its way to the island, its force and size overwhelming any of the seawalls that existed for the purpose of protection. The major port of Sendai was wiped out, as were several small towns and villages in the coastal regions. Although most of Japan's industrial infrastructure was far south and west of the devastated area, northern Honshu was home to many manufacturers in the electronics industry, and the damage that they had suffered was undetermined as of the morning news report. What was being reported though was that a major nuclear power plant on the coast at Fukushima had been severely crippled by the tsunami, and the disaster recovery activity at that site was not going well. Mark quickly got out of bed and got ready for work. He was anxious to get to the office and meet with the Japanese expatriate staff members.

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The TRQSS operations meeting occurred daily at 9:00 AM. This meeting was attended by the management staff and had a standing agenda of topics pertinent to the smooth operation of a just in time¹

¹ In an assembly operation, just-in-time (JIT) occurs when the parts required for each step arrive alongside each process at the exact time and in the exact quantity required. JIT is one of the "pillars" of the Toyota Production System (TPS), which is sometimes referred to as "Lean Manufacturing." TPS aims to eliminate all forms of "waste" in the system; as such, a characteristic of JIT systems is the absence of inventory buffers.

factory. TRQSS supplied seat belts to Japanese automakers in North America, primarily Toyota.² TRQSS was owned by Tokai Rika Co., of Aichi Japan, a member of the Toyota group of companies. Consequently, Toyota was TRQSS' largest customer, and all of their North American assembly plants received product from TRQSS [*Exhibit 1*]. For a North American supplier, TRQSS was a fairly accomplished practitioner of the often benchmarked Toyota Production System (TPS), and operated with very little finished goods inventory (FGI) relative to the amount of product that was shipped every day. One of the daily agenda items in the operations meeting was the status of component parts supply. Most of the components used in TRQSS' assemblies were manufactured internally or obtained from North American suppliers; however, there were some parts that were received from sources in Japan. TRQSS' products were global designs, with all of the original design work done by Tokai Rika in Japan. As a result, there were common components used by both Tokai Rika and TRQSS. While complete localization of all components was preferred, for some components that had a capital intensive manufacturing process, it made economic sense to import them from a common source. Mark was pretty sure that none of Tokai Rika's primary global sources were operating in the now devastated region, but what about the secondary suppliers? It was always a challenge in the auto industry to accurately map a multi tiered supply chain, and a major disruption at a single sole supplier somewhere down the chain could bring production to a halt at a tier 1 supplier or even an assembly plant. Certainly on Friday morning, (which was late Friday evening in Japan) less than 24 hours after this epic tragedy, none of these effects could possibly be known.

Friday's meetings were usually more relaxed, like that day's dress code, but on March 11 the atmosphere was dominated by the tragedy in Japan. The photographs and videos being streamed on the CBC and Globe and Mail web sites were almost unbelievable; words could not describe the absolute destruction that happened in an instant and without warning. Had the Japanese staff members contacted their families in Japan? Was everyone alright? Since it was already late evening there, not much more was known, but all members' families were safe, given that they lived in the Nagoya area, fairly well removed from the devastation. With the meeting's formal agenda completed, the discussion turned to Toyota. How would they be affected? Toyota was regarded in the industry as supply chain management experts; surely they would have an immediate handle on the effect of the tragedy and an action plan by Monday.

Background of TRQSS Inc.

TRQSS was established in 1987 as Quality Safety Systems Company Ltd. (QSS), a joint venture between TRW and Tokai Rika. TRW, a global conglomerate with an auto parts division based in Michigan, owned 60% of the shares in the joint venture. Tokai Rika Co. Ltd., based in Nagoya, Japan, is a global auto parts supplier and a member of the Toyota group of suppliers, operating everywhere in the world that Toyota does, using the Toyota Production System (TPS) in all of its factory operations. Although Tokai Rika

² Toyota, based in Aichi prefecture in Japan, is one of the two largest automobile manufacturers in the world (the other being General Motors). Toyota developed their own supply chain consisting largely of wholly or partially owned companies, implementing TPS throughout this network.

supplies several customers, Toyota is the major customer, and the owner of 31% of Tokai Rika's stock. During the 1980's, Japanese automakers were establishing assembly operations in North America. The goal of the joint venture QSS was to target these new "transplants" that were at least 50% Japanese owned. TRW was interested in the possibility of having their seat belt designs used in Toyota vehicles; Tokai Rika was interested in an experienced partner to help establish seat belt operations in North America. The management structure reflected the ownership; the President of QSS was a TRW appointee, and the Vice President was a Tokai Rika executive. A few Japanese expatriates served as coordinators in key departments to ensure that the Toyota Production and Quality systems were being implemented and taught [*Exhibit 2*]. A result of the venture was the development of a capable local technical and management staff.

From inception, the management team at QSS realized that they were being given an opportunity to create something unique. The management team reported directly to a board of directors composed of executives from both parent companies, with representation proportional to ownership. QSS developed operating plans and was responsible for executing them, but was not directly managed by either parent company; as a result, QSS developed a unique corporate culture, taking the best elements from each parent company along with a more idealistic vision of what an auto parts company could be like. This vision was articulated in a document called "The QSS Way" which was contained on the first page of the handbook that was distributed to new employees when they joined the company [*Exhibit 3*]. This document had a great influence on guiding the behaviour of all "associates" and although modified over the years, it continues to be referred to today.

In 2003, Tokai Rika purchased TRW's shares of the joint venture, and QSS became a wholly owned subsidiary of Tokai Rika Company. Although the ownership changed, the management structure was left intact. Brad Hedderson, a Canadian and 13 year QSS associate was named President. This was a unique situation for a Tokai Rika subsidiary; QSS was the only operating division anywhere in the world where the top executive was not Japanese.

Tokai Rika had also established 2 manufacturing facilities in Michigan and a small assembly operation in Indiana for their other product lines (automotive switches and security products and steering wheels), as well as a corporate office and test facility in Plymouth MI, that provide corporate services to all the North American factories including QSS. The corporate office is called TRAM. As of March 1, 2011, Tokai Rika changed the legal structure of QSS, reassigning the reporting responsibility along with the ownership shares to TRAM. To signify the event and to bring consistency with the naming convention of the other North American operations, the legal name of QSS became TRQSS Inc.

Assessment of the Supply Base

The week following the disaster was spent attempting to understand if any suppliers of any components or subcomponents were located in the affected region. TRQSS could determine quickly if any of their direct suppliers were potentially in trouble, but they needed to know if any parts that were obtained through Tokai Rika may be indirectly affected. This task was best accomplished by the Japanese expatriate staff members, such as Takeshi Harada, General Manager of Supply Chain Management and Shoji Tominaga, Executive Vice President. They could speak directly to their contacts within Tokai Rika

Japan, and then translate the information for TRQSS staff. The first document from Japan appeared on Wednesday, March 16. The information indicated that Toyota (and all other carmakers in Japan except Mitsubishi) had closed all its factories in Japan for that week until the extent of the supply chain disruption was understood. The major focus in Japan was on recovery, and all industrial enterprises were devoting resources to that effort. Approximately 50% of Tokai Rika's suppliers suffered some earthquake damage, and another 17% were affected by rolling electricity blackouts, as the problems at the Fukushima plant were worse than originally feared. The only work going on in any of Tokai Rika's factories was manufacturing of parts for overseas shipment, but now there was difficulty getting planes into Narita airport due to the fear of nuclear radiation. Tokai Rika continued the contingency planning meeting daily, and the translated minutes were updated and sent by email daily to TRQSS management.

As the meetings continued, it soon became apparent that TRQSS did not have any suppliers that were adversely affected by the natural disaster. Had there been an affected supplier, what was still unknown was the lead time to full recovery. For most components coming from Asia to North America, there was anywhere from 4 to 8 weeks' worth of finished inventory in the pipeline (shipping being the main and economical mode of transport, and hence, the long lead-times); even if a supplier had suffered a production disruption, the customer in North America would not feel the effects for at least a month. In the best case, by that time a recovery of production capacity might be achieved, and the supply of product would be maintained with a few expedited shipments by air and other faster modes of transport.

TRAM and TRQSS associates continued to focus attention on the recovery efforts in Japan, as every day the news reported more stories of destruction and human suffering, and the world began to become concerned with a looming nuclear disaster. TRQSS employees organized fundraising lunches and raffles and donated thousands of dollars to the Red Cross Japan relief effort [*Exhibit 4*].

Trouble from the Other End of the Chain

The first indication of what might happen next came the following week, when General Motors announced that production of the Chevrolet Colorado and GMC Canyon midsize trucks would be suspended indefinitely due to parts shortages caused by the Japan earthquake. A week later Honda made a major announcement that all North American production would be reduced by about 50%. Neither announcement had a direct effect on TRQSS, but the Honda announcement was foreboding, given that they were a Japanese automotive manufacturer that was well established in North America. Toyota had made no decisions regarding their production schedules, other than to reduce voluntary overtime at its North American plants in order to conserve the global supply of all components [*Exhibit 5*]. On April 1, Nissan abruptly announced to its supply base that they would be eliminating 6 days from the production schedule in that month, effectively shutting down for 1 week due to a lack of key parts and components. This announcement had a direct impact on TRQSS as the supplier of the seat belts for the Nissan Altima, the midsize sedan that was Nissan's top selling vehicle in the United States. A shutdown at Nissan's 2 factories in the US meant that parts would not be required from TRQSS, and the management team immediately began to plan for the necessary adjustments to the production schedule. Orders for

component parts to outside suppliers would have to be reduced³, and the plan for the direct labour workforce would need to be altered as well. The associates who worked on the Nissan assembly cells would not be required for one week; they would have the option of taking the time off without pay, or they could use vacation time, “banked” overtime, or “associate credits” in order to receive financial compensation for that week⁴. Still the larger concern was Toyota. About 80% of TRQSS’ shipments went to Toyota factories, and any similar work stoppage there would have a huge effect on TRQSS’ revenue. So far, Toyota had made no official statements, but TRQSS management wondered how Toyota could be unaffected when Honda and Nissan had already taken action?

The answer came in a Web broadcast to the supply base on April 8. Toyota would have to reduce production in North America as a result of parts shortages from Japan. Mark gathered with the senior management team to listen as Bob Young, TEMA⁵ Vice President of Purchasing announced that Toyota was taking 4 production days out of the schedule in April: Friday the 15th, Monday the 18th, Thursday the 21st, and Monday the 25th. On the surface, this didn’t seem too bad; the latter 2 days surrounded the Easter holiday weekend, and the days off might be welcomed by the associates, especially if the time off could be covered with vacation pay, banked time, or associate credits. But there was a caveat; TEMA would hold another webcast by April 20 to inform suppliers of any further production reductions.

The follow up webcast was scheduled for April 19. The production cuts that were announced went much deeper than TRQSS management had anticipated [*Exhibit 6*]. Toyota would continue the Monday and Friday pattern of no production at all of the assembly plants in North America for the entire month of May. Additionally, an entire week shutdown would occur in both the United States and Canada, coinciding with each country’s respective national holiday in May. Moreover, on the Tuesday through Thursday during the weeks that the plants would be running, production would be reduced to 50% of the normal run rate. Different plants were accomplishing this in different ways; some would run 1 shift only, some would run both shifts for 4 hours each. In any case, no Toyota workers were being laid off; idle production workers would be assigned to kaizen projects, or preparation work for the model changes that were coming in the fall with the Camry and RAV4 vehicles. Toyota still planned to start their new assembly plant in Mississippi on time, as that plant would increase the production capacity of Corolla vehicles in North America, a product that was crucial to the company as gasoline prices were climbing toward \$4 per gallon once again. The webcast stated that Toyota still expected all suppliers to keep preparing for the upcoming vehicle launches, and continue to follow all requirements of the Supplier

³ Firm orders for material releases are typically given to suppliers 1-2 weeks in advance. Given the amount of material already in the pipeline, future orders would have to be severely altered.

⁴ “Banked Time” refers to an option whereby an associate can “bank” a portion of overtime compensation to be withdrawn at a later time as compensation for scheduled time off. Associate “credits” are a fixed amount of compensated hours that an associate can use for personal reasons throughout the calendar year. Both options are benefits granted to TRQSS associates as part of their compensation package.

⁵ TEMA = Toyota Motor Engineering & Manufacturing North America, Inc.

Quality Assurance Manual, especially in the area of supplier changes. The webcast concluded by saying that there would be more information forthcoming regarding the production plans for the month of June, but no date was promised for that communiqué. And there were no details about which particular components Toyota was lacking, or what action was being taken to countermeasure the shortage on the supply side.

Now TRQSS management had to prepare for a different situation. Rather than manage potential component shortages and recovery plans in the supply base, there would be a drastic reduction in orders from the customer base, resulting in a severe reduction of revenue in the month of May. The business had to be managed through this sudden and uncertain situation. Unlike Toyota, parts suppliers like TRQSS could not afford to retain the workforce at full compensation throughout this period. Decisions would have to be made that would test management's commitment to the corporate culture. It seemed like a replay of the industry downturn of 2009; the management team turned to the policy that had been developed as a result of that recent experience.

Preserving the Culture in a Downturn

The auto industry in North America experienced a huge recession in 2009 as a result of a crisis in the financial industry triggered by a liquidity shortfall in the banking system in late 2008.⁶ Housing prices in the US decreased, bringing the net worth of many leveraged homeowners down as a result. Consumer confidence in the economy was lost, and since most automobile purchases require consumer loans, the rate of sales of new cars plummeted in the wake of the financial crisis, from a seasonally adjusted annual rate of 17 million to 9 million. All automakers selling vehicles in the US were affected, and Toyota was no exception. This event presented a brand new situation for QSS that would force the senior management team to test their commitment to the "QSS Way", while executing their fiduciary responsibility to the shareholders.

Although it is not explicitly stated in the "QSS Way", throughout its history QSS had always strived to follow the Toyota custom of "lifetime employment", meaning that once the company hires an individual as a full time employee, their employment would not be suspended or terminated by the company for reasons other than egregious or repetitive rule violations. To facilitate and maintain this practice, Toyota and its suppliers avoid hiring permanent employees to satisfy maximum workload levels and use temporary staffing agencies to compliment the fulltime workforce with a "buffer" of more "flexible" workers as insurance against minor economic disruptions. Since QSS had experienced steady growth along with Toyota for most of the past 20 years in North America, a workforce reduction through layoffs had never occurred.

By November of 2008, all the temporary workers at QSS had been let go. At the end of December, Toyota announced that they would be reducing their output in January of 2009, and subsequently would

⁶ Refer to external sources for specific causes of the economic recession.

be reducing their purchases from suppliers. Like many suppliers, QSS could not afford to keep idle workers on the payroll, so some decisions had to be made. Would the “no layoff” practice be violated? If so, could the corporate culture be maintained? Company survival was at stake; QSS had a responsibility to their customers, their shareholders, their employees, and their suppliers. All stakeholders were affected.

QSS did not have a “negotiated agreement” with associates regarding workforce reduction. Congruent with the philosophy of positive associate relations as described in the employee handbook, and supporting the corporate culture, QSS was a non union operation.⁷ Additionally, the Japanese believed that everyone in the enterprise should have a shared fate. Workers in Japanese companies had unions, but they were company unions; ultimately, the Tokai Rika workers union was only successful if Tokai Rika was.

The QSS management team decided to schedule and hold employee meetings every 2 weeks. With over 1000 people working in 2 buildings across 3 shifts, this alone was not an effortless task. The purpose of the meetings would be to communicate what was known, what was anticipated, and the risk involved. This turned out to be a good decision as by January, volume information from the customers was changing weekly, dropping to unanticipated low levels.

At the first employee meeting, the management team discussed the possibility of having to reduce the workforce by 50 people. After that set of meetings, 50 employees came forward to volunteer for temporary layoff. (In Ontario, a laid off employee receives 55% of his or her full wage for up to 45 weeks from government employment insurance. However, if a layoff exceeds 35 continuous weeks, it is no longer considered to be temporary under the Employment Standards Act and employment is terminated.) As a result, these volunteers were promised recall before the 35-week period, regardless of the economic situation at that time.

When volumes continued to decline in January, further action was required. Rather than resort to involuntary layoffs, which would penalize the lowest seniority employees, management reduced the workweek to 36 hours for all associates. This allowed the company to maintain the “no layoff” practice and apply a solution equally to everyone.

By April and May of 2009, volumes had declined by about 40% from November 2008 levels. By that time, involuntary workforce reductions could not be avoided, and about 100 of the lowest seniority associates were laid off (in addition to the original 50 volunteers). Even when they were on layoff, the associates were encouraged to attend the now biweekly communications meeting so that they could be kept “in the loop” and remain part of the team. By this time, as a response to the situation in the auto manufacturing sector, the Canadian government had initiated a plan called “work share”, which extended employment insurance benefits to employees who were not laid off, but who were working only partial weeks. QSS applied for and was accepted into the program along with most other auto parts suppliers and

⁷ This was in part a risk mitigation strategy, as a just-in-time Toyota supplier could not easily endure a labour force disruption such as a strike; therefore having the workforce represented by one of the North American labour unions was not encouraged by Toyota.

assemblers operating in Ontario. As a result, QSS was able to recall laid off associates sooner, continue to have everyone work a reduced workweek, and all participate in the work share program. When the US government implemented the “cash for clunkers” program, Toyota sales and production volumes recovered sufficiently such that QSS was able to recall all of the laid off associates, and gradually get everyone back to a 40 hour work week.

In October of 2009, QSS exited the government work share program. All associates had been recalled from layoff since August. Over that period, approximately 40 employees chose to leave voluntarily and pursue opportunities in a different field or location. For those who remained, QSS’ actions through that period demonstrated how decisions would be made in an uncertain environment where ethical values came into conflict; these actions reinforced the company culture and perhaps strengthened the bond of teamwork.

What Next?

One outcome of the 2009 recession for TRQSS was a workforce reduction policy developed by a joint committee of production and management team members. The policy upheld the right of seniority, which was not uncommon for companies in the industry and geographic area. However, it did create a level of complexity for TRQSS management. Although TRQSS, like most suppliers, received forecasts that projected requirements for 13 weeks, anything beyond the first week was subject to change; only the first week of the forecast was considered a “firm order,” and a new 13 week forecast was issued every week. TRQSS determined their labor requirements weekly, based on the firm orders. If a labor reduction was necessary, it would be done by reverse seniority; the lowest seniority associates would be laid off first. If these associates were working in the production areas where demand was still high, then the higher seniority associates who remained would be reassigned to the areas where needed. This created a potential training issue if the skill set of the reassigned associates did not adequately match the requirements of the job; however, management would honour this policy.

Just over a year after the development of this policy, TRQSS was now in need of implementing it. The circumstances were slightly different; this situation was not an industry wide economic downturn. TRQSS was affected because of the fact that a significant portion of their total revenue came from Toyota. In the past, this had been a favourable situation as Toyota prospered in North America and grew their market share at the expense of the domestic automakers. Now, the consequences of this deep dependency and tight coupling were not so favourable. Although there was belief that this would be a temporary situation, there was no information forthcoming regarding which components were in scarce supply, what action was being taken in the supply base, or how long the situation was expected to last. On May 2, three members from TMMC (Toyota Motor Manufacturing Canada) visited TRQSS as part of a “go and see” directive from their president, to confirm how key Toyota suppliers were handling the volume reduction, and what their plans would be for recovery. Brad Hedderson and Mark Dolsen met with the TMMC representatives in the main boardroom before giving them a plant tour of the few operations that were running. Although TMMC wanted to know how TRQSS was going to rapidly increase production capacity if the demand was to recover instantly, they also felt that TRQSS would be wise to prepare for a slow summer.

Exhibit 1 TRQSS Market Share (2007 Data)

Customer	Location	Vehicles	Annual Volume (2007 production)	% QSS Seating Positions
TMMC	Cambridge, ON	Lexus	78,074	100%
TMMC	Cambridge, ON	Corolla, Matrix	224,675	40%
TMMK	Georgetown, KY	Avalon	76,219	0%
TMMK	Georgetown, KY	Camry, Solara	438,433	100%
TMMNK	Lafayette, IN	Camry	37,972	100%
TMMI	Princeton, IN	Sienna	159,453	100%
TMMI	Princeton IN	Sequoia	22,488	100%
TMMI	Princeton IN	Tundra	101,482	100%
TMMTX	San Antonio, TX	Tundra	138,619	100%
TMMBC	Tijuana, MX	Tacoma	34,100	100%
NUMMI	Fremont, CA	Tacoma	170,765	100%
NUMMI	Fremont, CA	Corolla, Vibe	249,556	40%
		<i>Total Toyota</i>	1,731,836	79.2%
NISSAN	Smyrna, TN	Trucks	319,011	0%
NISSAN	Smyrna, TN	Maxima	46,042	0%
NISSAN	Canton, MS	Altima	153,710	100%
NISSAN	Smyrna, TN	Altima	184,899	100%
NISSAN	Mexico	Cars	448,693	0%
NISSAN	Mexico	Trucks	49,595	0%
		<i>Total Nissan</i>	1,201,950	28.2%
SIA (Subaru)	Lafayette, IN	Legacy, Tribeca	105,981	40.0%
		<i>Total Toyota, Nissan Subaru</i>	3,039,767	57.6%

Source: Ward's Automotive Yearbook 2008, compiled by author

Exhibit 2 TRQSS Organization Chart (March 2011)

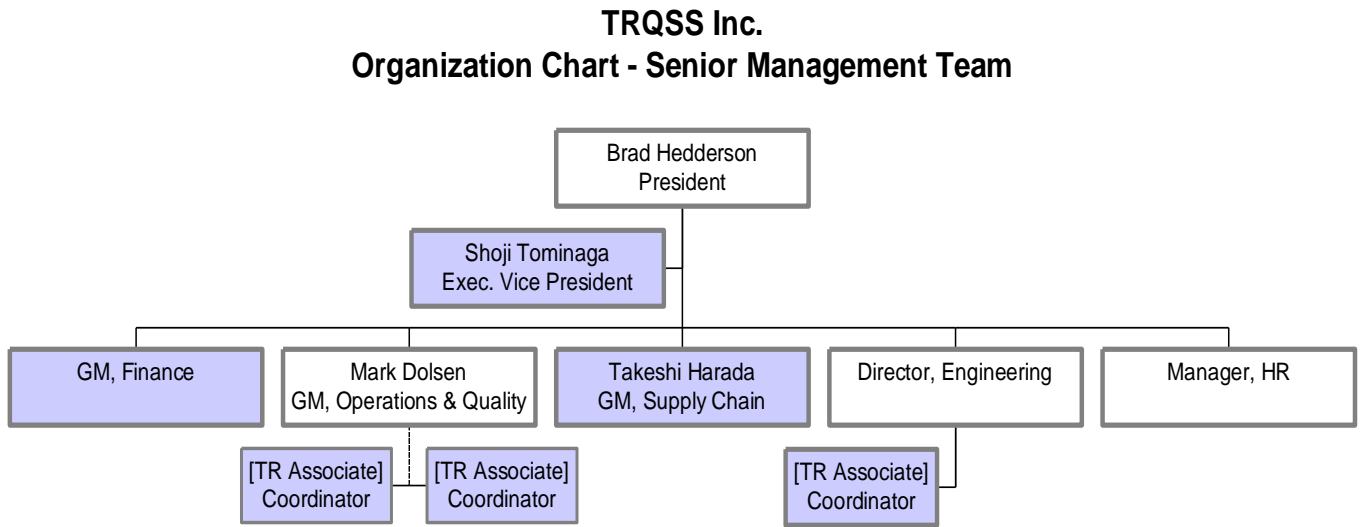


Exhibit 3 The QSS Way (1986)

QSS exists, first and foremost, because customers value our products and services. To meet their needs, quality is built into everything we do. Through continual improvement in our process, methods, and products we can reduce costs and maintain reasonable prices.

Emphasis is placed on prompt and accurate service and delivery to our customers. Suppliers to our company are dealt with ethically, and have an opportunity to earn a fair profit.

Associates, the men and women who work at QSS, are important resources. Each is an individual worthy of dignity and respect. QSS strives to create a safe, productive and clean environment that encourages Associates to fully utilize their ingenuity, skills and initiative. Associates are encouraged and expected to voice their ideas for improvement and their concerns. QSS is also a team that requires the cooperative efforts of individuals – teamwork. Talents and ideas of individuals must be communicated, understood and harmonized to be effective. Compensation for the work you do is fair and competitive. Associates who are qualified have equal opportunity for employment, development and advancement. QSS wants to make Associates feel secure in their jobs.

Associates who manage others must be competent. The responsibility for providing the tools and training necessary to accomplish the task rests with managers. Taking action to solve problems and ensure quality is also a primary responsibility of managers. Actions of managers are to be ethical, just and consistent.

We have a responsibility to be good citizens in the communities where we live, work and play. Good citizenship implies support of worthwhile causes and charities, protecting our environment and natural resources, maintaining our property in good working order and in an attractive way, and supporting local government by bearing our fair share of taxes.

Finally, we have a responsibility to the Partners who have provided a substantial investment. Our business must make a fair profit, it is the ultimate yardstick by which we measure whether we are a quality company. Capital must be earned and set aside to provide for adverse times. New products need to be developed, new equipment and facilities purchased and new programs launched. We will experiment with new ways of doing things. **The QSS Way – the way to prosper now and in the future.**

Exhibit 4 TRAM Red Cross Memo



Date: March 16, 2011

RE: Japan Earthquake & Tsunami Relief Effort

The devastating earthquake and resulting tsunami in Japan last week caused major damage to the country and people. The entire North American Tokai Rika Group (TRAM, TRMI, TRIN, TAC, and TRQSS) strongly feels the responsibility to support the relief and recovery effort that will be taking place over the next weeks and months as the full extent of this disaster is dealt with. We would also like to give our Associates an avenue to be of assistance as well. TRAM, Inc. will be having a fund drive between now and Thursday, March 31, 2011.

The TRAM Group Companies' donations and all Associate donations will be sent through the Red Cross national disaster relief fund to enable them to help the victims of the earthquake and flooding that occurred as a result of the tsunami.

Please look for the donation container in the HR Department to make a donation. Or, if you would like to make a donation directly to the Red Cross log onto <http://www.redcross.org/en>. You can also text REDCROSS to 90999 to make a \$10 donation.

The Red Cross has informed us that financial donations are the best way to assist victims of disaster. Monetary contributions enable the Red Cross to purchase the most urgently needed items as close to the disaster sites as possible. This ensures supplies get to victims as quickly as possible, without delays or added costs.

Thank you for your concern, compassion, and willingness to be part of the relief effort being made to assist the thousands of people who have been affected by this natural disaster.

If you have any further questions, please direct them to the HR Dept. or any member of the Community Involvement Committee.

Exhibit 5 News Article from The Globe and Mail

March 29, 2011

Honda cuts North American output

By GREG KEENAN
From Wednesday's Globe and Mail

Auto maker slashes production in Canada, U.S., fearing parts shortage from Japan

Honda Motor Co. Ltd. HMC-N is cutting production of vehicles indefinitely in Alliston, Ont., and its other North American plants - the first major hit for the auto industry in Canada and the United States from the crisis in Japan.

Starting Wednesday, output at Alliston will be cut to 300 cars and sport utility vehicles a day from more than 700 as the auto maker grapples with parts shortages.

There have been sporadic and short-term shutdowns at some auto makers and curtailment of overtime at Toyota Motor Corp. plants and others, but Honda is the first to enact a system-wide production cut in North America.

"This temporary production adjustment will be effective throughout North American Honda plants," Jerry Chenkin, executive vice-president of Honda Canada Inc., said Tuesday.

The parts shortage comes at a particularly inopportune time for Honda. It is gearing up Alliston and a plant in Greensburg, Ind., to produce the redesigned Honda Civic compact, which is the company's best-selling vehicle in Canada and is enjoying a sales boost in the U.S. market as gas prices surge. The new version of the Civic is scheduled to go on sale in Canada on April 20, Honda said at the Vancouver Auto Show on Tuesday.

The production cuts may also foreshadow more pain to come in the sector as Japanese auto manufacturers and parts makers struggle to get back on their feet after the devastating earthquake and tsunami on March 11. As a result of the crisis, global vehicle output could decline by as much as two million vehicles from an expected level of nearly 80 million this year, said industry analyst and consultant Bill Pochiluk, president of AutomotiveCompass LLC of West Chester, Pa.

In Honda's case, the production cut is caused by a potential shortage of parts from Japan, said Mr. Chenkin, who declined to identify what components are most at risk.

"What they're trying to do is maintain some level of production," he said. Honda will not lay off any workers in Alliston.

The vast majority of the parts that go into Honda vehicles assembled in Alliston, Greensburg and at assembly plants in Ohio and Alabama are shipped from North America.

But the impact of the earthquake, tsunami and nuclear crisis on some Japanese plants that make microprocessors and other small electric components is expected to reverberate throughout the global auto industry once existing supplies have been used and ships now at sea deliver parts made before the earthquake hit.

"It's a lot of electrical components like switches and relays," said a source at one Japan-based auto parts maker with operations in North America.

There are reports from U.S. dealers of vehicle shortages, notably Toyota's Prius hybrid sedan, but Canadian dealers said they are well-stocked. One dealer in Western Canada said he still has 2010 models available.

Sales figures for Prius in Canada and the U.S. differed dramatically in the first two months of 2011. U.S. Prius sales soared 47 per cent, while Canadian purchases plunged 53 per cent.

"Inventory at Toyota, Lexus and Scion dealerships across Canada remains generally good, with a complete selection of vehicles available to customers for the spring market," Toyota Canada spokeswoman Sandy Di Felice said.

Toyota Motor Sales USA warned dealers Tuesday that supplies of some replacement parts are being rationed. Canadian dealers had not received a memo on that subject, but were told to restrict the use of Toyota Genuine Motor Oil 0W-20 to select vehicles.

"There is a risk we may experience a short supply of Toyota Genuine Motor Oil in the coming months until mid-August," Toyota said in a memo to Canadian dealers.

That's because it contains an exclusive additive made by Adeka Corp. of Japan, whose facilities were damaged by the earthquake and the tsunami.

In a submission to securities regulators Tuesday, Toyota said the crisis may cause "a significant impact on production capabilities" of some vehicles.

