"COMPANY X": AN ANALYSIS OF CONTRACTING OUT MEDICAL SERVICES

by

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Table of Contents

Acknowledgements1
Abstract2
Research Question
Study Objectives – Importance of Study
Research Scope
Literature Review4
The Organization – COMPANY X
Company X Safety & Environmental Overview7
Safety8
Environmental
Current Safety Performance9
Current Situation
IS Networld
Government Safety Regulations
Safety History – Oil & Gas
Safety Management Systems20
Safety Culture
Human Resources
Factors Affecting Outsourcing
Elements in Choosing an Outside Service Provider
Risks of Outsourcing Safety
Consultant Lack of Responsibility40
Lack of Understanding of the Key Recommendations41
Specification, Contract, and Delivery43
Lack of Resources45
Contracting Out Costs
Competency of Safety Management
Future Provisions
Outsourcing Merits and Drawbacks : COMPANY X49

onclusion5	2
ibliography5	5

Table of Figures

COMPANY X Area of Operations:	6
Employee recordable Injuries:	
Vehicle Claims, 2007 to Present:	
The Evolution of Safety Culture	25
Leadership behaviours for safety	31

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Abstract

This project was done in order to assist Company X in determining what policies, procedures, and measurements they must have in place in order to successfully continue the outsourcing of medical services. Similarly, what will the company need to have in place if they create an in-house medical program in the future? This paper is essentially a literature review, where research was done concerning safety history, safety systems, safety culture, human resources, the factors affecting the make or buy decision, and the merits and drawbacks of outsourcing. It was discovered firms may outsource part of their safety management system in order to increase operational flexibility, or because they do not have the technical "know-how" to successfully manage it to a higher standard. I concluded that due to large fluctuations in employment levels, its relatively generalist approach to HR, and its smaller health and safety department, Company X should continue outsourcing its medical services to a third party.

Research Question

This project will study what Company X needs to do to assure itself that due diligence has been completed in order to meet present and future government, and other health and safety requirements applying to the Company X gas venture in northern British Columbia. What policies, procedures, and measurements must Company X have in place if they continue to use outside contractors for medical services? Alternately, what will they need in place if they decide to create a complete "in house" safety management program, including medical services in the future? This paper will examine the company's current situation; provide information regarding the use of external contractors, and make future recommendations based on research data.

Study Objectives – Importance of Study

There is limited information regarding the effect of outsourcing safety or medical services on firms operating within the natural gas industry in Canada. Research in this specific area could lead to a greater understanding of the benefits and costs of outsourcing, while also creating the potential for improved understanding of the process if firms choose not to outsource, or provide these services "in house". This study strives to create clear understanding in the planning, designing, and costing of either outsourcing services, or designing specific internal health and safety resources options.

Research Scope

This project examines the cue diligence required by Company X's management in order to determine how the firm should approach their future health and safety requirements in northern British Columbia. As COMPANY X operates within the United States and Canada, this project dealt specifically with COMPANY X's northern British Columbia operation in order to maintain a relatively manageable project size. COMPANY X can reference this study for its Alberta operations as well, while also taking into account any possible differences in Alberta laws and legislation.

Literature Review

Although there is ample information regarding occupational health and safety in North America and many other industrialized nations, it was fairly difficult in finding research specific to the contracting out of safety/medical services within the Canadian natural gas industry. Research related to leadership, occupational safety, and contracting out across a broader range (other high risk industries) than the oil and gas industry was used in order to formulate research and direction for COMPANY X. Several of these publications provided valuable information for this report:

- Ennis, T. (2012, February). Risks to process safety in a contracted out environment. Loss Preventicn Bulletin 223, 13-16. Retrieved from http://iclib.nipc.net/pubs/new-articles/91-06/en-91-06/941.pdf
- Flin, R., & Yule, S. (2012, December 29). Leadership for safety: industrial experience. Retrieved from BMJ Quality and Safety: http://qualitysafety.bmj.com/content/13/suppl_2/ii45.full.pdf+html
- Hudson, P. (2003). Applying the lessons of high risk industries to health care. *Quality & safety in Health Care*, 7-12.
- Lee-Brotherton, V., & Lynch, B. (2012, December 14). 5 questions to ask your safety testing vendor. *Functional Ingredients*, 26-29. Retrieved from NewHope360.com.
- Mearns, K., & Yule, S. (2012, September 23). The role of national culture in determining safety performance: Challenges fo the global oil and gas industry. Retrieved from http://www.abdn.ac.uk:

http://www.abdn.ac.uk/iprc/uploads/files/Mearns%20_%20Yule%202009%20Nati onal%20Culture%20and%20safety.pdf

 Zacharatos, A., Barling, J., & Iverson, R. D. (2005). High-Performance Work Systems and Occupational Safety. *Journal of Applied Psychology*, 77-93.

Personal correspondence with COMPANY X's Health and Safety Coordinator also provided valuable information for this project.

The Organization – COMPANY X

Company X is an exploration and production company engaged in the development and production of long-lived natural gas and oil properties onshore in North America. Based in Texas, the company is widely recognized as a leader in the development and production from unconventional reservoirs including shale gas, and coal bed methane. The company's Canadian subsidiary, COMPANY X, is headquartered in Calgary, Alberta. At year-end 2011, the company had reserves of approximately 330 billion cubic feet of natural gas equivalents (Bcfe) in Canada.

The company, COMPANY X, is developing a portion of the "private" Basin of northeast British Columbia, where it has leased 130,000 net acres. Wells in this basin in northeast British Columbia are abundant, and produce an average initial flow rate of 230,000 cubic metres per day (8 million cubic feet per day) with the best wells ranking amongst the most productive wells drilled in Western Canada. Exploration companies have spent over \$2 billion to acquire resource rights in this basin (National Energy Board, 2012). COMPANY X has booked approximately 100 Bcfe (gas production) related to this acreage, and has completed eight wells in 2012. However, in the third quarter of 2012, COMPANY X suspended any further spending on natural gas assets in its BC area of operations due to low gas market prices, and increased production which is currently meeting pipeline commitments. The company plans to continue with capital projects and further drilling in 2013 with planned expenditures of \$100 million per year over the next three years (O'Meara, 2013).

COMPANY X Area of Operations:

Map has been removed for reasons of confidentiality.

Reproduced by permission from: Company X website (www.xxxx.xx)

Company X Safety & Environmental Overview

According to COMPANY X's website, www.xxxx.xx, the company will ensure that all production and pipeline operations are built and maintained to meet or exceed all federal, state, or provincial regulations (Company X, 2012). COMPANY X also maintains the integrity of their pipelines through the following operational procedures (Company X, 2012):

- Pipelines transporting natural gas are predominately made of steel, and corrosion resistant waterproof coatings are used to maintain steel integrity and prevent corrosion. COMPANY X also uses a process called cathodic protection, which deters steel corrosion. Cathodic protection is the process of protecting the metal surface of the pipeline by making it the "cathode" of an electrochemical cell. This is done by placing the metal that is to be protected, with the metal of a more easily corroded metal (anode) (Piping and Corrosion Specialties, Inc., 2013).
- All COMPANY X pipeline operations are controlled and maintained with a
 pipeline control centre where gas flow rates, pressures, valve positions, and
 compressor station operations are monitored around the clock by trained
 personnel. If a problem is cetlected or known problem escalates, controllers can
 monitor or immediately shut down the pipeline.
- COMPANY X personnel regularly inspect pipeline areas using air, vehicle, and foot patrols. Inspectors also look for activities such as construction and excavation near pipeline operations in order to maintain pipeline integrity and safety.

 COMPANY X regularly communicates with emergency officials, local police, and fire departments. Detailed coordination plans/protocols are in place with the appropriate agencies if an emergency occurs.

In terms of safety management personnel, COMPANY X has one health and safety coordinator that is responsible for all of the BC and Alberta operations. This position is based in Alberta, and travel is required to various COMPANY X locations when needed.

Safety

COMPANY X, while committed to the development and transportation of energy resources, also strives to meet or exceed environmental, health and safety regulations. The company also believes that involving and communicating with key stakeholders, including First Nations communities, improves health and safety of all people living or working at or near COMPANY X facilities. According to COMPANY X, this will also result in the protection of communities and environment at large (Company X, 2012).

Environmental

COMPANY X writes that they pride themselves on their environmental stewardship, and that they enjoy a peerless reputation for their responsible practices. COMPANY X's approach to responsible exploration and production has resulted in a top notch regulatory record (Company X, 2012). COMPANY X also states their leadership is comprised of outdoor enthusiasts who value environmental preservation and conservation of natural resources not as lofty corporate goals, but how they run their business on a daily basis (Company X, 2012).

Current Safety Performance

According to personal correspondence from COMPANY X's health and safety manager, the last recordable injuries recorded at COMPANY X were:

- Alberta 572 days.
- British Columbia 308 days.
- Corporate (Calgary) 2757 days.

As you can see by the table below, COMPANY X did not have any recordable injuries up to the third quarter of 2012, but did have one incident in November of 2011.

Employee recordable Injuries:



Reproduced from: personal COMPANY X email correspondence.

Another important safety aspect of COMPANY X's operations is driver and vehicle safety. Employees use heavy vehicle equipment on site, and also travel between work sites on a daily basis. According to the International Association of Oil & Gas Producers, driving related incidents are a leading cause of injuries and fatalities. Successful safety programs concerning driver and vehicle safety include:

1. Seatbelts - must be used by all occupants at all times.

- Driver training & qualification drivers must be licensed, trained, and have the capacity to safely operate the vehicle.
- 3. In vehicle monitoring systems work data that can be stored, analyzed, and communicated back to the drivers (GPS etc.).
- Cellular telephones and two-way communication devices cell phones should not be used for calling/texting while vehicle is in operation.
- Journey management plans all risks should be assessed and managed within scope of vehicle work.
- Narcotics, drugs, and medications vehicles should not be operated if a driver is under the influence of drugs, narcotics, or medications that impair performance.
- Driver fitness and alertness drivers should be screened for conditions that may impair safety (e.g. sleep apnea). Drivers should be well rested and alert.
- Vehicle specifications vehicles should be used for their intended purpose, and be maintained in safe working order (International Association of Oil & Gas Producers, 2013).

COMPANY X implemented a new defensive driver program in 2006 in order to increase employee safety while driving, and address a high number of vehicle incidents (thirty incidents in 2007-2008). COMPANY X also deals with remote work locations, combined with severe weather and road conditions. As you can see by the graph below

(graph includes the entire organization), incidents have dropped from over twenty per year in 2007 and 2008 to two in 2012.

Vehicle Claims, 2007 to Present:



Reproduced from: personal COMPANY X email correspondence.

Current Situation

This section will discuss COMPANY X's current external medical services provider for its British Columbia operations. Currently, COMPANY X is using COMPANY Y for its health and safety services. COMPANY Y provides occupational first aid attendants, a Physician's Assistant, and mobile treatment center at COMPANY X's British Columbia operations. According to COMPANY Y's website, COMPANY Y is a leader in the provision of Medical Services for many industries including Oil & Gas, Mining, Plant Construction, Seismic Services, Logging, Plant Turn Arounds/Shutdowns, and Special Events (Company Y, 2012).

COMPANY Y specializes in medical services for the oil and gas industry, and has a team that includes Emergency Medical Technician's (EMT), Emergency Medical Responder's (EMR), paramedics, physician's assistants, registered nurses, and occupational registered nurses. According to COMPANY Y, all medical personnel are fully certified, and work throughout western Canada (Company Y, 2012). The current cost breakdown for COMPANY X utilizing COMPANY Y's services is:

- 1. Occupational First Aid Level 3 \$500 to \$650/day (approximated for privacy).
- 2. Physician Assistant \$1000 to \$1200/day (approximated for privacy).
- 3. Mobile treatment center \$200 to \$300/day (approximated for privacy).

These costs add up quickly for COMPANY X to over \$50,000 per month, over \$150,000 quarterly, and over \$600,000 per year for COMPANY X's BC operations alone when employment is at full capacity.

IS Networld

COMPANY X was planning to utilize IS Networld (ISN) during the second quarter of 2013; however, this has been put on hold for the short term. IS Networld is an online database which is a global resource for connecting companies with safe, reliable contractors and suppliers. Organizations like ISN are part of increased efforts to influence Occupational Health and Safety (OSH) standards within contractor supply chains (Nunes, 2012). This increased effort is accomplished through the use of "selecting safe contractors" and "OHS Certification Schemes" where OHS requirements are mandatory in order to properly select safe, skilled, and knowledgeable contractors (Nunes, 2012).

ISN collects safety, procurement, sustainability, quality and regulatory information from contractors and suppliers, verifies its accuracy, and then reports the results in a simple format to members. Their process allows firms to select those resources that best meet internal and governmental requirements, while providing contractors/suppliers the opportunity to centralize their information, save time and gain presence in the marketplace (IS Networld, 2012).

According to their website (www.isnetworld.com), ISN's Review and Verification Services (RAVS) is the industry-leading provider of health, safety, and procurement data verification. ISN employees and subject matter experts review and verify selfreported contractor information, and incorporate a level of due diligence to assess the accuracy, relevance and timeliness of the data provided (IS Networld, 2012). Their review and verification services include the following:

1. Health & Safety RAVS

- Incident Forms
- Citations/Prosecutions
- Written Safety Programs
- Training Documentation

2. Procurement RAVS

- Experience Modification Rate (EMR)
- Workers Compensation Premium Rate Statements
- Insurance Certificates

COR/SECOR/SMA (IS Networld, 2012).

ISN claims that the following benefits will occur when joining their service:

- Streamlining the conformance process.
- Staying informed: email reminders prior to expiration of insurance and other conformance information. Access to unlimited, toll-free help-desk support.
- Marketing exposure: creation of a company profile including industry and locations, centralization of conformance items, and an online document library with real-time access.
- Third party data: audits, training, qualifications, and drug/alcohol background checks (IS Networld, 2012).

According to ISN, by becoming a member, COMPANY X will have access to over 40,000 contractors and suppliers that have been verified in conforming to self-reported information that is accurate, relevant, and available at all times (IS Networld, 2012). The subscription cost of ISN for COMPANY X's total Canadian operations will be \$2000 to \$8000 per year, which may fluctuate based on a three year average of number of employees.

Government Safety Regulations

Peak employment at COMPANY X's northern BC operations in 2012 was approximately 450 workers, which mostly consisted of contractors and consultants. Staffing at this time is currently just eight employees. These employment levels fluctuate based on the amount of drilling and exploration which peaks in the warmer months. Drilling, facility construction, pipeline construction, and related completions are very seasonal. Some variables depend on cold weather, while others require warmer weather to gain reasonable access. As per WorkSafe BC guidelines, "the employer must provide for each workplace such equipment, supplies, facilities, first aid attendants, and services as are adequate and appropriate for (WorkSafe BC, 2012):

- a) Promptly rendering first aid to workers if they suffer an injury at work, and
- b) Transporting injured workers to medical treatment."

WorkSafe BC's Schedule 3A sets minimum levels of first aid which includes type and quantity of equipment, supplies, facilities, first aid attendants, and services. As oil and gas is deemed a high risk industry, and COMPANY X's operations are more than twenty minutes travel time from a hospital, the following table applies to the company (WorkSafe BC, 2012):

ltem	Column 1 Number of workers per shift	Column 2 Supplies, equipment, and facility	Column 3 Level of first aid certificate for attendant	Column 4 Transportation
1	1	Personal first aid kit	Of announcementation is an announcement production of the second state of the second s	
2	2-5	Level 1 first aid kit	Level 1 certificate	
3	6-10	Level 1 first aid kit ETV equipment	Level 1 certificate with Transportation Endorsement	ETV
4	11-30	Level 3 first aid kit Dressing station ETV equipment	Level 3 certificate	ETV
5	31-50	Level 3 first aid kit First aid room ETV equipment	Level 3 certificate	ETV

6	51-200	Level 3 first aid kit First aid room Industrial ambulance equipment	Level 3 certificate	Industrial ambulance
7	201 or more	Level 3 first aid kit First aid room Industrial ambulance equipment	2 attendants, each with Level 3 certificates	Industrial ambulance

Reproduced from: WorkSafeBC (www.worksafebc.com)

WorkSafe BC Standard OFA1: Certification of Occupational First Aid Attendants

Reproduced verbatim from WorkSafeBC:

First aid attendants are an essential part of the first aid services required for workplaces under Part 3 of the *Occupational Health and Safety Regulation* ("OHSR"). This standard explains how a person becomes certified to act as an attendant, the terms and conditions of certification, the general responsibilities of the attendant in the workplace, and the disciplinary actions the Workers' Compensation Board of B.C. ("Board") may take if an attendant does not meet his or her responsibilities (WorksafeBC, 2012).

Requirements of Certification:

Section 3.14 of the OHSR defines "first aid attendant" as, "a person who holds a valid first aid certificate issued by the board or by a person recognized by the board and who is designated as a first aid attendant by the employer". The

Board recognizes three types of Occupational First Aid attendants: Level 1, Level 2, and Level 3. There is also a Transportation Endorsement available to Level 1 and 2 attendants. The Board has recognized certain training agencies throughout British Columbia as being authorized to teach first aid training programs and certify attendants who successfully complete the programs

The employer must ensure that a person who is designated as a first aid attendant:

(a) is at least 16 years old,

(b) has successfully completed the first aid training course or first aid examination developed or approved by the board,

(c) has a first aid certificate in good standing at the required level issued by the board or a person recognized by the board, and

(d) meets any other requirements determined by the board for designation as a first aid attendant (WorksafeBC, 2012).

The company, COMPANY X, is currently meeting or exceeding all standards and guidelines as per WorkSafeBC legislation.

Safety History - Oil & Gas

In this section, I will present a brief overview of the safety history in the oil and gas industry, and explain how companies began to manage risk. Companies such as COMPANY X and their employees are safety oriented, but have benefitted greatly from experiences of other companies and government regulations regarding safety. In the past, a macho culture paradigm preceded a safety culture, whereby accidents were regarded as to be expected and part of everyday life. Recently, high risk industries such as oil and gas have been more concerned about employee safety. The industry now is one where death and injury rates are essentially zero, and employees are safer once they have arrived on the company work site (Hudson, 2003).

According to Hudson, the oil and gas industry remains an extremely dangerous industry, and the processes required to extract products and provide them to the customer are also hazardous (Hudson, 2003). The hazards of the industry are extensive, with operations in environments ranging from the high arctic, to desert conditions involving heavy machinery and equipment. These jobs are often performed by new, inexperienced (lack of proper training) local employees because of the need to respect political and legal requirements for local participation (Hudson, 2003).

In the initial years of the oil and gas industry, injuries and fatalities were considered just part of the day-to-day business. Employees were very well paid in the 1970's mainly because the industry was considered "high risk", and workers were being paid high wages in order to cope with this increased level of risk (Mearns & Yule, 2012). Since then, there has been substantial change in safety, and since the early 1990's the industry has been excelled in its safety performance. Also, pressures from society and government regulations have required that attention to safety be extended to environmental and occupational health issues (Hudson, 2003). Also, a firm's commitment to health and safety management is more important to safety behaviour at work than national culture in an increasingly global economy (Mearns & Yule, 2012).

Safety Management Systems

In this segment, I will explain current and successful safety management process, and how it has developed within the industry. Companies such as COMPANY X manage safety by creating positive attitudes around health and safety, and creating formal regulations which aim to keep all people involved safe. Well-designed and managed safety management systems result in reduced accidents and their associated costs (worker's compensation or possibility of fines) (Zinni, Mathis, & Jackson, 2011). The following five attributes of safety management have assisted organizations in reducing accidents (Zinni, Mathis, & Jackson, 2011):

- 1. Organizational commitment.
- 2. Policies, discipline, and record keeping.
- 3. Training and communication.
- 4. Participation and safety committees.
- 5. Inspection, investigation, and evaluation.

Organizations with high levels of safety performance and reliability produce goods and services over long periods of time with very few errors in safety; two primary attributes of these firms are:

- Operate with a chronic sense of unease and are never complacent. This means that if there has not been a serious incident in the long run, the firm realizes one could always occur at any time.
- 2. Weak signals or symptoms illicit a strong and immediate response from the organization. If something seems wrong, the firm will shut down operations and

investigate in order to discover the symptoms to the potential problem (Organisation for Economic Co-operation and Development (OECD), 2013).

Incidents in the past and lessons learned from them made organizations realize that sound process safety leadership is necessary for preventing both minor and serious safety issues (Organisation for Economic Co-operation and Development (OECD), 2013).

Oil and gas companies have achieved their current levels of performance through the gain of sound attitudes to safety issues, and the use of organized management of hazards within the industry (Hudson, 2003). These systems are basically the application of management procedures or processes to the problem of safety hazards an organization meets on a daily basis. A typical approach involves (Hudson, 2003):

a) Discovery and assessment of safety hazards a specific operation faces.

b) Specification of how hazards will be managed.

c) What is to be done if events, even though best efforts are applied, go wrong? Effective safety management includes a database of known hazards, and a clear understanding of how to reduce and prevent accidents due to the recorded hazards. The management system should be documented, with detailed accountabilities and necessary competencies to perform duties vital to the safety of all participants (Hudson, 2003). Lastly, a number of audit levels and review are essential with the belief that safety knowledge and accident prevention will never be 100%, and that safety processes can always be improved (Hudson, 2003). As mentioned, the average oil and gas industry worker has maintained a "macho" image over the years, and the success of achieving high levels of safety performance is from the direct, "hard-nosed" application of safety management methods driven by company managers. Legal requirements or penalties also have played a minor role within the industry (Hudson, 2003). Oil and gas managers began to realize that safety performance was an indicator of economic performance, and that cutting corners on safety to make money was penalized too often to make it a successful strategy (Hudson, 2003). This led companies to realize that effective safety programs were not as difficult or costly to improve as feared. It also led to major oil and gas firms to implement safety management systems in countries where these systems were not legally required (Hudson, 2003).

Oil and gas exploration and production has achieved its success on the basis of hard and systematic management. Although poor safety attitudes existed at first, the industry developed approaches to create better safety attitudes (Hudson, 2003). The application of safety management systems can assist in achieving high levels of safety: however, such systems are document based and can be bureaucratic (Hudson, 2003). The system often sets minimum standards, which often results in no more than the achievement of said standards, particularly due to competition for managerial attention and resources (Hudson, 2003). A safety management system defines sound systems, practices, and procedures but is never sufficient if practiced routinely; an effective safety system needs an effective safety culture to thrive (Hudson, 2003). This type of safety culture enables individual employees to use initiative, while sustaining high levels of safety performance across the organization.

Safety Culture

The following section describes what is required to be in place for oil and gas companies to successfully create a confident safety culture. The definition of safety culture is "the shared values and beliefs that interact with an organization's structures and control systems to produce behavioural norms" (Reason, 1998). Safety culture is not created overnight, but gradually is response to local conditions, past events, character of leadership, and the mood of the workforce (Reason, 1998). The entire firm, from senior managers to front line workers need to believe safety culture and awareness is just as significant as corporate profits. According to the Organisation for Economic Co-operation and Development (OECD), strong leadership is vital to safety culture due to the fact that leadership is central to the culture of any organization, and it is culture that defines and influences worker behavior and safety (Organisation for Economic Co-operation and Development (OECD), 2013).

Hudson also writes that safety culture in highly hazardous industries, whether internal or imposed, should be:

- 1. **Informed**: all managers understand what is going on within their organization, and employees are prepared to report their own mistakes and near misses.
- Wary: the whole organization is on the guard for the unexpected, and maintains a high degree of caution.
- Just: the business is typically a "no blame" culture. Some actions are believed by all involved to be totally unacceptable and deserving of discipline.
- 4. **Flexible**: firms consider variations in demand and adapt quickly to changes in their surroundings. They also provide prompt and routine modes of operation.

 Learning: companies anticipate change, are ready to learn, and do what is required to improve.

Hudson writes there is a "model of cultural maturity" for the evolution of safety culture within a company identified with five distinct phases (Hudson, 2003):

- Pathological: safety is a difficulty caused by workers. The main focus is the business and the desire to not get caught by safety personnel.
- Reactive: companies begin to take safety seriously, but there action after safety incidents occur.
- Calculative: safety is pushed by management systems with a large amount of data collection; however, safety is primarily driven by management rather than bought into by the entire workforce.
- Proactive: improved performance results in unexpected challenges. Employee involvement begins to move safety initiatives away from a "top-down" management approach.
- Generative: active participation at all workforce levels. Safety is seen as an essential part of the business.

Evidence also suggests that in in top performing companies, OHS are not considered separate issues or functions, but as a vital part of productivity, competitiveness, and profitability (Flin & Yule, 2012). The five phases of cultural maturity are shown in the following image:

The Evolution of Safety Culture



Reproduced from: (Hudson, 2003)

According to Hudson, safety culture consists of four dimensions:

- It is informed at all levels; being informed develops from seeking and delivering information.
- It demonstrates trust by all; trust is created by being just and informed. Negative news or incidents can be expressed and accepted as information to be acted on, rather than as a reason to punish.

- It is adaptable to change; adaptability develops from being flexible, learning from what goes well and from what goes wrong.
- 4. It worries; success does not promote complacency. Being concerned is a healthy situation resulting from a combination of being informed and a belief that when things are going well "life is not always fair", which provides the reason why the culture is wary (Hudson, 2003).

As stated by the above four dimensions, it is clear that being informed and being aware of what is really happening within a company provides the principal and necessary step in the growth of an effective safety culture (Hudson, 2003). Being informed creates trust, and therefore provides the basis for adaptability. According to Hudson, worry arrives later on when complacency becomes a threat, and as "chronic unease" provides the crucial solution to the biggest threat to advanced safety cultures; their own success.

Also, a firm with healthy safety culture also maintains a healthy respect for the hazards that can threaten its operations (Reason, 1998). Reason also suggests that companies can sometimes "forget to be afraid", and this can result in companies like COMPANY X, and others like it, to become vulnerable to opposing influences. When a company understands how to create an informed safety culture, it can then "socially engineer" its safety development through the use of everyday practical measures (Reason, 1998).

Human Resources

Along with culture and safety management, human resources play a vital role in industrial safety. This section will briefly explain how human resources play a very important role in occupational health systems in industries such as oil and gas. Proper employee recruiting, screening, training and retention play a vital role in creating effective health and safety.

In 1999, there were 833 work related fatalities in Canada, while 379,395 Canadian workers suffered injuries that required compensation for earnings lost due to missed work or permanent disability (Zacharatos, Barling, & Iverson, 2005). Traditionally, the method most often used for managing occupational safety was taking a "control-oriented" approach to human resources: a process that presumes workers are motivated to exert only as much effort as is necessary (Zacharatos, Barling, & Iverson, 2005). As a result, it is management's responsibility to use influence to control employee behaviour concerning safety performance. As mentioned in the previous section, this method often uses rules to enforce behaviours and the use of punishment to achieve compliance to the established rules (Zacharatos, Barling, & Iverson, 2005).

There has been an increasing perception that human resources are better managed by "high-commitment", or "high-involvement" type strategies where employees are more engaged (Zacharatos, Barling, & Iverson, 2005). This type of strategy produces conditions that inspire employees to identify with the goals of the organization, and to apply efforts to achieve them (Zacharatos, Barling, & Iverson, 2005). These high involvement strategies also focus on empowering employees through increased information flows and decentralization of decision making power which results in increases in productivity (Zacharatos, Barling, & Iverson, 2005). This strategy includes human resource practices that recruit, select, develop, motivate, and retain employees resulting in a sustainable competitive advantage. Zacharatos, Barling, and Iverson argue that these strategies can be used to increase occupational safety.

High performance work practices can also be applied to occupational safety in the same way a firm approaches its economic performance. Safety can be considered an operational component, just like production, sales, quality control, and profits (Zacharatos, Barling, & Iverson, 2005). According to Zacharatos, Barling, and Iverson, a high performance work system is composed of:

- Employment security: The extent to which the organization provides secure employment for all employees. The most important factor is employee security, which characterizes an investment in time and resources for employees which leads to increased loyalty and trust.
- 2. Selective Hiring: Focuses on the fit between employees and their work setting. Employees that are not a suitable fit will be more prone to being injured on the job. This would involve the pre-screening of potential employees, and excluding the higher risk individuals from employment in order to decrease potential injuries.
- Extensive Training: Employees who receive safety training suffer fewer work related injuries. Employees also gain greater capabilities to control their work environment which leads to increased safety performance.
- 4. Self-managed Teams: Teamwork and decentralized decision making increases familiarity and cohesion within work groups. The better the quality of management/employee relationships, and the cohesion within the group, the better employees comply with safety rules and regulations. This also results in increased sharing of safety ideas and solutions.

- 5. Reduced Status Distinctions: Reduce the distance between top management and employees by increasing exposure to each other. As status barriers are decreased between management and employee levels, all sides are more likely to view safety as a shared responsibility.
- 6. Information sharing: Information sharing across all organizational levels is vital for high safety performance. Organizations with better safety programs and records often have increased open discussion between management and employees. When employees feel comfortable discussing safety issues with managers, they are usually more committed to respecting safety procedures. In turn, trust is also created with high levels of information sharing between different groups.
- 7. Compensation for Safety: Well paid employees feel valued by their employers. Data indicates that compensating employees contingent on their safety performance is effective in reducing occupational injuries. Also, if safety is a key performance indicator, employees should be rewarded for their efforts. Research also indicates that when employees are compensated for safety performance at a group level, and for behaviours that expand beyond the individual's personal safety, the number of days lost to injuries and the costs involved were significantly reduced.
- 8. **Transformational Leadership**: An important leadership model where occupational safety is enhanced. Transformational leadership factors which enhance safety are:
 - a) "Leaders high in idealized influence would convey the value of safety through their personal behaviours."
 - b) "Those high in inspirational motivation would convince their employees they could attain high levels of safety that were previously considered impossible."

- c) "Intellectually stimulating leaders help employees think about safety, and develop new ways to achieve safety levels."
- d) "Individualized consideration would exist through leadership's real concern about their employee's safety while at work. Also, research indicates that transformational leadership can be taught to managers, and that it plays an important role in increasing occupational safety."
- 9. High Quality Work: Well-designed jobs ensure employees are engaged intellectually, as well as emotionally. Safety violations increase during periods of rapid economic growth. This is due to the requirement for increased production to meet demand, which also increases the workload and pace. Managers, when hindered by a larger workload, may often compromise safety in order to meet this rise in demand. Research indicates lower accident rates occur when employees were in well-designed job positions, and where they were able to participate in decision making (Zacharatos, Barling, & Iverson, 2005).

The following table illustrates how human resources personnel, supervisors and managers can impact effective transformational leadership through the use of appropriate transformational behaviours:

Leadership behaviours for safety

	Transactional behaviours	Transformational behaviours
Supervisors	Monitoring and reinforcing workers' safe behaviours	Being supportive of safety initiatives
	Participating in workforce safety activities (can also be transformational)	Encouraging employee involvement in safety initiatives
Middle	Becoming involved in safety initiatives (can also be transformational)	Emphasising safety over productivity
managers		Adopting a decentralised style
		Relaying the corporate vision for safety to supervisors
Senior managers	Ensuring compliance with regulatory requirements	Demonstrating visible and consistent commitment to safety
	Providing resources for a comprehensive	Showing concern for people
	safety programme	Encouraging participatory styles in middle managers and supervisors
		Giving time for safety

Reproduced from: (Flin & Yule, 2012).

Factors Affecting Outsourcing

In this section, I will discuss how companies make the decision whether to outsource safety or not, and factors which influence these decisions. Firms such as COMPANY X have traditionally used external medical service contractors due to normal industry practices and seasonal employment fluctuations. Since COMPANY X has already decided to use an external contractor for medical services, this section will also provide valuable information concerning any future decisions regarding new internal programs. From cost issues to the apparent importance of safety in general, there are many particular reasons why a firm may choose to outsource safety. According to Nunes, outsourcing allows the organization to shift activities to more specialized companies where workplace risks are better understood and controlled. Also, in general, the limitations of a company are one of the primary issues resulting in

outsourcing, and particularly in human resource management (Nunez, 2009). Some part of all organizations can benefit from an "outsourcing assessment" in order to determine what to specifically outsource and why (Richards, 2007).

According to Richards, there are many reasons why companies choose to outsource, but most reasons fall into three categories: operations, finance, and labour. A main reason for any category is the improved ability to focus on the core of the business and minimize distractions or business processes which are seen as minor to the company's main focus (Richards, 2007). However, the most common reason given for outsourcing some facet of a business is the potential of increased profits (Richards, 2007). Some of the increased rewards are lower costs, reduced capital needs, increased cash flow, investment avoidance, and turning assets into cash (Richards, 2007).

Nunez also writes that new, flexible systems of organizational work (partly inspired by Japanese firms' successes), have changed many companies into leaner organizations. Creating a leaner organization is often done through outsourcing the management of some important role of human resources, such as occupational health and safety functions (Nunez, 2009). The consequences of outsourcing increase when core activities are transferred, causing new challenges for the firm such as reassigning responsibilities and distributing information between and within firms (Nunez, 2009).

Workplace safety has become one of the most important concerns facing organizations, and HR management in particular. Nunez writes that regardless of the increasing concern and importance of the issue, the issues affecting the outsourcing decision in Occupational Health and Safety (OHS) activities remain somewhat

32 | Page

unexplored (Nunez, 2009). Also, evidence indicates OHS is one of the key activities most likely to be outsourced since it may not be considered a core procedure of the firm, or there is an absence of available technical resources (Nunez, 2009). Nunez also writes certain research has indicated that subcontracting safety processes can worsen worker safety conditions largely due to coordination issues between firms. It is also noted that outsourcing can create weaknesses in the OSH of contractors through fragmented employment relationships. This occurs when management control and responsibilities is not clear (Nunes, 2012). Other risks include cultural and language barriers, complex communication lines, and high work intensity due to peak workloads (Nunes, 2012).

Contracted jobs can also experience increased risk as they are usually conducted on the host organizations work site. Situations may occur where workers unfamiliar with the work site are not aware of potential hazards, or the organization's employees are not aware that outsourced workers are on site (Nunes, 2012). There have been many examples where safety incidents increase when the level of management and control between contractors and employees has been mismanaged (Nunes, 2012).

Nunez has determined that the level of occupational risk does not relate to the "make or buy" decision regarding subcontracting. Therefore, the gain or loss of internally providing OHS services appears to be unaffected by the complexity of occupational risk (Nunez, 2009). Nunez also indicates the variation between external transaction costs and internal organizational costs is independent of required OSH services. Nunez believes this may push external OHS providers to target larger or

riskier firms where the demand for their services is increased and they are as competitive as internally produced options (Nunez, 2009).

Some companies may not have the technical skills to assess their own levels of occupational risk, and with a lack of external auditing, the OHS service provider may exaggerate the risk assessment in order to increase the price of their services. Yet, if firms successfully anticipate price increases, they may create the necessary skills internally by hiring and training internal safety practitioners (Nunez, 2009).

Firms may also use audits to examine subcontractor effectiveness, which can be used to measure the success of an externalized activity. A successful audit may result in improved trust between the firm and its outside contractor(s). Also, audits done before and after an external contractor is hired should reduce informational and transactional costs, and support the competitiveness of using the external market (Nunez, 2009).

Next, a company may not believe there is a current relationship between the preventative activity and gains in occupational safety (Nunez, 2009). Integration of OHS activity is one of the major challenges when creating preventive safety measures. If integration does not occur, the strategic value of OHS remains unaffected as the activity is not considered as part of the firm's core concerns. The outcome of failed integration is that OHS becomes a secondary activity where the firm feels it is not worth investing internal or external resources towards (Nunez, 2009).

Nunez writes that when management's commitment to OHS in high, external OHS providers are more likely to be used. Also, when employee representation is operated through OHS committees, again, external OHS services are more likely to be

used. These results indicate that most managers and committees likely possess limited OHS skills; therefore, if managers want to improve OHS services the logical choice is to avoid involvement and use an external provider (Nunez, 2009). Managers may use increased interest in OHS to improve the monitoring and control of the external provider instead of administering the OHS activity itself (Nunez, 2009).

Nunez writes that, in general, firms fail to perceive the strategic value of OHS in engaging their management. Also, for most OHS activities, the value of the preventive activity may not be noticeable to management. In this case, the outsourcing decision will largely depend on the cost of using the external market and on the level of "informational unevenness" (Nunez, 2009). The International Labour Organization (ILO), a group formed in 1919 to advocate for employee rights at work, warns of the dangers of relying solely on external sources. The ILO encourages the internal production of some OHS activities in order to increase employee participation, and ensure that a safety culture is established (Nunez, 2009).

Some believe that subcontracting some OHS activities can be positive, particularly for small and medium sized firms where an absence of technical resources and skills negatively affects safety performance (Nunez, 2009). Nunez wrtes that public policies aimed at supporting auditing for small and medium sized firms by providing financial and technical support, could be favourable due to decreases in informational irregularities and business costs. The result of these incentives to small and medium sized business is the ability to purchase crucial OHS resources in the outside market. There is generally a common belief with both safety practitioners and

public administrators, that firms should internally create and administer some OHS activity (Nunez, 2009).

Elements in Choosing an Outside Service Provider

In this section, I will analyze how COMPANY X can ensure they are using the correct contactor now, or the possibility of another in the future, and what qualities they should have. Every industrial producer, at some time, usually hires an outside contractor to do specialized work. This makes good business sense at times, as many firms do not have the capability of re-assigning or re-training staff. The challenge is determining which service provider is most able to do the job on time, within budget, with the best outcome, and with the least safety incidents (Pacific Ethanol, 2011). With the correct choice, an outside contractor can act as a beneficial partner to support managers and engineers in lowering costs and add increased value over the long run (Pacific Ethanol, 2011). This includes:

- Precise planning: The need to run at optimal production levels at all times while minimizing downtime for maintenance or safety issues is of vital importance to all firms. The best way to avoid problems is to ensure the contractor provides a precise, highly detailed plan of the service to be done in advance. The plan should include the scope of work to be done, the crew/employees, the specifications, safety checks, specific tasks, and a complete timeline from start to finish.
- Qualified workforce: After soliciting request for quotes, the selection process should include an in-depth evaluation of the contractor's employees, and their knowledge, skills, and abilities. Recognized training programs can vouch for a

contractor's performance (see ISNetworld), and most OHS providers are part of credentialing bodies which evaluate the firm's competencies.

- Correct equipment for the job: A contractor can decrease costs for the firm by possessing the correct equipment. The contractor should also be selected with foresight and thought regarding their particular equipment, and how it relates to the contract or project.
- 4. Safe work practices: All contractors, even those providing OHS services, can never compromise safety for the sake of speed. A serious accident can stop a project immediately for an extended period, and instantly put a project's budget in peril.
- 5. Open communication: Constant and open communication with the firm's management is vital from the start to completion of the project. An outside OHS provider will provide project reports whenever necessary or required and without delays.
- 6. Partnership for the long run: Firms must look for a contractor that is willing to maintain a presence even after the scheduled work is complete. Added value is increased when an outside OHS contractor can act as a resource for long term management and planning (Pacific Ethanol, 2011).

Enlisting the skills of an outside contractor allows small to medium sized firms to keep their staff focused on the core competencies of the firm, and results in greater flexibility over the long run (Lee-Brotherton & Lynch, 2012).

Risks of Outsourcing Safety

In this section, I submit concerns or risks companies like COMPANY X may have or develop by using safety contractors. As mentioned, COMPANY X has traditionally used an outside contractor to provide medical services; however, they need to be aware of the risks outlined in this section which may occur if complacency finds its way into COMPANY X. These risks include (Protiviti, 2013):

- Lack of on time delivery performance and a decrease in end user satisfaction due to service delays.
- 2. Decrease in product or service quality due to failed cost saving efforts.
- 3. Insufficient planning and budgeting results in an outsourcing failure.
- Outside contractor my not be financially viable which causes the risk of downtime and higher costs.

Recent studies have indicated that total expenditures to third parties have reached approximately 40% to 60% of total revenue due to increased trends in outsourcing (Protiviti, 2013). It is essential that firms like COMPANY X are very aware of outsourcing risks.

Over the past twenty five years, there has been an increase in larger companies and manufacturers creating much smaller business units due to sales, divestments, and management buyouts. Coupled with this trend is the fact that fewer firms are keeping important safety or engineering capabilities in-house (Ennis, 2012). This market has resulted in an increased reliance on outside consultants and contractors for the provision of primary safety, technical, and safety design support (Ennis, 2012). There are a number of risks involved in the widespread contracting out of core safety responsibilities to external contractors or third parties. These risks are:

- Lack of responsibility of the consultant ensuring that safety recommendations are realistic within the operating environment and conditions.
- Lack of understanding of the key recommendations made by the consultants.
- Failure of the company to recognize the importance of the recommendations made by the consultant.
- Failure of the company to correctly specify the contract and delivery of the problem to be solved/corrected.
- Lacks of resources to implement the consultant's recommendations, or the recommendations are unreasonable or unwarranted.
- Failure of the consultant to deliver an engineered solution in the anticipation of obtaining additional work.
- In the longer term, the lack of retention regarding key safety knowledge within the smaller business unit (Ennis, 2012).

As mentioned previously, there are two main reasons why companies contract out safety work. These are:

- 1. Lack of specialist knowledge in-house to complete the work.
- Lack of resource (time) where the piece of work to be completed cannot be done in the time available with the level of resource in-house, even though there is sufficient knowledge to do the work (Ennis, 2012).

Both are valid reasons for outsourcing safety and the result has been a large increase in the number of consultants working within the chemical industries over the past twenty years (Ennis, 2012). Due to this increase, smaller companies; lack the knowledge and in-house specialists necessary to maintain a proper safety program, lack the ability to keep them interested in their work, lack capacity to properly maintain their personal knowledge base, and omit opportunities to give safety professionals suitable career progression opportunities (Ennis, 2012).

Consultant Lack of Responsibility

All consultants and contractors have an essential responsibility to their client to make certain recommendations and/or ensure services are reasonable for the client to implement effectively. In many cases, a consultant may recommend solutions or improvements that are either disproportionate, or too costly to implement (Ennis, 2012). According to Ennis, if the customer or client considers the recommendations difficult, they may not ultimately be implemented which could result in a failure of key safety systems. This communication, or lack thereof, and potential lack of follow through can contribute to a dangerous level of complacency for the contractor, as it is easy to suggest improvements that are too costly or too difficult to execute (Ennis, 2012).

Important to note, the contractor is not ultimately responsible for the implementation of any recommended improvements to safety processes or systems; it is the client's responsibility to ensure any necessary safety recommendations are fulfilled. In order to be effective, the client must have a minimum level of comprehension of the safety matter in order to recognize if the contractor's recommendations are possible. If this understanding is at minimum overlooked and at

worst not available, there is also a range of risk that the importance of any recommendations may not be recognized (Ennis, 2012).

Therefore, risk exists where the contractor may not provide a solution that meets the customer's requirements, or the firm will not understand the importance of the appropriate recommendations. If the client cannot recognize shortcomings in the reporting, the client may also fail to implement key recommendations or implement them incorrectly (Ennis, 2012).

Lack of Understanding of the Key Recommendations

In complex safety environments, like natural gas, where hazards such as fire or explosions exist, a lack of understanding regarding these issues is a common and dangerous problem. In cases like COMPANY X, there is often a dual failure between both the contractor and client. The contractor assumes a level of knowledge that the client does not have; therefore, there are two main possible outcomes:

- 1. The report is put aside and key recommendations are not dealt with.
- The report is acted upon, but the critical issues are either not fully understood, or not understood at all. Another consultant is then often hired to rework, revise, or interpret the recommendations made by the first consultant (Ennis, 2012).

The ultimate issue with both outcomes is the potential failure of the safety systems within the company (Ennis, 2012).

It is therefore very important that the client is an informed buyer concerning the consultant or contractor's services, and that they must also understand the key issues and services. It is equally important the consultant clearly understands the level of

knowledge and competence of the client when compiling a report, making recommendations, or providing safety services (Ennis, 2012). With smaller consultant/contractor firms, it is expected that the people responsible for safety generally have a limited understanding of government legislation and key safety issues if they have been in the same company or role for a longer period of time. This lack of understanding decreases when the person has been employed with several companies and also understands a lack of training and development exists for safety managers (Ennis, 2012).

Ennis raises this important consideration: How can it be ensured that clients are, in fact, intelligent buyers when the organization may have one or two safety professionals to cover everything? Many safety managers in large firms are nearing the end of their careers, and it is unclear where new safety leaders will come from or how they will be trained (Ennis, 2012). According to Ennis, there is a common problem in that many consultant or contractor reports are often poorly understood, especially when these relate to complex topics (fire, explosion hazards). There is often unwillingness on the company's part to follow up with the contractor in order to gain further explanations of the report (Ennis, 2012). Perhaps company complacency or distraction takes precedence if safety planning appears uncomplicated.

Ennis also indicates it is the consultant's responsibility to write a report so the client is able to understand the issues within it. The consultant or contractor must make an assessment of the technical ability and knowledge of the client and "pitch" the report or services to the appropriate reader friendly level, while also providing additional supporting information within the report (Ennis, 2012).

According to Ennis, it is the responsibility of the client to have adequate understanding within the company to cover the basic requirements of the process and the key safety issues. If the report is not understood, then internal actions should be taken to ensure the key recommendations are understood at all levels (Ennis, 2012). The consultant is partially responsible for this, and steps should also be taken by the client to ensure the report or service provider creates a report that the client will understand (Ennis, 2012).

Specification, Contract, and Delivery

When dealing with external contractors of any type, it is very important the contract is clearly specified, with clearly defined, measurable goals and objectives. Ennis writes the vast majority of contracts do not clearly specify that the report must be written to take into account the level of knowledge within the company, or specify that an engineering solution may be required; it is often assumed the consultant will deliver an audience specific report (Ennis, 2012). In many cases, the solution delivered by the consultant has not met client expectations due to a clear misunderstanding or failure of the client to communicate specific conditions. It is also important that the consultant take into account the level of knowledge within the company, and the type and depth of solution that is required (Ennis, 2012). Clearly, the delivery of the report should be addressed within the contract, and the level of requirement of any additional support after the report is delivered.

It is also vital to make sure everything is in writing before the contract is signed. This point may come across as obvious, but not having all important details in writing occurs on a regular basis (Richards, 2007). Industry personnel would benefit from an improved understanding of how to write an effective contract, and also how to clearly communicate the real requirements, legal ramifications and purpose/goals. Ennis writes the following items should be specified within the contract:

- Full description of the work required.
- Purpose of the work.
- Timeline, including any time spent on site and expected delivery dates.
- Deliverables including report/service formats.
- Any specific exclusions pertaining to the specific contract.

Also, it is important to have terms within the contract to manage the relationship between parties, and how to resolve conflict if disagreements occur (Richards, 2007).

Another common error in outsourcing is not creating a strong service level agreement (SLA), which causes many outsourcing agreements to ultimately fail (Richards, 2007). The bottom line is, even though a segment of a company might be contracted out, the company is still ultimately responsible for its performance. Some members of the organization, depending on the scope/scale of the outsourcing, will be required to provide a large percentage of their resources in assuring the contracting is meeting the terms of the SLA (Richards, 2007). Ultimately, if the SLA is treated as a partnership, and the issues that will inevitably arise are dealt with quickly and professionally, it is probable the contract will be successful and allow the process to be repeated (Richards, 2007).

Lack of Resources

As stated, many firms have limited safety resources; therefore, it is difficult to grasp all the necessary information in order to cover the issues. In the current structure of many companies, there is a significant risk of dropping below a minimum level of safety competence. Ideally, the safety manager should be proficient in understanding a wide variety of hazards and risks found at the work site (Ennis, 2012). The safety manager should be a generalist with an awareness of a wide range of hazards, risk assessment capabilities, as well as understanding relevant and applicable government legislation (Ennis, 2012). It would be additionally important for the generalist to have an understanding of any sector based or interest group guidance (Ennis, 2012).

Maintaining a minimum level of safety competence can be difficult for smaller sized firms, particularly within an organization where the safety manager is the sole safety resource for the company (Ennis, 2012). Competence can become even more difficult to maintain when the firm has a limited budget. The safety manager potentially becomes isolated from attending training courses or trade conferences where additional knowledge could be gained along with progressive technical safety developments (Ennis, 2012). Ennis goes on to say, in many firms there is minimal time or funds made available for safety managers to attend events that are beneficial to professional development. Networking would be beneficial at professional events to meet with other safety professionals that could offer/share advice on hiring the most proficient consultant or contractor in order to fulfill particular safety needs (Ennis, 2012). Without external professional contact, improving safety competencies would be nearly impossible in order to gain a beneficial working knowledge of process safety issues.

Networking can be more difficult to budget for with requirements to financially justify attendance to safety meetings and seminars (Ennis, 2012).

A small work site with a limited number of processes may be able to have a single manager with sufficient safety knowledge to cover most of the necessary requirements to more than a superficial level (Ennis, 2012). However, if the firm has multi-plant, multi-process facilities, the task of keeping current with the required amount of safety information becomes increasingly onerous (Ennis, 2012). Making matters worse, when one person is the sole safety resource, they are often too busy meeting legal minimum monitoring requirements (slips, trips, falls etc.). Essentially, one person would be very challenged to find time to deal with higher level safety issues; therefore, seasoned safety professionals with years of experience would likely struggle with the sheer volume and range of safety knowledge that is required on complex work site (Ennis, 2012).

Risks also exist where a contractor does not fully understand specific requirements of the client and scope of work involved. This risk increases when the consultant does not, or cannot visit the site, which is increasing in frequency (Ennis, 2012). An example of this occurring is when a contractor is hired, and then immediately subcontracts the job or parts of the job to another contractor. Subcontracting may result in an increase of risks and errors finding its' way into the scope of work being done (Ennis, 2012). Finally, risks also exist with using the contractor that is the lowest cost. The work may be contracted out further to an even cheaper contractor; therefore, it is crucial the client understands who has final accountability for the work being done (Ennis, 2012).

46 | Page

Contracting Out Costs

When a firm outsources, it is very common to discover the total cost of outsourced functions are not properly understood (Protiviti, 2013). When choosing to contract out safety service, the total cost can often be misreported or not estimated correctly at all. In evaluating the comparative cost between in-house or external safety service, companies should identify all costs, including both direct and indirect costs (Ennis, 2012). A common error is to report only direct costs, which results in the contracted out services ultimately reported at a lower cost. Indirect costs include:

- Costs incurred during the internal management of external contracts.
- Ongoing training and development of in-house personnel.
- Costs of full administration of permit-to-work procedures and the technology to operate them (Ennis, 2012).

It is not acceptable to leave key knowledge and competency with external contractors; as the state and availability of this knowledge cannot be guaranteed (Ennis, 2012). Missing preservation of this vital information can be a problem when a single person responsible for safety leaves the company or retires, often without a suitable transition period for the sharing of valuable safety knowledge. Many years of information or files can be literally thrown away without proper understanding of their value to the organization (Ennis, 2012).

Richards argues that in cases where the outsourcing service appears to cost more than an internally generated one, a thorough analysis usually discovers outsourcing actually costs less than obtaining the same quality, functionality, and growth ability provided by the contractor.

Competency of Safety Management

According to Ennis, there has been a reduction in status and level of competence of safety managers in many organizations. The reduction may be caused by cost saving measures, or a misguided belief that this level of competency is adequate (Ennis, 2012). Many organizations have safety managers that have been promoted from within, but have little experience or interaction with regulatory agencies. Many new managers have little or no formal engineering or scientific training, and are often given basic occupational health and safety and then are expected to be fully responsible with all aspects of safety (Ennis, 2012).

Organizations should consider risks inherent in the processes carried out and materials used on the work site when selecting personnel that will have primary safety responsibility. This consideration should be strategic, include a defined career development route within the company, and incorporate necessary succession planning (Ennis, 2012). In addition, any career development and related safety training should include the type of business involved and associated safety hazards related to that specific industry (Ennis, 2012).

Future Provisions

Organizations like COMPANY X must question whether the number of skilled safety consultants can be sustained considering the present economic environment. There is increasingly more pressure to do more with less and increase profits, so firms must consider if future safety managers will have the same skill set as the current ones (Ennis, 2012). There is a large population of safety managers in their forties and fifties

that will be retiring over the next ten to fifteen years. Ennis writes that it will be difficult to predict where the new generation of safety managers will come from considering present economic conditions, since most of these managers are slowly leaving the work force (Ennis, 2012).

Many consultants and contracting firms make considerable effort to train personnel; however, there is no substitute for quality time spent within a company to gain vital safety experience (Ennis, 2012). Although the use of outside contractors has increased for occupational safety, the decision to do so should be based on a rational and objective basis, and not based solely on financial criteria. Many organizations are relying exclusively on outside contractors for basic safety needs to fulfill requirements for efficiency and cost cutting; however, there are potentially serious implications over the long run (Ennis, 2012).

Outsourcing Merits and Drawbacks : COMPANY X

This section will provide a brief overview concerning the merits and drawbacks of COMPANY X using COMPANY Y to provide its medical services at their worksite locations in British Columbia. The following items are benefits that COMPANY X realizes through their outsourcing relationship:

 Flexibility – COMPANY X realizes increased flexibility through the use of an external contractor providing medical services. When employment is at higher levels due to increased exploration and drilling activities, the contractor meets the required personnel and equipment needs. If employment needs decrease for various reasons, the contractor simply adjusts the level of service to the appropriate level.

- Reduced Costs by outsourcing medical services, COMPANY X lowers operational costs through decreases in HR costs including hiring, training, and retaining etc. COMPANY X also decreases salary and pension costs. The company also saves capital by not having to purchase, manage, or maintain a mobile treatment center or emergency transport vehicle. Reduced costs often lead to increased profits.
- 3. Increased Focus by outsourcing, COMPANY X can focus on core safety management systems along with its core business of exploring, drilling, and producing natural gas. COMPANY X can provide a focused safety culture, but rely on the expertise provided by the outside contractor for its medical services. As mentioned, small and medium sized firms like COMPANY X may lack the technical resources and skills to provide the same level of service COMPANY Y provides; therefore, COMPANY X can focus on what they do best.
- Positive Partnership an external contractor like COMPANY Y can add value and resources through long term partnerships.

Some of the possible disadvantages of using COMPANY Y for medical services are:

 Unrealized Costs – costs may be inadvertently higher for COMPANY X due to unrealized indirect costs incurred in providing management for external contracts. Also, costs for providing training and development of in-house personnel related to outsourcing are often not included. The cost of COMPANY Y can be up to \$50,000 per month: is COMPANY X management sure they are getting the best "bang for their buck"?

- Complacency by relying on a sole external provider for medical services,
 COMPANY X safety managers may become satisfied with the status quo.
 Managing an in-house program may allow management to be more innovative, and find better ways to create solutions.
- 3. Loss of Expertise COMPANY X, by relying on COMPANY Y, lacks retention of key knowledge regarding the application of medical services. COMPANY Y, by the nature of their business, will be more knowledgeable regarding government regulations, safety training, and critical aspects of medical care in remote locations. COMPANY X may become too dependent over the long run.
- Delays an outside service provider may cause interrupted service to COMPANY X due to increased demand (lack of personnel), weather delays, labour disputes etc. The can have a negative impact on the relationship, service quality, and customer satisfaction levels.

Conclusion

Based on information provided by COMPANY X and through my research, this writer suggests COMPANY X should continue to use an outside contractor in providing medical services at their British Columbia gas operations. However, COMPANY X must be aware of the risks involved with using outside contractors, and take steps to mitigate these risks. Such risks include a lack of consultant responsibility, lack of understanding, and a lack of resources etc. (refer to Risks of Outsourcing Safety) that can lead to increased health and safety incidents. Data also indicates that COMPANY X, as a smaller company, does not have specialized human resource capabilities related to OHS, but does not have the technical skills to assess their current levels of occupational risk. Therefore, safety is still a primary core activity for the company. Coupled with fluctuating employment levels related to the amount of drilling, exploration, and seasonality, flexibility will remain a primary benefit on continued outsourcing.

The first issue COMPANY X needs to consider is an internal review of their current contractor, COMPANY Y. An audit must be done to ensure that COMPANY Y is providing effective medical services, which can also be used to increase the level of trust between COMPANY X and COMPANY Y. An audit will also enable COMPANY X to reduce transactional costs over time, and improve monitoring and control of the external provider. Audits should be performed annually in order to determine if the service level agreement is effective and satisfactory to both parties.

As mentioned, the number of employees and contractors at COMPANY X's British Columbia operations peaked at four hundred and fifty in 2012, yet later in the year when drilling and exploration was suspended, there were a total of eight employees at the site. It is easy to comprehend why an outside contractor providing medical services would be an easy choice for management to make. COMPANY X must ensure the correct selection for outside services is done in order to lower costs and add value over the long run. As mentioned, precise planning, qualified personnel, correct equipment, open communication, and a partnership for the long run are requirements for a successful contractor relationship. Investment in a meaningful working relationship allows a smaller company like COMPANY X to say focused on their core competencies and remain flexible when employment needs change.

Next, It is possible for COMPANY X to implement an in-house medical program in the future, but to succeed they must make necessary and important internal changes to human resources management and leadership. Although oil and gas companies like COMPANY X traditionally use third party medical providers, it is possible COMPANY X could effectively manage these changes internally with effective planning, effective implementation, and constant evaluation. COMPANY X does possess a high level of safety knowledge and management, which could translate into a well-run in-house program.

In order to achieve this, changes in leadership at COMPANY X would include transformational leadership through supervisors, middle managers, and senior managers where behaviours can motivate employees to set aside personal goals, and adopt the espoused goals of the organization (Flin & Yule, 2012). As mentioned, safety culture at COMPANY X should include managers at all levels that are informed, wary, just, flexible, and always learning. The goal of COMPANY X should be to have a "generative" model of cultural maturity where there is active participation at all levels, and safety is seen as an integral part of the business (refer to Evolution of Safety Culture – p. 25). Supervisors, middle managers, and senior managers at COMPANY X must emphasize safety over production, must encourage employee involvement, and must demonstrate a visible and consistent commitment to safety (Flin & Yule, 2012).

In terms of HR management, COMPANY X would also have to increase the breadth of their human resources department, as they currently have an HR manager and a general HR practitioner (payroll etc.) in their Calgary office. None of the current HR personnel specialize in safety, and any safety training that is required is done using outside sources. This writer recommends that COMPANY X hire an HR person that has a background in OHS, and can assist COMPANY X in recruiting, selecting, developing, motivating, and retaining employees in order to create a competitive advantage in not just production, but in safety as well. HR can also assist senior management, middle managers, and front-line supervisors with transformational leadership changes.

Important to note, COMPANY X only has one health and safety coordinator servicing all of COMPANY X's operations in BC and Alberta. This writer recommends they hire another coordinator in order to assist in easing the work load in periods of higher employment. If external medical providers are not used in the future, two safety coordinators can assist HR in effectively hiring the appropriate medical/safety personnel and deploying them where needed. An increased number of HR and health/safety coordinators will better understand, and have the technical skills to assess, plan, and create effective, innovative safety programs at COMPANY X's British Columbia operations. Finally, as the market potential for LNG grows, COMPANY X will most likely grow along with it. COMPANY X management, whatever they decide regarding outside medical providers, can better manage future growth with skills gained from transformational leadership, and improved HR management that are applied to improving OHS management in the short term.

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