

Safety culture in oil and gas: Factors that contribute to cultures of non-report

by

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### Abstract

This study addresses cultures of non-report in the oil and gas industry in Alberta, Canada. The purpose of the study was to determine what human, workplace/organizational, and external factors contribute to the presence of a culture of non-report within contractor organizations that provide construction and technical services in Alberta's oil and gas sector. The participant organization was a multinational that provides construction and technical services on an oil sands site north of Fort McMurray, Alberta. The study centered on observations made by 19 personnel working for the participant organization. Data was collected through one-on-one, semi-structured interviews, and results were analyzed thematically.

The results of the study conclude the following five core factors contribute to the presence of cultures of non-report amongst organizations that provide construction and technical services: workplace pressures from oil and gas companies/site owners, contractor organizations and coworkers/other industry professionals related to safety performance metrics; ineffective reporting processes and procedures, particularly for minor incidents; lack of trust between workers and their supervisory/management and safety personnel; fear of repercussions; and workplace environments that negatively impact self-image and social perceptions. These pressures can begin to be shifted by developing solutions such as the ones proposed in this paper that incorporate the human side of safety as a part of safety culture and supportive organizational messaging, centering on the humanistic components of organizational culture with the goal of helping organizations and their personnel value human safety over safety performance metrics.

*Keywords:* culture of non-report, non-reporting practices, safety culture, human safety, safety performance, minor incidents, oil and gas

## **Introduction**

This paper discusses human, workplace/organizational, and external factors that contribute to the presence of cultures of non-report amongst organizations that provide construction and technical services in the oil and gas industry of Alberta, Canada. I first became aware of the research need to evaluate cultures of non-report and the value placed on safety performance metrics (appearance at a personnel, project contract, worksite, and organizational level) over human safety while attending a construction conference in Houston, Texas in the fall of 2014. During a conference break, one of the attendees openly talked about an incident that occurred on a project site in India where a worker was accidentally struck and killed by a vehicle in the site parking lot. Out of fear of repercussions due to safety performance being tied to the project contract, site personnel moved the deceased's body from the site parking lot to a ditch across the road where it was left. This industrial safety issue suggests there is an overemphasis on contract safety performance that drives some workers to perform unsafe and/or unethical acts in order to protect the organization's safety record, and respectively, the project contract and their job stability. This incident initially raised the question of the prominence of cultures of non-report and the factors that contribute to its presence.

Through conversations with other personnel working for construction and technical services providers, it appeared that safety performance metrics are valued over human safety when safety performance is tied to project contracts, resulting in non-reporting workplace practices. Through these conversations, stories of incidents from work sites in North America were shared covering various industries, from oil and gas to mining. One contact discussed an incident that involved the individual's relative, who at the time of the incident, worked for a mining company in the United States. This contracted miner was injured on a work site when the

miner's finger became caught in a pinch point between a machine and a crosscut. When the miner (still underground) removed his work glove, he discovered his finger was entirely severed below the first knuckle. His foreman was present at the time of the injury and informed the seriously injured worker that he was to finish the shift, if at all possible, and to then tend to his injury off shift and off property. At this time, the foreman informed the injured worker that if he reported the accident, the entire contract team would lose their monetary safety bonus. Lastly, the foreman told the injured worker that he would have the individual fired if he reported his injury. Moreover, if the reputation of the company was at risk due to poor safety performance, an employee who reported an incident, and therefore posed a threat to the organization's reputation, would be terminated in order to protect to company's image and ensure continued success of the organization. This incident serves as an example of how non-reporting practices are encouraged when safety performance metrics are valued over human safety.

Another story that inspired this research project was shared by a Program Director assigned to an oil and gas program in Alberta, Canada. As the story was told, one of the site personnel obtained a minor work-related injury that required the individual to seek medical attention, resulting in a small number of stitches. When the worker returned to the work site, the worker reported that colleagues "demonized" the individual for reporting the incident. The worker told the Program Director that he would never report another minor incident. A literature review revealed that non-reporting pressures have been documented by various scholars (see literature review section); yet, there is sparse scholarship that addresses the relationship between organizationally-driven safety performance metric pressures and the presence of cultures of non-report in oil and gas. From the literature review and the initial observations discussed in this introduction section, this research project was designed to address factors that influence decision

making in relation to work practices and reporting when an individual is faced with fear of repercussions and other safety performance pressures. Specifically, the study focuses on personnel perceptions to address factors that are responsible for encouraging fear-based risky behaviours and non-reporting practices related to safety performance pressures.

The participant organization for this study was a multinational that provides construction and technical services in Canada and various international locations. The organization has espoused company-wide safety values, including a reputable health, safety and environment (HSE) program and system with partnered processes, policies and procedures. The organization had been providing contracted construction and technical services on an oil sands site north of Fort McMurray in Alberta, Canada for over 40 years. At the time of the study, the contractor organization had approximately 450 personnel working for them on the respective site. Overall, the site had approximately 6,000 people working on it at the time of interviews, representing a combination of numerous contracted personnel and organizations, as well as personnel who work directly for the oil and gas company/site owner.

The data that is discussed in this paper was gathered from conducting semi-structured interviews with 19 participants working for the participant organization on the aforementioned oil sands site belonging to a synthetic crude oil producer. The interviews were recorded and analyzed thematically. Findings for the study were analyzed in relation to:

- 1) The study's prediction that asserts a relationship exists between the presence of a culture of non-report and a deficiency of humanistic components (beliefs, values, human welfare, dignity, etc.) and the *human side of safety*, which results when safety performance metrics are valued over human safety, and

- 2) Schein's (1992/2010) three levels/processes that precede attitude formation (artifacts, espoused beliefs and values, and basic underlying assumptions).

The use of the term *human side of safety* in this study refers to safety elements that do not fit within the traditional physical safety model (i.e. preventing injuries), including factors that present barriers to psychological safety such as work related stress, extended work hours impacting work-life balance, burnout, workplace bullying/ostracism, pressures associated with contract safety performance, etc.

Due to the sparse scholarship on the concept of cultures of non-report caused by organizationally-driven safety performance pressures, the objective of this study design was to contribute to this academic area and develop a starting point for future studies across various industries (for related scholarship, see Gadd and Collins (2002); Lipscomb, Schoenfisch, & Cameron, 2015; McKinnon, 2013; and Reason, 1997). As such, there is a need for scholarly research studies to be conducted in the area of safety culture that specifically addresses how decision making around reporting practices is determined and what artifacts, espoused beliefs and values, and basic underlying assumptions are responsible for encouraging these behaviours. By identifying human, workplace/organizational, and external factors that reflect and reinforce a culture of non-report in the oil and gas sector, organizations are able to leverage the recommendations discussed in this paper to further develop their safety programs and organizational messaging, supporting the development of an effective safety culture which values human safety, and in turn, reduces non-reporting practices.

### **Literature Review**

The inception of safety cultures can be tracked back to the 1986 Chernobyl nuclear disaster in Pripjat, Ukraine which occurred as a result of inadequate safety practices (Pidgeon,



1991). From this incident, an awareness for the need to improve safety measures arose on a global scale across industries. Since its inception, safety culture has been integrated as a part of organizational culture through espoused values, management support, safety training, safety programs, policies, processes and procedures. The term *safety culture* was established by the International Nuclear Safety Advisory Group (INSAG) post-Chernobyl, calling to action the need to place site safety and authority on the senior member(s) of a nuclear facility (Sorensen, 2002). From here, the adoption of safety culture (as part of organizational culture) expanded to other industries, including the oil and gas sector where work sites often involve multiple contractors and large workforces simultaneously executing maintenance and capital project work (i.e. sustaining capital or large capital projects that include construction scopes). This assignment of safety culture responsibility (as proposed by INSAG) has been carried over to the oil and gas industry where, today, the site manager and/or project manager is ultimately responsible for the safety of the workforce, with their jobs being at risk for inadequate contract safety performance.

### **Safety Culture as a Component of Organizational Culture**

In order to understand safety culture, one must first understand culture as it relates to a group and/or organization. Schein (2010) proposes the following definition for *culture*:

The culture of a group can now be defined as a pattern of shared basic assumptions learned by a group as it solved its problems of external adaptation and internal integration, which has worked well enough to be considered valid and, therefore, to be taught to new members as the correct way to perceive, think, and feel in relations to those problems (p. 18).

This definition can be applied to both organizational culture and the safety culture that is an integrated component of the respective organizational culture. When this definition is

considered, it can be understood why safety culture concerns, such as non-reporting practices, can become a subcultural value on some work sites.

There continues to be considerable disagreement amongst researchers on how the term *safety culture* should be defined. Zhang, Wiegmann, von Thaden, Sharma, and Mitchell assert that there have been few attempts to examine the various definitions prior to their 2002 study. In their study, Zhang et al. reviewed 18 definitions of safety culture and 12 definitions for safety climate in order to suggest standard definitions. The commonalities found for safety culture definitions were:

- Safety culture is a concept defined at a group level or higher, which refers to the *shared values* among all the group of organization members.
- Safety culture is concerned with formal safety issues in an organization, and closely related to, but not restricted to, the management and supervisory systems.
- Safety culture emphasizes the contribution from everyone at every level of an organization.
- The safety culture has an impact on its' members' behavior at work.
- Safety culture is usually reflected in the contingency between reward system and safety performance.
- Safety culture is reflected in an organization's willingness to develop and learn from errors, incidents, and accidents.
- Safety culture is enduring, stable and resistant to change (Zhang et al., 2002, pp. 2–3).

From these commonalities, Zhang et al. (2002) suggested the following safety culture definition:

The enduring value and priority placed on worker and public safety by everyone in every group at every level of an organization. It refers to the extent to which individuals and groups will commit to personal responsibility for safety; act to preserve, enhance and communicate safety concerns; strive to actively learn, adapt and modify (both individual and organizational) behavior based on lessons learned from mistakes; and be rewarded in a manner that is consistent with these values (p. 3).

Although Zhang et al.'s (2002) safety culture commonalities and definition, in addition to many other safety culture definitions, suggest employees have shared values and beliefs in relation to safety, Gadd and Collins (2002) suggest that subcultures create an absence of safety culture cohesion. For this reason, the term *safety culture* as used in this study refers to an adapted version of Zhang et al.'s (2002) safety culture definition:

The enduring value and priority placed on worker and public safety *with the goal of having everyone, in every group, at every level of an organization sharing this value*. It refers to the extent to which individuals and groups will commit to personal responsibility for safety; act to preserve, enhance and communicate safety concerns; strive to actively learn, adapt and modify (both individual and organizational) behavior based on lessons learned from mistakes; and be rewarded in a manner that is consistent with these values.

Further, in order to understand the integration of safety culture as part of organizational culture, it is imperative to understand what safety culture *is*, beyond its definition.

Similar to organizational culture, safety culture is congruent with systems theory (i.e. the system of incidents, reporting, action, feedback, and need for continuous improvement), structuration theory (i.e. social systems within the work place, agency, and a macro and micro structure focus) and institutional theory (i.e. shared beliefs and values). Keidel (1990; 1995), one

of the early organizational culture scholars, explains that organizational design can be explained through a triangular design framework with three variables: decentralization (autonomy), centralization (control), and teamwork (cooperation). An organization might favour one variable strongly over the others, or an organization might strive to have a balance of two or three of the variables. Similar to organizational culture, these three variables impact the nature of a safety culture and an organization's representative safety program. Moreover, safety culture closely aligns with organizational culture theories.

As organizational culture is a complex system, safety culture is also a complex system with many influencing factors. A 2002 safety culture literature review conducted by Gadd and Collins asserted:

- Culture is a concept that describes the shared values of an organization that influence stakeholder behaviours and commitment, and safety culture is part of this overall organizational culture focused on safety values.
- Management's commitment to an organization's safety culture is a key influencer on the overall safety culture, particularly in relation to employees' perceptions of management's commitment towards safety.
- Presence of subcultures within an organization suggest an absence of a cohesive safety culture.
- Monetary bonuses that reward good safety performance or compensate personnel who work in hazardous conditions can lead to an increase in unreported safety incidents or other unsafe behaviour (Main Findings section, paragraphs 1–4).

In addition, further complexities are added to a safety culture when injury-free project bonuses are tied to contract safety performance and awarded in the form of a monetary bonus, which exist

as part of a system that values the status of self. These safety performance bonuses encourage workers to not report injuries or minimize injuries for their own benefit of receiving a bonus, or out of fear in an effort to preserve their job and/or social perceptions amongst their coworkers when safety performance bonuses are tied to team performance (McKinnon, 2013). Moreover, there are both effective and ineffective factors that contribute to an overall culture of safety.

### **Safety Culture Effectiveness**

Reason (1997), another early organizational culture and safety culture scholar, presented key qualifying characteristics for determining the effectiveness of a safety culture, which includes: having a culture of trust where personnel are encouraged to engage in safety expectations, including an understanding of what is satisfactory and unsatisfactory behaviour; having a culture that encourages reporting of incidents, injuries and near misses; having a safety information system used for collecting, analyzing and disseminating lessons learned information, including checks on the system; and having the ability and willingness to be flexible and change as the environment and industry evolves. Effective implementation of an advanced safety program and partnered adoption of the respective safety culture requires a balance between a bottom-up 'pull' and top-down 'push' strategy that encompasses engagement from personnel at all organizational levels (Hudson, 2007). The strategy involves marketing an advanced safety program and partnered safety culture as a product, attempting to pull/attract employees to engage rather than push/force them to accept the cultural change (pp. 709–710). Hudson asserts that this pull requires people wanting the product. In safety cultures, for the most part, management and personnel both want a safe place to work. This *want* is the foundation for establishing effective safety cultures.

The following five level framework can be used to classify the effectiveness of an organization's safety culture:

- Pathological: Who cares about safety as long as we are not caught?
- Reactive: Safety is important, we do a lot every time we have an accident.
- Calculative: We have systems in place to manage all hazards.
- Proactive: We try to anticipate safety problems before they arise.
- Generative: HSE is how we do business round here (Parker, Lawrie, & Hudson, 2006, p. 555).

Leveraging these classifications, an example of a pathological safety culture would be one that discourages the reporting of incidents and/or rewards those who do not report incidents, while an example of a reactive safety culture would be one that emphasizes the organization's value of safety and increases employee training post incident. An example of a calculative safety culture would be one that places value on systems for hazards management, and an example of a proactive safety culture would be one where potential hazards are identified prior to commencing project work. Finally, an example of a generative safety culture would be one that focuses on engraining safety as a core value and key component of the organization's overall culture. A generative safety culture is the most effective safety culture for providing personnel with a safe and positive working environment.

### **Safety Program Effectiveness**

Safety programs have become a key component of safety cultures. A review on the safety programs of five construction companies in the United States, Australia, and Hong Kong presented seven common program elements in all cases: 1) the programs focused on influencing employees' behaviours and their commitment to safety; 2) the programs supported the belief that

all injuries and incidents are preventable, and therefore unacceptable (i.e. the organization should provide personnel with the adequate training and supervision to execute the respective job safely) ; 3) top management personnel had a strong commitment to safety and supporting the programs; 4) the programs focused on engaging all stakeholders on safety concerns (i.e. not just workers in the field); 5) the programs included safety risk management systems that were utilized to identify, evaluate, and then respond to safety hazards/risks; 6) authority and accountability for safety were present, with safe behaviour rewarded; and 7) the programs were supported by a safety knowledge database where lessons learned data was stored (Zou, 2011). The participant organization's safety program encompasses the above listed elements that Zou asserts are indicative of an effective safety program. Yet, non-reporting practices were still present in the organization, which contends the above listed safety program elements should be expanded to address cultures of non-report.

### **Cultures of Non-report**

There has been significant development of theory related to organizational culture and safety culture and substantial studies that evaluate the effectiveness of safety cultures and safety programs (Gadd & Collins, 2002; Hudson, 2007; Parker et al., 2006; Zhang et al., 2002; Zou, 2011 to name a few). Safety cultures and safety programs play an important role in promoting safe work practices and improving workplace safety; however, the observations discussed in the introduction of this paper and the studies discussed in this subsection of the literature review demonstrate that cultures of non-report exist within some organizations in spite of noble efforts to foster a supportive safety culture. Although there has been many safety culture studies that measure reporting (either as a cultural variable or as an outcome variable in relation to the number of incidents and/or near misses reported), there is need for additional academic research

in the area of non-reporting that evaluates human safety as a compared value to safety performance metrics. As such, the concept of a culture of non-report, resulting as an environmental by-product of safety performance being tied to a project contract, is an academic area that requires further scholarship.

This paper contends that cultures of non-report result from: 1) a deficiency of humanistic components and the human side of safety, which results when safety performance metrics are valued over human safety, and 2) attitude formation which follows Schein's (1992/2010) reasoning that demonstrates a relationship between attitude formation and organizational culture. Schein's (1992/2010) three levels/processes that precede attitude formation are: 1) artifacts, 2) espoused beliefs and values, and 3) basic underlying assumptions. When applied to safety culture, manifestations that precede attitude formation can be seen as the following: artifacts as the outer layer, espoused values as the middle layer, and basic assumptions as the core (Guldenmund, 2000). This concept, drawn from organizational culture, explains how perceptions of safety cultures are created in the first place. The following are examples of these three levels of attitude formation in relation to safety cultures of construction and technical services providers:

- An example of a basic assumption is that employees enjoy working for a company that operates safely. Another basic assumption is that performing work with a good safety record increases the likelihood of being awarded work in the oil and gas industry.
- An example of espoused values are publically stated corporate mission statements, corporate values, and goals of the organization's safety program and system.



- An example of artifacts include observable behaviours, policies, tracking and reward systems, processes, training, posters, brochures, promotional items, etc. that support the safety program and system.

These three levels/processes contribute to attitude formation as it relates to safety cultures and cultures of non-report.

Work environments that push workers to take risks can be understood through Westrum's (1998) typology which explains how organizations process information (as cited in Westrum, 2004). This typology includes the following: pathological (focus on personal power and needs), bureaucratic (focus on established organizational processes/procedures [rules], positional hierarchies, and departmental separation), and generative (focus on a shared mission versus persons [pathological] or positions [bureaucratic]). As explained by Westrum (2004): "Culture shapes an organisation's response to problems. Probably the most helpful insight is to see culture as that set of processes that shapes organisational response to the challenges that organisations face" (p. 22). Moreover, the typology of how an individual processes information can be used to understand how organizations and individuals respond to safety incidents and the decisions personnel make around them when an incident does occur:

- Suppression (i.e. punishing or stopping the person so that they do not report the incident; typically the response of a pathological environment)
- Encapsulation (i.e. isolating the individual(s) so that the report is not heard by the right people or at all; typically the response of a bureaucratic environment)
- Public relations (i.e. making the incident public as to show what the organization is doing to ensure it does not happen again; typically the response of a bureaucratic environment)

- Local fix (i.e. addressing the problem for one instance but ignoring it might be occurring elsewhere on site, on different work site locations, etc.; typically the response of a bureaucratic environment)
- Global fix (i.e. acknowledging the problem is not an isolated incident and attempting to create a global fix solution; typically the response of a generative environment)
- Inquiry (i.e. progressing past reactive fixing to proactively finding the root cause problem that is attributing to incident occurrence in the first place; typically the response of generative environments) (Westrum, 2004)

These typologies are important in acknowledging why different responses to organizational culture and safety culture occur, explaining why a specific response might be expressed by some individuals of an organization but not necessarily all, some departments of an organization but not necessarily all, and some construction and technical service providers but not all.

The occurrence of a safety incident requires the individual(s) to make the decision if he/she/they will or will not report the incident. As widely known, safety incidents involve organizational factors, local workplace factors, and unsafe acts (Reason, 1997, p. 17). Yet, management often attributes safety incidents to the unsafe acts of workers, not accounting for the work environment that initially encouraged the worker to engage in the risky behaviour (McKinnon, 2013). When management automatically attributes safety incidents to the unsafe acts of workers without accounting for the work environment, leadership personnel are communicating values to their employees that suggest safety performance metrics are valued over human safety. As McKinnon (2013) asserts, although incidents occur because of a failure in the system, there continues to be a tendency to blame the worker. Environmental influencing factors that are sometimes not evaluated by management post incident include tight project

schedules, inadequate training and/or supervision, extended work hours that result in sleep deprivation and impact safety and performance (Lockley, Barger, Ayas, Rothschild, Czeisler & Landrigan, 2007), pressures to keep projects on budget, work-life balance stress caused by shift work, and contract safety performance pressures, to name a few. These factors communicate that project performance/associated revenue is valued over human wellbeing. In relation to contract safety performance, safety performance standards are set and communicated, audits are conducted, safety observations are reported and analyzed for trends, the number of minor incidents and near misses is evaluated, the Total Recordable Injury Rate (TRIR) is calculated, safety investigations are conducted, repercussive actions are determined, feedback is (sometimes) given, and lessons learned are implemented. Although this system does support safe work practices, it can also become a system where safety performance metrics are valued over human safety. When the individual(s) involved in the safety incident is/are faced with the decision to report or not report the incident, these values that are communicated by the organization's HSE system can become influencing factors.

Observations outlined in the introduction section, as well as the observations of McKinnon (2013), demonstrate the implications that emerge when a tendency to blame the worker exists. According to Schein (2010), "If supervisors and their managers fail to create a climate of psychological safety that stimulates upward communication, both safety and organizational effectiveness will be compromised" (p. 397). Psychological safety is achieved through an attractive positive vision; formal training; learner involvement; positive role models; informal training of relevant groups and teams; practice fields (environment where personnel can practice skills and make mistakes without impacting the organization or job), coaches and feedback; and support groups where learning problems can be expressed and discussed (Schein,

2010, p. 305–306). Building on this concept, when supervisors/managers fail to create a climate of psychological safety that stimulates open communication between workers and their supervisory/management personnel, ineffective incorporation of humanistic components and the human side of safety, as a part of the overall safety culture, ensues, resulting in an environment where a tendency to blame the worker is more likely to exist. Moreover, the relationship between supervisory/management personnel and workers is key for addressing this tendency to blame the worker, which in turn influences reporting and incident investigation values.

A positive safety climate encompasses feelings of trust and motivation amongst personnel, which makes the practice of reporting less threatening from the standpoint of the employee. According to O'toole (2002), a positive safety climate is supported by:

- Treating accident incidents as system problems, not opportunities to fix blame
- Treating employees as thinking, knowledgeable, and important players whose opinions and suggestions are solicited and frequently acted upon (p. 235)

Furthermore, the results of an employee perceptions survey conducted amongst 1,414 employees of a large ready-mix concrete company in the southwestern region of the United States concluded employees perceived that personnel involvement and commitment was the most influential factors on safety culture, with a positive pioneer average of 84.6 percent (O'toole, 2002). Therefore, employee perceptions are imperative in understanding what factors influence an individual's decision to report or not report an incident, contributing to the absence or presence of a culture of non-report.

Gadd and Collins (2002) assert that employee perceptions in relation to management's influence on an organization's safety culture is a critical measurement for evaluating organizational safety values:

From the literature it emerged that management was the key influence of an organisation's safety culture. A review of the safety climate literature revealed that employees' perceptions of management's attitudes and behaviours towards safety, production and issues such as planning, discipline etc. was the most useful measurement of an organisation's safety climate (Main Findings section, paragraph 2).

Furthermore, individual perceptions reflect in an employee's behaviour, organizational commitment, and responsibility of actions (Cox & Cheyne, 2000). Since employee perceptions influence employees' decisions in relation to engaging in unsafe behaviours and risky decisions while working, such as non-reporting practices, semi-structured, one-on-one interviews were chosen for this study's data collection method. In addition, Roelofs, Sprague-Martinez, Brunette and Azaroff's (2011) study amongst Hispanic construction workers in the United States demonstrated the effectiveness of using a qualitative approach for employee perception-centered research.

The practice of not reporting incidents may be practiced by some individuals but not others, on some work sites but not others, and in some organizations but not others. Factors identified by Reason (1997) that contribute to a climate where some individuals trust and/or feel motivated to report incidents include:

- Indemnity against disciplinary proceedings—as far as it is practicable
- Confidentiality or de-identification
- The separation of the agency or department collecting and analysing the reports from those bodies with the authority to institute disciplinary proceedings and impose sanctions
- Rapid, useful, accessible and intelligible feedback to the reporting community

- Ease of making the report (p. 197)

This paper further explores these influencers as well as other human, workplace/organizational, and external factors that were discovered through this study as they relate to the oil and gas sector in Alberta, Canada.

Taking in to consideration individual subjectivity as well as different degrees of influencing factors that vary from organization to organization, is important to gain a clear understanding to what degree personnel are being impacted by non-reporting pressures in the workplace. A survey that engaged 1,155 union carpenters in Washington state studied incident/injury reporting rates and determined that the majority of participants (>75 percent) felt comfortable/safe reporting work-related incidents/injuries to their assigned supervisor without the fear of being disciplined for the safety incident occurrence (Lipscomb, Schoenfisch, & Cameron, 2015). In this same study, the majority of participants reported that they believed that the majority of incidents/injuries that occurred on their work site were reported by their colleagues. Although these statistics support considerable reporting rates, they also demonstrate over 20 percent of the workforce did not feel comfortable/safe to report work-related incidents/injuries. Furthermore, nearly half of the participants in this study indicated that they felt it was better to not report minor injuries and that they felt pressure to use their private insurance for work-related injuries treatment (p. 411).

This study provides evidence of the under-reporting of work-related incidents/injuries as it relates to the carpentry trade in Washington State, particularly incidents/injuries that are classified as minor incidents. This study also provides evidence that fear of retribution and repercussions of incident/injury reporting is present, supporting that non-reporting practices are present and warranting further exploration in to what factors lead to its development. This

research is particularly relevant to Alberta's oil and gas industry which leverages large numbers of union carpenters through Canada's Building Trades Unions (CBTU) to perform work on oil sands sites. In order to further support scholarship on safety culture and safety program effectiveness, studies that encompass multiple trades, such as this research, are warranted to address the presence of cultures of non-report in oil and gas and its relation to safety performance at a personnel, project contract, worksite, and organizational level.

## **Method**

### **Participants**

The data collected on non-reporting practices in Alberta's oil and gas industry were derived from conducting semi-structured interviews with 19 participants working for the participant organization on the aforementioned oil sands site belonging to a synthetic crude oil producer. Participants included 17 men and two women. In order to recruit participants, permission was requested to post flyers at the work site, and the participant organization was asked to mention the study at site safety meetings with the researcher's contact information given out. Original participant recruitment plans included sending a company email to personnel, inviting individuals to contact the researcher if they were interested in participating in the study. However, due to the majority of the personnel being contracted workers versus permanent employees, the majority of personnel did not have company email addresses. As such, recruitment via email communication was not leveraged. Therefore, recruitment methods included flyers on site and announcements at mandatory safety meetings and crew-specific meetings. Moreover, it is anticipated that the majority of personnel working on the site for the participant organization were made aware of the study.

Participants were a combination of direct hire personnel that worked directly for the participant organization (permanent employees) and personnel who were contracted through building trades/labour unions. Participants work history with the participant organization ranged from three months to 16 years, with 68.4 percent (13 out of the 19) of participants working over two years for the organization. Of the participants, 94.7 percent (18 of the 19) worked primarily in the oil and gas industry at the time of the interviews with only one participant working in various industries. Participants included labourers, foremen, general foremen, and supervisors (including trades such as iron workers, insulators, steamfitters/pipefitters, boilermakers, and millwrights), as well as site safety and management personnel. Collectively, the participants reflected a representative sample of the respective workforce.

A relationship was not found in this study between an individual's perspective of non-reporting practices and their job position. For example, labourers were not less likely to report than the supervisors and foremen. A relationship was not found between willingness to report and the length of time with the organization/project or on the basis if someone was a direct hire or temporary hire (union craft personnel brought on for project duration) employee. For example, some industry professionals make the assumption that newer personnel who are temporary hires through a union will have a decreased commitment to safety and reporting (in comparison to direct hire personnel who have a relationship with the organization). This relationship did not present itself in this study, and it is anticipated a larger sample size would be required to draw such conclusions.

The participants identified their length of experience working in construction and/or technical services ranging from one year to 35 years, with 84.2 percent (16 out of the 19) of participants identifying they had over seven years of experience in construction and/or technical



services. Some participants had previous experience working in other sectors such as commercial and residential construction, mining and shipping. Taking in to account length of time in the industry and employment backgrounds, this explains why participants had varying exposure to different safety cultures throughout their careers.

The participant organization had been providing small capital construction and multi-trade technical services on the site for over 40 years. The participants interviewed had been working on the project/site from two weeks to eight years (10 out of 19 [52.6 percent] under on year). Taking in to consideration the nature of projects in the oil sands that require contractor organizations to ramp up workforces for short durations, this percentile is considered normal due to the large number of contract workers who are brought on through the building trades/labour unions. Some personnel had only worked on the one oil sands site, and some participants had worked on other oil and gas sites in Northern Alberta or in Eastern Canada. As such, it is important to note that the information shared by participants was not solely specific to the participant organization and included observations of other contractors on the same site, as well as experiences on other work sites.

### **Procedure**

The study was designed to determine what human, workplace/organizational, and external factors contribute to the presence of a culture of non-report within organizations that provide construction and technical services in the oil and gas industry of Alberta, Canada. A qualitative approach was taken for this study to better understand cultures of non-report from the perspectives of personnel working in the field. This qualitative approach enabled participants to discuss factors they provided data on versus weighting factors that were identified for them. Prior to commencing the study, an ethical review for research involving humans was undertaken.

Upon approval of the ethical review, the research was carried out to ensure all ethical requirements were met.

Ethical considerations involved the wellbeing of the participants. There was a risk of raising negative feelings and anxiety through the use of interviews to discuss non-reporting practices from an employee perspective. For this reason, interviewing was done in a friendly tone, being careful to avoid tones and questions that stimulated the perception of an interrogation. Participants were also assured, verbally and via the participant consent form, that their name, job title and any other identifiable characteristics would not be included in this final research paper in order to protect the identity of the individual. The participant organization agreed that participant names and titles would not be provided to them in order to ensure privacy and confidentiality. All interviews were tape recorded with permission from the participants; all participants were asked to sign a formal consent form to participate in the study. Participants were also assured that they were able to withdraw from the study without prejudice if desired. None of the participants interviewed for the study elected to withdraw from the study.

The semi-structured interviews comprised of 20 core questions; additional prompter questions were utilized, when applicable, to further engage participants in the dialogue (see Appendix A for the list of interview questions). All participants were asked the 20 core questions; some participants were asked additional questions dependent on the information discussed in the conversations. The interview questions were developed to test the study's assumption that assert a relationship exists between the presence of a culture of non-report and a deficiency of humanistic components (beliefs, values, human welfare, dignity, etc.) and the human side of safety, which results when safety performance metrics are valued over human safety. Each interview was scheduled for one hour in length with the majority of interviews

running under in time. The length of the interviews was dependent on the participants' eagerness to discuss information in further detail.

Interviews took place over the course of two days on January 27 and 28, 2016. This timeframe is significant, as the interviews took place during a multi-year decline of crude oil prices beginning in late 2014. Due to the remote location of the oil sands site, travel was required to the site in order to conduct interviews with the participants. Although interviewing participants off site or via Skype was offered to potential participants, this option was not requested. The study was originally designed to include 20 participants based on data saturation predications related to a larger sample size; however, one anticipated participant did not check-in for the on-site interview for unknown reasons during the second day of the interviewing process. Results were therefore drawn from the data sets provided by the 19 participants. Conducting the interviews on site included use of a private room in the participant organization's facilities. Due to the interviews having been conducted on site and in a private room of the participant organization's facilities (at the discretion of the participants), it is anticipated that this arrangement might have made some personnel feel less comfortable to speak openly and freely about non-reporting practices. In order to create a comfortable interviewing atmosphere, all participants were encouraged to ask questions and assured that the study was not an audit of the contractor organization or site.

All interview recordings were transcribed manually for analysis. Four commonly accepted and utilized methods of analysis for qualitative inquiry include: thematic, structural, dialogic/performance, and visual (Riessman, 2004). For this study, thematic analysis was selected, which is a qualitative research analysis approach that identifies and categorizes commonalities and themes from raw data. The thesis committee supervisor of this study

reviewed the data categorizations and analyses presented in this paper. Themes and commonalities were viewed through the theoretical lens that was introduced by Schein (1992/2010) and explains the three levels/processes that precede attitude formation: 1) artifacts, 2) espoused beliefs and values, and 3) basic underlying assumptions. The results from the study were also used to draft a suggested definition for a culture of non-report.

### **Results**

In order to understand the presence of cultures of non-report and its impact on behavioural choices, this study aimed to uncover understandings and experiences of trades/craft personnel from their own perspectives with the purpose of identifying the human, workplace/organizational, and external factors that contribute to non-reporting practices. Examples of these three categorizations of factors are as follows:

- Human: self-image preservation, social perceptions, bullying and ostracism; relationships with supervisory/management and safety personnel; fear of repercussions
- Workplace/organizational: Ineffective reporting processes and procedures, particularly for minor incidents; workplace pressures related to safety performance metrics
- External: economic downturn related to low crude oil prices

To understand the dynamics of a culture of non-report, it is pertinent to first understand the presence of workplace pressures and partnered risky behaviours that contribute to unsafe work behaviours as identified by participants in this study. Workplace pressures and risky behaviours influence the likeliness of incident occurrence and the partnered need for the individual(s) to determine if he/she/they will or will not report the incident. It is important to note that the

workplace pressures and risky behaviours observed by participants were not solely specific to the participant organization and included observations of other contractors on the site, as well as experiences from other sites.

Workplace practices vary from individual to individual, with some personnel willing to take on more risk than others. Some participants had experienced workplace pressures and risky behaviours, whereas others had not. As shown in Table 1, pressures identified in the workplace were largely tied to project performance/revenue and included:

- Relationship between incident reporting and the project contract's safety performance record, which in turn could impact job stability and employment
- Reduction of labour hours facilitated by oil and gas companies/site owners, resulting in job instability and unemployment (particularly in relation to the low crude oil prices of 2015–2016)
- Reduction in basic site services provided by the oil and gas company/site owner (i.e. regular snow plowing), which communicates that budget is valued over worker safety and results in a decrease in personnel engagement
- Idealistic expectations from oil and gas companies/site owners and supervisory/management personnel to meet tight project schedules and budgets (particularly in relation to the low crude oil prices of 2015–2016)
- Long work days that impact work/life balance
- Ineffective supervision and training that does not support skills development
- Misalignment between training given and training required to execute job in the field
- Lack of communication and trust between workers and their supervisory/management and safety personnel

- Presence of bullying and ostracism on oil sands sites

These workplace pressures that largely focus on project performance and revenue over human wellbeing and safety can lead workers to engage in risky behaviours and unsafe acts, negatively impacting safety culture.

Participant Quotes	Levels of Attitude Formation Involved	Concept (Subtheme)
<p>...<u>I don't report a lot of stuff because I don't want to affect the stats</u> in one way. But that's actually low on my list; it's more so <u>I can handle myself</u>. (P5, Q11)</p>	<p>Basic underlying assumptions  Espoused beliefs and values</p>	<p>There is concern that reporting an incident will impact the project contract's safety performance record, which in turn could impact job stability and employment; there is also a motivation by some personnel to handle incidents on their own.</p>
<p>...The client still has the work that they gotta do. And they're of course trying to <u>get as much done as with little amount off people as they can</u>; that's reality...The work hasn't been picking up...Not as many people has been employed, so some of the people that we're getting are doing what they think are favours for you by maybe going out and <u>doing a job unsafely or not not by the rules just because they get it done quicker</u>, and they think that they are doing you a favour. But <u>I've seen that over the years the same thing as when things have gone kind of bad in the economy and jobs gets tight</u>, people start to do that but as as jobs are or jobs become more plentiful then they're willing to ask more questions...But as things get tight, they'll just go, "Oh I'll get go and do, I'll get that right away." And they just often run and get it done because <u>they don't want to be the person laid off</u>;</p>	<p>Basic underlying assumptions  Espoused beliefs and values  Artifacts (intangible)</p>	<p>The reduction of labour hours by oil and gas companies during the economic downturn adds the workplace pressure of job instability and unemployment.</p>

Participant Quotes	Levels of Attitude Formation Involved	Concept (Subtheme)
<u>they want to be the person who can go get it done for you...</u> (P11, Q18)		
<p>...When the craft ask for something and the continually answer is: <u>“it’s not in the budget.”</u> I believe that kind of <u>deteriorates their commitment...I think you can’t expect the craft to operate function at a high level and follow all the policies and procedures if the basic stuff, if we can’t get the garbage emptied or if you can’t get the dumpsters emptied...There’s a certain loss of engagement</u> because we continuously saying <u>budget, budget, budget; it’s not in the budget.</u> We can’t get the roads plowed, we can’t get the roads sanded...<u>that’s from the client level...</u> (P12, Q17)</p>	<p>Basic underlying assumptions</p> <p>Espoused beliefs and values</p> <p>Artifacts (tangible and intangible)</p>	<p>The reduction in basic site services provided by the oil and gas company/site owner communicates that budget is valued over worker safety, resulting in a decrease in personnel engagement.</p>
<p>It’s mostly from management trying to <u>meet schedules, cut budgets, be on time...</u> And you know the <u>price of oil right now;</u> it’s making the <u>companies drive even harder,</u> as they are trying to meet to actually run the plant... (P4, Q17)</p>	<p>Basic underlying assumptions</p> <p>Espoused beliefs and values</p> <p>Artifacts (tangible and intangible)</p>	<p>Pressures from oil and gas companies/site owners and supervisory/management personnel to meet schedules and budgets increases when the industry is in a recession.</p>
<p>...Up at 4:30 in the morning, we’re out here by 6:30. We don’t get home till 7 o’clock at night. So you’re dealing, you have to <u>shut off your home life...</u>I’d rather deal with home life because out here is like woh; it can get to the point I’ve seen people have <u>nervous breakdowns...</u> (P14, Q18)</p>	<p>Basic underlying assumptions</p> <p>Espoused beliefs and values</p> <p>Artifacts (intangible)</p>	<p>Long work days is a workplace pressure that impacts work/life balance.</p>
<p><u>Improper supervision...</u> It was when I first got here; I kinda didn’t know the difference...<u>They aren’t being told kind of what’s right and wrong...</u> like if there’s something that that we’re doing that were not supposed to be doing... <u>if you</u></p>	<p>Basic underlying assumptions</p> <p>Espoused beliefs and values</p> <p>Artifacts (intangible)</p>	<p>Effective supervision and training is appreciated by workers who value skills development and want to learn how to do a job correctly.</p>

Participant Quotes	Levels of Attitude Formation Involved	Concept (Subtheme)
<p><u>don't have someone telling you these things you're never gonna learn right...</u> (P10, Q18)</p>		
<p>...Somewhere, someone in an office is writing a program, and we have to roll it out here on site. And they're <u>forgetting the type of people</u> that we're dealing with ...<u>We're supposed to be the advocates for the people in the field.</u> But when these <u>programs roll out, sometimes we read through it, and we find it difficult to understand...</u> (P12, Q14)</p>	<p>Basic underlying assumptions</p> <p>Espoused beliefs and values</p> <p>Artifacts (tangible and intangible)</p>	<p>Developing relevant programs and procedures for the target audience is important for mitigating workplace pressures associated to training.</p>
<p>...<u>People don't trust safety and companies don't trust the employees</u> and both of them have good reasons to with a lot of these companies... <u>I think a lot of it would be communication with safety officials...</u>(P15, Q12/Q13)</p> <p>It would really just be a poor mindset...like <u>poor communication between the guys on the ground and the guys in the chairs.</u> Like when you can bridge that gap, and <u>really communicate things, that's when you know those issues start to wither away right...</u>(P10, Q19)</p>	<p>Basic underlying assumptions</p> <p>Espoused beliefs and values</p> <p>Artifacts (intangible)</p>	<p>Open communication and the development of trust mitigates pressure between workers and supervisory/ management and safety personnel.</p>
<p>...But out here, yah <u>between incidents and bullying, I believe too that if they had to really investigate a lot of incidents, I can tell you it would lead back to bullying...</u>Because this guy was different; he had his different beliefs. And they really went at him. And he just couldn't take it. <u>They isolated him; he got isolated.</u> From everybody... (P14, Q18)</p>	<p>Basic underlying assumptions</p> <p>Espoused beliefs and values</p> <p>Artifacts (intangible)</p>	<p>Bullying and ostracism are workplace pressures present on oil sands sites in Northern Alberta.</p>

**Table 1. Workplace pressures identified by participants.**



Some participants suggested that non-reporting pressures have increased during the low crude oil prices in 2015–2016 due to more individuals being concerned about their job security. As a participant suggested, when there is less work available, personnel seem less inclined to report and more inclined to try to solve the problem without a formal report (P17, Q10). For example, if a worker hit his/his head on a piece of scaffold that was sticking out, he/she would be more likely to tie a piece of ribbon on the end of it to make it more visible to others then report it formally (P17, Q10). Personnel also seem more inclined to report when others are reporting. Personnel who value reporting are put in uncomfortable situations when they hear colleagues discuss incidents of not reporting. As one participant described, the individual thinks about the worker and the worker's family when determining whether to report against the individual for minor incidents and the possibility of the individual losing his/her job because of the report against him/her (P15, Q10). Research studies that evaluate changes in safety cultures and reporting practices throughout an economic cycle, capturing periods of expansion (growth) and contraction (recession), would be beneficial in order to explore this external factor in further detail.

As shown in Table 2, risky behaviours identified by participants as a response to workplace pressures included:

- Leveraging “shortcuts” in an effort to get a job done faster
- Using improper PPE in an effort to minimize the time required to complete a task (i.e. using the incorrect gloves instead of going to the tool crib to get the correct gloves in an effort to reduce time spent retrieving the appropriate PPE)
- Using shortcuts through the plant facilities instead of utilizing designated paths and not wearing PPE in an effort to simplify tasks that do not appear dangerous

- Unsafe parking habits
- Stress and overwork behaviours exhibited by some supervisory/management personnel

All of these responses to workplace pressures demonstrate how personnel try to simplify work tasks to meet project performance and revenue requirements. These responses to workplace pressures can help one begin to understand why some individuals report all incidents, why some individuals report some incidents, and why some individuals do not report any incidents.

Participant Quotes	Levels of Attitude Formation Involved	Concept (Subtheme)
<p>Yah what have I seen personally? Lifting, for instance, lifting 20 foot piece of pipe that is ¾ in thick, 36 inch pipe, and you’ve got 3 inch slings. And in my opinion, you should be using 4 inch slings...I’m not running all the back to the tool crib for those 4 inch slings, yah we will put two 3 inch slings on there and lift it; stuff like that; <u>it’s a shortcut</u>. (P3, Q17)</p>	<p>Basic underlying assumptions Espoused beliefs and values Artifacts (intangible)</p>	<p>“Shortcuts” are leveraged as a response that enable workers to get a job done faster.</p>
<p>...You can’t do it with these big gloves on, and you don’t have another pair of gloves in your pocket. And rather than go to the tool crib and walk all the way there and all the way back, you just take your gloves off for a quick second, at least start it, and then put your gloves back on. Yah, <u>you see guys do that to speed it up a bit</u>. (P16, Q18)</p>	<p>Basic underlying assumptions Espoused beliefs and values Artifacts (intangible)</p>	<p>Improper PPE use occurs as a response in an effort to minimize the time required to complete a task.</p>
<p>Shortcuts they will definitely <u>walk a shortcut path</u>, if instead of going around. <u>That’s a big one that I have noticed...on all the sites that I have been on</u>. Sometimes they would <u>rather not use their gloves</u> to do a task that’s you know screwing on a bolt or <u>something simple like that</u></p>	<p>Basic underlying assumptions Espoused beliefs and values Artifacts (intangible)</p>	<p>Shortcuts through the plant facilities are utilized instead of using the designated paths, and PPE is not always worn in an effort to simplify tasks that do not appear dangerous.</p>

Participant Quotes	Levels of Attitude Formation Involved	Concept (Subtheme)
<p><u>that they don't feel is any danger.</u> Trying to think of some others that are popular, <u>not wearing hearing protection.</u> (P5, Q17)</p>		
<p><u>...There's a back-in policy in that parking lot for safety reasons.</u> You have to evacuate, you pull out. You know you don't gotta back up. That's kinda why the policies there, and so you don't run somebody over while your backing up trying to get out of there. So <u>they'll pull in and block in about every vehicle and every row by pulling in and parking straight in front of them.</u> (P10, Q17)</p>	<p>Basic underlying assumptions</p> <p>Espoused beliefs and values</p> <p>Artifacts (tangible and intangible)</p>	<p>Unsafe parking habits is another "shortcut" that some personnel enact as a response.</p>
<p>I'll say that the person at that <u>upper level, is feeling either stressed out, overworked,</u> maybe feeling, probably not the right person for the job. If it's actually trickling down that far you know they should be, <u>they should be educated enough and feel confident enough that they can solve the issue without bringing it down to that level.</u> (P4, Q18)</p>	<p>Basic underlying assumptions</p> <p>Espoused beliefs and values</p> <p>Artifacts (intangible)</p>	<p>Stress and overwork behaviours are exhibited by some supervisory/ management personnel; this type of response can be identified and felt by other employees.</p>

**Table 2. Responses to workplace pressures identified by participants.**

Personal characteristics/personality traits and personal physical factors were identified by some participants as additional factors that contribute to risky behaviours in the workplace. In addition, pre-existing injuries/conditions were identified as personal physical factors that can contribute to additional workplace risk amongst some individuals and organizations (P11, Q13).

Personal characteristics/personality traits identified by participants as contributors to risky behaviours in the workplace included personal work ethic (P7, Q17; P2, Q18), high personal risk tolerance (P1, Q17/Q18; P7, Q17/Q18; P12, Q17/Q18), an 'it can't happen to me' mentality (P8,

Q18; P15, Q17), a defiant nature (i.e. defying basic safety rules such as not wearing the required PPE [P14, Q17]), and a willingness to engage in boisterous play (i.e. tossing gear back and forth between two or more workers and/or exhibiting roughhouse behaviours [P14, Q17; P17, Q17]). These personal characteristics/personality traits relate to personality psychology/individual psychological differences; therefore, they are not discussed in further detail in this paper, as these are areas of expertise outside of organizational culture and communication.

The data provided by participants on non-reporting pressures comprised of personnel perceptions and insights obtained through the participants' industry observations and experiences. The observations and experiences identified by participants align with one or more of Schein's three levels/processes that precede attitude formation, which include: 1) artifacts (tangible artifacts such as process and procedural documents, written policies, manuals, posters, etc.; intangible artifacts such as observable behaviours), 2) espoused beliefs and values (ideals and ideologies, goals, values, aspirations, rationalizations, etc.), and 3) basic underlying assumptions (unconscious and taken-for-granted beliefs and values) (2010, p. 24). The data discussed in the subsequent subsections focuses on the following five core factors:

- Workplace pressures from oil and gas companies/site owners, contractor organizations and coworkers/other industry professionals related to safety performance metrics
- Ineffective reporting processes and procedures, particularly for minor incidents
- Lack of trust between workers and their supervisory/management and safety personnel
- Fear of repercussions
- Workplace environments that negatively impact self-image and social perceptions

### **Workplace Pressures from Oil and Gas Companies/Site Owners, Contractor Organizations and Coworkers/Other Industry Professionals related to Safety Performance Metrics**

Some participants had only ever had positive experiences where reporting was always encouraged and no feelings of apprehension were experienced, whereas others had experienced non-reporting pressures due to various factors, including safety performance-related metrics. Although reporting is typically encouraged by management/supervisory and safety personnel, pressures associated with safety performance metrics acts as an influencing factor in the practice of non-reporting. Further, data collected through the interviews suggests that minor incidents (i.e. a small cut or burn versus a serious injury that requires hospitalization) are more likely to go underreported when pressures of non-report related to safety performance metrics are present.

As shown in Table 3, there are many pressures personnel face related to safety performance metrics when deciding to report or not report an incident. Oil and gas companies/site owners, contractor organizations and coworkers/other industry professionals all have the potential to influence an individual worker in the way he/she views safety performance metrics and reporting. Preventing incidents is very important to contractor organizations because their safety performance is a critical factor for the award of future contract work in the oil and gas sector. Contractor organizations on oil sands sites report their safety performance statistics to the respective oil and gas company/site owner, and the oil and gas company/site owner become involved in the investigation process if a serious injury or fatality occurs. A serious injury can result in a contractor being temporarily kicked off site, and there can also be repercussions for supervisory/management personnel. If a contractor's number of incidents is above the industry norm, their contract may become at risk. Further, there is a reduced potential for the organization to be awarded future work by other oil and gas companies. In addition, coworkers and other

industry personnel also influence pressures related to safety performance metrics when they share stories about individuals who are laid off or fired after reporting an incident he/she were involved in. These workplace pressures related to safety performance metrics create barriers for reporting.

Participant Quotes	Levels of Attitude Formation Involved	Concept (Subtheme)
<p>...So <u>eventually those reports stack up and it goes against the company, and eventually the company is gunna be punished</u> because I have <u>seen companies get kicked off of site because of their safety record</u>. Now, are those major incidents that's the reason behind getting kicked off or an accumulation of everything? I don't know. (P3, Q13)</p>	<p>Basic underlying assumptions Espoused beliefs and values Artifacts (tangible and intangible)</p>	<p>There is a perception that an accumulation of safety incidents will result in repercussions for the contractor organization at the judgement call of the oil and gas company/site owner.</p>
<p>...I don't mean to say it in a mean way, this is where <u>you got to remove these people</u> because if you don't, I mean we've already got <u>kicked off site</u> once...(P14, Q11)</p>	<p>Basic underlying assumptions Espoused beliefs and values Artifacts (intangible)</p>	<p>As contractor organizations experience repercussions from oil and gas companies/site owners for poor safety performance, they implement their own repercussion measures to reduce the likelihood of incident reoccurrence, including employment termination.</p>
<p>...<u>I don't report a lot of stuff because I don't want to affect the stats</u> in one way. But that's actually low on my list; it's more so <u>I can handle myself</u>. (P5, Q11)</p>	<p>Basic underlying assumptions Espoused beliefs and values</p>	<p>There is concern that reporting an incident will impact the project contract's safety performance record, which in turn could impact job stability and employment; there is also a motivation by some personnel to handle incidents on their own.</p>
<p>...Less <u>backlash</u>...that would definitely make a difference...That's not just through contractors that through client and everything because <u>it's usually the</u></p>	<p>Basic underlying assumptions Espoused beliefs and values</p>	<p>Oil and gas companies/site owners and contractor organizations play significant roles in developing safety performance standards and</p>

Participant Quotes	Levels of Attitude Formation Involved	Concept (Subtheme)
<p><u>client that does the pushing...</u>(P18, Q19)</p>	<p>Artifacts (intangible)</p>	<p>associated post-incident repercussion measures; “backlash” (repercussions) measures are identified by some workers as a contributing factor to cultures of non-report.</p>
<p>...The <u>safety pyramid</u>, well eventually that <u>banged knee and that cut finger is going to work its way up to a maybe cut off finger or worse so...</u>The way you are <u>working is unsafe</u> because every three days you have banged your knee, your elbow or your finger, and eventually it is going to be your hand. And we don’t want that, <u>so you gotta go</u>. In the employers defence I understand that side of it...(P3, Q11)</p>	<p>Basic underlying assumptions Espoused beliefs and values Artifacts (tangible and intangible)</p>	<p>Heinrich’s (1931) safety triangle/pyramid is leveraged as a guide by some organizations to determine anticipated accident ratios (including the number of minor incidents) and continued employment decisions.</p>
<p>...A lot of encouragement from the <u>the supervision</u> is kind of a big part of it...Especially the older fellows around here who have been around when <u>you’re were not allowed to report anything right</u>, you know especially from them...<u>they’re saying oh they’re just lying</u>. You report that, <u>you’re gone...</u>(P10, Q13)</p>	<p>Basic underlying assumptions Espoused beliefs and values Artifacts (intangible)</p>	<p>Although there is encouragement from supervision to report, some personnel influence other workers and suggest that reporting will result in termination.</p>
<p>Honestly, pre-existing conditions with people that come to site; <u>it’s hard not to let that creep in to your decision</u>. Because you’re... <u>judged on your safety</u>. <u>As a supervisor, as a manager in the company, you are judged on your safety</u>. <u>It’s too bad there could not be some kind of mechanism that people that have pre-existing...bad hips or bad knees...if they reinjure that pre-existing...injury from whenever it happened, that it would not become</u></p>	<p>Basic underlying assumptions Espoused beliefs and values Artifacts (intangible)</p>	<p>If workers with pre-existing injuries reinjure themselves on site, this counts as an incident against the contractor organization.</p>

Participant Quotes	Levels of Attitude Formation Involved	Concept (Subtheme)
<u>a statistic in the safety world against you.</u> (P11, Q13)		

**Table 3. Workplace pressures identified by participants specifically related to safety performance metrics.**

Along with measuring safety statistics, safety theories are used in the industry to influence personnel’s perceptions of safety culture. Three participants referenced Heinrich’s (1931) safety triangle/pyramid (which asserts for every 330 accidents, 300 will not cause an injury, 29 will result in a minor injury, and one incident will result in a major injury/fatality) and how it is leveraged as an artifact to guide organizations on anticipated accident ratios (P3, Q11; P5, Q11; P10, Q10). As a result, as one participant disclosed, there are some supervisory/management personnel who consider the number of minor incidents reported by an individual when making decisions in relation to continued employment (P3, Q11). Moreover, there appears to be a basic underlying assumption amongst some supervisory/management personnel that if a worker is involved in multiple minor incidents, the worker is conducting work in an unsafe manner and more likely to be the cause of a serious incident in the future. This in turn influences personnel when making the decision to report incidents, particularly a minor incident that is easier to hide.

**Ineffective Reporting Processes and Procedures**

High turnover rates in the industry with large numbers of short-term personnel appears to be a factor of consideration when contractor organizations and oil and gas companies/site owners establish safety processes and procedures. Safety processes and procedures are sometimes developed with the basic underlying assumption that individuals who are in the area for the short term, to benefit from the higher wages, are less likely to report than personnel who are



committed to being in the area for longer periods. For example, alcohol and drug testing is not always addressed on a case-by-case basis; currently some organizations will test everyone on the immediate crew when a safety incident occurs, even if some of the crew members were not involved in the incident (i.e. on brake, working on a different task, etc.). Some organizations also require mandatory drug and alcohol tests for minor incidents (i.e. an individual bumping his/her head on a piece of equipment). One participant expressed frustration with this process, not because the individual was worried about the results, but rather, it demonstrated observable behaviour that suggests supervisory/management personnel do not trust their workers (P3, Q7/Q8). Investigatory procedures established by organizations were also identified as a reason why some personnel avoid reporting minor incidents. As shown in Table 4, investigatory procedures (as identified by participants) can involve extensive paperwork, a lengthy interviewing process with multiple follow-up meetings, and the feeling of having a “target on your back.” As such, some policies and procedures lead to a decreased commitment to report. As one participant framed it, “The processes are designed to protect the workers, but they are discouraging to a point where they get sometimes really, really blown out of proportion where the incidents are miniscule” (P6, Q12). This participant also mentioned a previous job that the individual had worked on where there was a documentation-only report process for minor incidents that appeared to encourage reporting of minor incidents. These perceptions align with Reason’s (1997) assertion that “ease of making the report” supports the reporting community’s willingness to report (p. 197).

Participant Quotes	Levels of Attitude Formation Involved	Concept (Subtheme)
...With a <u>25 percent turnover</u> , you know it’s <u>hard to get them to buy in</u> because they’re only here for a short period. It’s <u>more about the</u>	Basic underlying assumptions	High turnover rates on oil sands sites give the impression that some personnel are there for the

<p><u>money</u> for them, and then off they go...(P11, Q15)</p> <p>...I see it more in the leadership role...If the person wants to work and wants to be here and stay longer, he'll own up to more of his mistakes and holds people around him <u>accountable</u> to make his job easier. So it's more just the people who are here to make a <u>quick buck</u> and get out that <u>won't report</u>...P19, Q11)</p>	<p>Espoused beliefs and values</p> <p>Artifacts (intangible)</p>	<p>financial benefits and are less likely to adopt reporting and other safety practices.</p>
<p>... <u>I wouldn't report a small cut</u> or whatever. <u>I take care of myself</u>...(P17, Q20)</p>	<p>Basic underlying assumptions</p> <p>Espoused beliefs and values</p>	<p>Some personnel prefer to not report minor incidents that they believe they can adequately manage on their own.</p>
<p>...A piece flew up under my glasses into my eye, and I couldn't get that out. <u>Drug and alcohol test</u>. So <u>to avoid things like that, you don't report</u>... <u>I had to do two post-incident tests in seven days</u>. I remember I came into work that eighth day and went straight to the boss and said: "Listen I don't do drugs, and you aren't going to catch me doing drugs. You want me to test, I'll come in here every day and test...(P3, Q7)</p> <p>...<u>Next layoff, he's gone</u>. <u>That's another reason why people might not report the minor things</u>. (P3, Q8)</p>	<p>Basic underlying assumptions</p> <p>Espoused beliefs and values</p> <p>Artifacts (tangible and intangible)</p>	<p>To avoid potential repercussions such as mandatory drug and alcohol tests and layoffs, some personnel do not report incidents (particularly minor ones); this avoidance is not necessarily due to substance use; it can be due to a feeling of distrust experienced from their supervisory/ management personnel.</p>
<p>... He cut his hand or something, now <u>he's got to go for a D&amp;A</u> (drug and alcohol test), and he's gotta <u>fill out a big page about what happened</u>. And they make a <u>big deal about the smallest little thing</u>...(P16, Q11)</p>	<p>Basic underlying assumptions</p> <p>Espoused beliefs and values</p> <p>Artifacts (tangible and intangible)</p>	<p>Safety investigations for minor incidents can include extensive procedures such as filling out paperwork as well as drug and alcohol testing.</p>
<p>...I think what detours it is for people who are used to being in the</p>	<p>Basic underlying assumptions</p>	<p>The reporting process (which can include paperwork,</p>

<p>field is...<u>the amount of paperwork</u> that's associated with it, being sequestered and taken aside and <u>having those conversations, having the interviews</u>. The fear of the <u>A&amp;D (alcohol and drug) policy and process...</u>(P12, Q10)</p>	<p>Espoused beliefs and values  Artifacts (tangible and intangible)</p>	<p>investigation interviews and drug and alcohol testing) can be cumbersome; parts of the process can also generate feelings of fear amongst some personnel.</p>
<p>...When somebody actually does report something, thinking that it is gonna be that it's just for information, just for data, they usually seem to <u>go through a lot more than what is told</u> to the...It becomes an incident, then its <u>paperwork and meetings</u>, and they got a <u>target on your back</u>. (P1, Q10)</p>	<p>Basic underlying assumptions  Espoused beliefs and values  Artifacts (tangible and intangible)</p>	<p>Misalignment between what is told to personnel and actual post-incident follow-up actions becomes a non-reporting pressure; it also creates a feeling of having a "target on your back."</p>

**Table 4. Reporting processes and procedures identified by participants.**

**Tangible artifacts as reporting incentives.** Tangible artifacts are sometimes used as incentives to encourage personnel to report. These tangible artifacts are typically items of no significant financial value such as company-branded sweaters, water bottles, etc. As one participant disclosed, during turnarounds where large numbers of personnel are brought on site for a short period of time, personnel are encouraged to report and fill out safety observation forms in exchange for receiving company promotional items (P11, Q15). On another site a participant worked on, the organization put the safety observation forms in a raffle draw to encourage personnel to report (P17, Q15). These small incentives encourage reporting while avoiding the implications of providing financial bonuses that are tied to project safety performance.

Although it is not common practice for oil and gas companies operating sites in the oil sands of Northern Alberta to provide financial bonuses for completing a job safely, a participant disclosed that lump sum contracts might encourage non-reporting (P11, Q15). For example, if an organization is awarded a project on a lump sum basis with an agreed upon project schedule, it

charges a set amount regardless of time and materials involved. In some cases, an organization will tell their personnel that if they complete a job safely and before the scheduled project completion date, they will be paid for the remaining time that the project was originally planned for. For example, if a project was to be completed in 12 weeks and the crew completed it safely in 11 weeks, they would still be paid for the 12 weeks (i.e. the last week is comparable to a paid week off). This kind of arrangement, where there is a tie between safety performance and paid time off due to a shortened schedule, encourages non-reporting. It puts pressure on personnel because workers do not want to be seen as the individual that cost their coworkers paid time off.

**Anonymity and its effectiveness for improving reporting practices.** Many organizations now leverage safety observation forms as an artifact on sites for their personnel to utilize for reporting incidents, as did the participant organization. These forms can be filled out anonymously or with personal identification associated with them. Safety observation forms are also leveraged to recognize and encourage safe work practices. In agreement with Reason (1997), some participants felt “confidentiality or de-identification” (p. 197) from reporting would increase reporting practices, particularly for minor incidents and near misses. However, other participants disclosed they had no concerns in relation to anonymity and reporting. Further, some participants felt anonymity was problematic because it creates a greater chance that the incident will not be understood correctly versus discussing the incident in depth and determining solutions for the problem. Moreover, the importance of reporting anonymity for encouraging reporting practices is subjective in nature.

**Post-incident report feedback.** As identified by Reason (1997); “rapid, useful, accessible and intelligible feedback to the reporting community” (p. 197) contributes to a climate where personnel trust and/or feel motivated to report incidents. Participants in this study further

confirmed these findings as they relate to post-incident report feedback in oil and gas. The majority of participants appreciated receiving feedback and found it helpful. As shown in Table 5, participants identified feedback is most helpful when it is:

- Provided in a timely manner
- Delivered through positive/constructive messaging in a method that is effective for the audience (i.e. discussing during the weekly safety meeting or providing hands-on training workshops versus lengthy procedure documents)
- Discussed in enough depth for personnel to understand the facts surrounding the incident (with exception to confidential details)
- Reaches the whole contractor’s site team and is not limited to select crews (i.e. site-wide safety meetings versus just addressing the crew involved in the incident)
- Focuses on safe work practices to support future prevention of the incident reoccurring, including the identification of trends

Participant Quotes	Levels of Attitude Formation Involved	Concept (Subtheme)
<p>...Sometimes <u>the investigations take so long</u>, and can't really get in to the details, but the problem with that <u>if you don't share the feedback, that's when rumours start...</u>(P12, Q14)</p> <p>...<u>You get rid of all the rumours. Because if don't give them the information, they'll make it up...</u>(P11, Q14)</p>	<p>Basic underlying assumptions</p> <p>Espoused beliefs and values</p> <p>Artifacts (intangible)</p>	<p>Timely feedback is key for avoiding rumours.</p>
<p>I would say <u>positive feedback is the key...</u>(P1, Q14)</p> <p>...When we talk about feedback and sharing that within our own group...I just try to <u>keep it clean and simple and to the point</u>. When</p>	<p>Basic underlying assumptions</p> <p>Espoused beliefs and values</p> <p>Artifacts (intangible)</p>	<p>Feedback through the form of positive/constructive messaging, which is delivered in a method that is effective for the audience, is appreciated by personnel.</p>

you start rolling out huge programs that that are very complicated, you lose the crowd...(P12, Q14)		
... <u>It would help with guys understanding why</u> and not just like being oh that guy reported something...he's gone... <u>They don't say nothing; they just say he's gone.</u> (P16, Q14)	Basic underlying assumptions Espoused beliefs and values Artifacts (intangible)	If personnel do not understand what led to someone being fired after being involved in a safety incident, there is potential for this to influence their fear of reporting.
...For the most part, we try to get that right <u>across the whole site</u> ...(P11, Q14)	Espoused beliefs and values Artifacts (intangible)	Feedback can be leveraged to inform the whole contractor's site team and is not limited select crews; this supports further incident prevention.
...They do give you updates on what happened and if somebody was treated...It's good to know, and you also hear like where they were when it happened. And so <u>if you keep on hearing a certain area, it's a pretty good indication you've got to be really careful if you go to work there</u> ...(P15, Q14)	Artifacts (intangible)	Feedback can be used to prevent additional incidents and to inform personnel of trends.

**Table 5. Effective post-incident report feedback identified by participants.**

Feedback was delivered to the reporting community in various ways. Artifacts that were identified by participants to provide this feedback to the reporting community included safety meetings, daily crew meetings, safety campaigns and safety posters.

Feedback that only informs personnel to not repeat the unsafe act was considered unhelpful feedback. Participants expressed appreciation when supervisory/management and safety personnel demonstrated that the safety concerns that led to an incident were being addressed. Some participants also expressed that they wanted to be provided with validation that there would be a thorough investigation in to the incident versus immediate grounds for dismissal without due diligence inquiry to determine the root cause of the incident (i.e. the injured worker ignored training versus the organization did not provide adequate training and

supervision). Sharing feedback in this manner breaks down the belief that being involved in an injury and reporting it will result in immediate grounds for dismissal.

### **Lack of Trust between Workers and their Supervisory/Management and Safety Personnel**

Participants identified that supervisory/management and safety personnel play a key role in developing the reporting community. This includes the need for supervisory/management and safety personnel to assure workers that the purpose of reporting incidents is to prevent future occurrences versus to fire the person who was injured/report without a fair investigation. This reassurance addresses the basic underlying assumption that reporting an incident will result in job termination or layoff. As one participant expressed, "...give them some validation that their job isn't on the line for reporting would be the biggest one for sure; let them know you want to look at the situation and that they're not going to get fired, and prove it" (P5, Q13). As shown in Table 6, participants identified key characteristics of supervisory/management and safety personnel that contribute to the development of trust amongst personnel:

- Fosters a professional relationship centered on open communication and mutual respect
- Demonstrates approachability, including an open door policy and constructive responses to reports (i.e. not swearing when personnel report)
- Values employee engagement, including engagement that demonstrates personal value to the individual such as one-on-one coaching and mentoring (if required)
- Aligns enacted values with espoused values
- Provides regular reporting encouragement to personnel that focuses on reoccurrence prevention

- Demonstrates commitment to a fair investigation that is evaluated on a case-by-case basis
- Delivers partnered feedback to the reporting community through the appropriate level of transparency, informing personnel what the company is doing to prevent future reoccurrences

Supervisory/management and safety personnel with these above characteristics support the reporting community by creating a safety culture that places value on the human side of safety and humanistic components, which in turn creates a climate of psychological safety.

Participant Quotes	Levels of Attitude Formation Involved	Concept (Subtheme)
<p>... I think a lot of it would be <u>communication with safety officials</u>...the safety guy stopped us and said, "Okay, <u>do you feel safe</u> about everything that you're doing? Is there different ways that you think this should be approached?"...<u>That I actually appreciated</u>. (P15, Q13)</p> <p>...Even the <u>safety...coming around</u>. <u>I love seeing that because I know they are looking out</u>...(P8, Q20)</p>	<p>Basic underlying assumptions</p> <p>Espoused beliefs and values</p> <p>Artifacts (intangible)</p>	<p>Safety personnel play a key role along with supervisory/management personnel in developing a safe psychological working environment.</p>
<p>I think <u>number one, communication</u>, to have communication amongst your coworkers and everyone around you, even other trades that are working around you. I think that is a huge part of...<u>creating that trust and that bond amongst your peers</u>...and <u>treating people with respect</u>. And you'll get that right back...(P7, Q13)</p>	<p>Basic underlying assumptions</p> <p>Espoused beliefs and values</p> <p>Artifacts (intangible)</p>	<p>Fostering a professional relationship centered on open communication and mutual respect supports the development of trust between workers and supervisory/management and safety personnel.</p>



Participant Quotes	Levels of Attitude Formation Involved	Concept (Subtheme)
<p>...Maybe the reaction...Let's say one of my guys drops something and I go in to tell my boss. When I tell him, the reaction is usually like "oh XXXX." So maybe <u>if that reaction was a little bit different it would encourage people to approach a little differently, a little more.</u> (P1, Q20)</p> <p>...<u>We tell all of these people all of our doors are always open...</u>(P13, Q13)</p>	<p>Basic underlying assumptions</p> <p>Espoused beliefs and values</p> <p>Artifacts (intangible)</p>	<p>Approachability, including an open door policy and constructive responses to reports (i.e. not swearing when personnel report), helps workers believe that human safety is valued and reporting is encouraged.</p>
<p><u>I like to be one-on-one with all my crew, and my peers, and my coworkers...always keeping...their spirits up.</u> (P7, Q11)</p> <p>...The foreman took the group and took them <u>one by one.</u> And sat down with them, and asked them that question: "How would you feel if something happened? Could you, <u>would you be able to come and talk to me?</u>" (P14, Q13)</p>	<p>Basic underlying assumptions</p> <p>Espoused beliefs and values</p> <p>Artifacts (intangible)</p>	<p>Effective engagement, such as one-on-one coaching and mentoring (if required), demonstrates personal value to the individual.</p>
<p>...When you report stuff, they say: "Oh <u>we want you to report everything and nothing's going to happen.</u>" But then you see a guy report something and then <u>something happens...it scares a guy...</u>(P16, Q19)</p>	<p>Basic underlying assumptions</p> <p>Espoused beliefs and values</p> <p>Artifacts (intangible)</p>	<p>Misalignment between espoused values and enacted values negatively impacts relationships between workers and their leadership personnel.</p>
<p>...<u>They encourage you to report this so that...they can punch it in and factor all these...injuries in, so we can work on not making it happen again...</u>That's what I encourage to my workers.</p>	<p>Basic underlying assumptions</p> <p>Espoused beliefs and values</p> <p>Artifacts (intangible)</p>	<p>Regular reporting encouragement that focuses on reoccurrence prevention helps communicate the message that reporting is indeed encouraged and is used to prevent incidents.</p>
<p><u>Do an investigation, and if it isn't an actual accident, well it's not your fault, well you're not going to run the guy off site...</u><u>Companies have to prove themselves, if they</u></p>	<p>Basic underlying assumptions</p> <p>Espoused beliefs and values</p>	<p>Evaluating incidents on a case-by-case basis demonstrates commitment to a fair investigation.</p>

Participant Quotes	Levels of Attitude Formation Involved	Concept (Subtheme)
<u>don't, people are going to be a little nervous of reporting incidents or accidents.</u> (P2, Q13)	Artifacts (intangible)	
... I think the more...info you can give out to the people and try to be as <u>transparent</u> as you can, I mean there's stuff that you can't tell them...but... I just go back to...what would I want if I was...still...on the tools... <u>Would that be something I'd wanna know?</u> <u>Well yah, I'd wanna know...</u> (P11, Q14)	Basic underlying assumptions  Espoused beliefs and values  Artifacts (intangible)	Delivering partnered feedback to the reporting community through the appropriate level of transparency informs personnel what the company is doing to prevent future reoccurrences while maintaining applicable confidentiality.

**Table 6. Characteristics of supervisory/management and safety personnel identified by participants that contribute to the development of trust and encourage reporting.**

**Fear of Repercussions**

A predominant pressure identified with non-reporting practices involved witnessing personnel being laid off or fired who reported an incident, including minor incidents. Past history of what has been personally experienced, witnessed and/or heard as stories from other workers prompts the perception that reporting will lead to termination or layoff amongst some personnel. However, some participants had been involved in incidents and reported them and were not laid off or let go. Others had either witnessed or personally experienced being laid off or fired after reporting an incident that, according to the participant (P16, Q20), was not caused by the individual's unsafe actions. When a worker who is involved in an incident has a negative experience with a company (i.e. experiences layoff or job termination), these stories are then often shared with other workers, which reinforces the perception that personnel's jobs are at risk if they do report an incident. Moreover, a fear of repercussions is being created by the *perception* that reporting will lead to job termination or layoff. To avoid the anticipated repercussions

caused by the industry perception that reporting will result in job termination or layoff, reporting of incidents is sometimes avoided, particularly in the case of minor incidents.

Fear of repercussions and the observable behaviours associated with this emotion are discussed in detail in this subsection. As demonstrated in Table 7 by the examples of participant observations and experiences, perceptions are formed by personnel when they personally experience, witness and/or hear of situations where individuals have reported incidents and then receive verbal or written warnings, are suspended without pay, laid off or fired from a company. One participant talked about seeing workers show visible signs of being scared/nervous to report, including an individual who was almost in tears while reporting a minor incident because the worker thought he was going to lose his job because of the incident (P1, Q12). According to three participants (P1, Q7; P5, Q12; P10, Q12), this fear of repercussions was greater when they were new to their career and/or reported for the first time due to the uncertainty of reporting outcomes. For example, new personnel are sometimes guided by older generations/more seasoned personnel to not report on the basis that reporting will result in job termination or layoff. In some instances, participants also spoke of outcomes where personnel were fired or laid off regardless if the individual was at fault or not. When observable behaviours such as these are shared as stories in the industry, witnessed or experienced by an individual, fear associated with reporting can develop. However, personnel do not always know the full story of why a worker is laid off or fired post incident/report (i.e. they reported late or knowingly engaged in an unsafe act, such as not using a harness for a job that required one). As one participant disclosed, the individual had reported incidents throughout the worker's career and had never been fired (P2, Q11). This example demonstrates that this perception of reporting resulting in certain job termination or layoff is not true in all cases. This perception that suggests all reported incidents

will result in job termination or layoff, exacerbates the fear of reporting. Stories such as this are important for shifting the perception that reporting an incident will lead to certain job termination or layoff, breaking down the barrier of belief that everyone who is involved in an incident and/or reports an incident will be laid off or fired.

Participant Quotes	Levels of Attitude Formation Involved	Concept (Subtheme)
<p>...Paper work, meetings, <u>finger pointing</u>... when I started as an apprentice <u>the older fellows would say you better lose a limb before you report something around here</u>... But it seems to be changing...I haven't seen any of that here this time around...I'd say <u>it is a pretty predominate culture that you don't want to say anything (unless) you absolutely have to</u>...(P1, Q7)</p>	<p>Basic underlying assumptions Espoused beliefs and values Artifacts (intangible)</p>	<p>New personnel learn from some seasoned workers that reporting is not encouraged and leads to repercussions and "finger pointing."</p>
<p><u>Scared</u>, scared that that they might lose their job because years ago, and it was <u>years ago</u>, if you got hurt, they waited for you to get better and <u>first layoff you were gone</u>. (P14, Q10)</p>	<p>Basic underlying assumptions Espoused beliefs and values Artifacts (intangible)</p>	<p>The industry's history of laying people off after reporting an incident continues to create fears about job security.</p>
<p>...If a guy goes <u>he cuts his finger and reports it</u>, and it's an incident...it's <u>that guy is usually next to go</u>. (P1, Q10)</p>	<p>Basic underlying assumptions Espoused beliefs and values Artifacts (intangible)</p>	<p>When personnel witness other workers being fired post-incident, it reinforces the perception that the same outcome might be applicable to them if they report.</p>
<p>...<u>You get nervous to report something for sure</u>...I remember I've had people who work for me that stuff would happen and when they were coming to tell me that it happened you could tell they were <u>visibly scared</u> and like didn't know what was going to happen and worried for their job... when he told me he <u>was</u></p>	<p>Basic underlying assumptions Espoused beliefs and values Artifacts (intangible)</p>	<p>Personnel who fear losing their jobs due to reporting demonstrate physical signs of fear, including nervousness, being scared and crying (the approach of the personnel investigating a safety incident influence this fear response).</p>

Participant Quotes	Levels of Attitude Formation Involved	Concept (Subtheme)
<p><u>almost in tears thinking he was going to lose his job over it right</u>, so that seems to be the idea that everyone has... (P1, Q12)</p> <p>...One guy told me: “I literally <u>left the room crying</u>.” He said: “I don’t cry, but he said: “Being <u>drilled at</u>, what I was asked, wasn’t right”...(P14, Q14)</p>		
<p>...There was <u>no guardrail</u> and I went right off over the end...<u>I had to go to the hospital and then I was on light duty for a couple of weeks</u>. And then soon as I was off light duty, they were like oh your <u>laid off</u>...(P16, Q20)</p>	<p>Basic underlying assumptions</p> <p>Espoused beliefs and values</p> <p>Artifacts (intangible)</p>	<p>Although incidents are not always the fault of the worker, there can still be a tendency to blame the worker; when a worker has this experience, it reinforces the fear of repercussions.</p>
<p>...I’ve <u>had incidents and reported them</u> and Yah, I’m <u>still here</u>. (P2, Q11)</p> <p>(Speaking of the participant organization)...I’ve <u>never seen it yet where someone actually reported something and they got in trouble over it</u>...it’s not all employers that actually do that. (P4, Q7)</p>	<p>Basic underlying assumptions</p> <p>Espoused beliefs and values</p> <p>Artifacts (intangible)</p>	<p>The perception that reporting an incident will result in certain job termination or layoff is not true in all cases; this false perception that suggests all reported incidents will result in job termination or layoff, exacerbates the fear of reporting.</p>
<p>(Speaking of the participant organization)...I can definitely say they don’t look at it as the person; the first thing <u>they do is they look at the situation. And they assess the situation. Some of the other places I’ve worked, definitely they look at the person, even if it wasn’t their fault</u>. (P5, Q12)</p>	<p>Basic underlying assumptions</p> <p>Espoused beliefs and values</p> <p>Artifacts (intangible)</p>	<p>Tendencies to blame the worker versus assess the situation vary from organization to organization; the organizational predominance to blame the worker reinforces the perception that reporting will result in the worker being blamed.</p>
<p>...Companies call it a zero tolerance...there’s a lot things that you see, just <u>small, tiny, little infractions you see people get fired over it</u>, and <u>that is a huge</u>,</p>	<p>Basic underlying assumptions</p> <p>Espoused beliefs and values</p>	<p>When personnel witness other workers being fired for minor incidents, they give advice to other workers, suggesting to not report minor incidents.</p>

Participant Quotes	Levels of Attitude Formation Involved	Concept (Subtheme)
<u>that's huge on people saying: "Well shut up..."</u> (P15, Q9)	Artifacts (intangible)	
<p>...<u>You need supervision to be able to be approachable...</u> and I understand there's situations they can't be. But safety, yes, you have to be approachable.</p> <p>...Definitely within the craft level, it seems to there still a little bit of <u>fear and hesitation</u> around that (reporting). I think it stems from the type of <u>safety advisors and safety officers that people traditionally think of...</u>(P12, Q9)</p>	<p>Basic underlying assumptions</p> <p>Espoused beliefs and values</p> <p>Artifacts (intangible)</p>	<p>Supervisory/management and safety personnel leadership styles influence the existence/nonexistence of reporting fears amongst personnel.</p>
<p>...I don't believe of getting rid of the person immediately. I'd rather see them stay for a bit so you can teach them instead of shifting them to another company and saying it's your problem cuz that's what we do in this industry. <u>We just fire you, off you go hired by another company.</u> He's got bad taste in his mouth about the company he left, <u>not knowing what he did wrong.</u> <u>Before we fire people, we should train them...</u> (P19, Q16)</p>	<p>Basic underlying assumptions</p> <p>Espoused beliefs and values</p> <p>Artifacts (intangible)</p>	<p>When personnel are fired post-incident without feedback/training, they move on to the next job with the same unsafe habits and a new fear of reporting.</p>

**Table 7. Observable behaviours identified by participants that contribute to a fear of reporting.**

As discussed in the reporting processes and procedures subsection, investigatory procedures vary from company to company, with some organizations evaluating incidents fairly on a case-by-case basis whereas others do not. The way a company handles incident investigations contributes the absence or presence of a fear of repercussions amongst personnel. As one participant disclosed, the participant organization did a good job assessing the situation but that "Some of the other places I've worked, definitely they look at the person, even if it

wasn't their fault" (P5, Q12). As another participant framed it, "...Companies have to prove themselves, if they don't, people are going to be a little nervous of reporting incidents or accidents" (P2, Q13). For example, if an incident takes place, a fair investigation should follow with repercussions then determined. In line with this, termination for serious unsafe acts (particularly in the instance where other workers were put in potential harm) was expressed as a fair repercussion by some participants, aligning with Reason's (1997) assertion that "indemnity against disciplinary proceedings—as far as it is practicable" (p. 197) is beneficial in supporting the reporting community. There needs to be a balance where both the personnel and organization are considered. During the investigatory process, some participants identified the importance of an organization evaluating their own contribution to the situation (i.e. if the organization supplied adequate training and provision of a safe working environment). Moreover, to address fear of repercussions, organizations need to commit to investigating the overall system and not just the worker's actions.

The participant organization was credited for its commitment to coaching personnel, correcting unsafe acts, and helping workers learn versus implementing straight disciplinary actions. However, as a participant disclosed, some companies fire personnel without explaining how the worker should have performed the work safely (P19, Q16). In instances like these, the individual does not learn and starts their next job with the same unsafe work habits. They also bring with them a new fear of reporting. This participant asserted that time should be spent educating these individuals in order to help them learn safer work practices. As other participants suggested, organizations need to demonstrate that they provide continued support to their injured personnel who are not found at fault, as well as share information about incidents so that their personnel understand the facts. As another participant disclosed, the individual found talking to

personnel about the incident and providing feedback, versus suspending them without pay, led to gaining their trust (P4, Q16). In turn, this relationship of trust encourages reporting and safer work practices.

### **Workplace Environments that Negatively Impact Self-Image and Social Perceptions**

In addition to non-reporting pressures, there appears to be significant pressures related to self-image preservation, social perceptions and bullying/ostracism on oil sands sites according to some participants. Pressures of self-image preservation, social perceptions, and bullying/ostracism identified by participants are shown in Table 8. As one participant disclosed, individuals are sometimes singled out for incidents/injuries and their performance in relation to being prone to injury (P6, Q12). As another participant suggested, individuals dislike the negative connotation that comes with being involved in an incident or reporting against a worker that has been involved in one (P12, Q12). Further, another participant spoke of workers wanting to prove themselves, with some individuals taking on extra risk such as executing a job alone when requested to do so by supervisory/management personnel (P19, Q17/Q18). As this participant explained, on some sites, personnel are occasionally relied on to perform jobs on their own. This participant had worked on a different site where fatalities were the result of personnel working alone. These feelings and situations described by the participants are correlated with self-image preservation and social perceptions. Self-image preservation can be seen as a basic underlying assumption of how an individual feels one must maintain his/her image. Social perceptions can be seen as observable behaviours as well as espoused values and beliefs that are upheld by a group of people; social perceptions form part of an individual's work community and have an influence on an individual's self-image. As such, an individual's coworkers, as well as site-wide personnel working for other organizations and industry professionals working on



other sites in the area, contribute to the development of social perceptions in the oil sands that, in turn, influence self-image.

A participant spoke of a time where the individual did not want to report an incident that required hospitalization; however, the individual did report it when the worker was encouraged by others (P17, Q12). Moreover, this was an incident where the individual felt safe to report because social permission was granted, allowing the worker to protect self-image. The participant also explained how some personnel who report minor incidents are teased and made fun of by other workers, which in turn discourages reporting of future minor incidents (P17, Q20). This same participant spoke of two separate serious injuries (participant and another individual) that were not reported because the individuals relied on their employment, did not want to involve the company, and did not want to look weak. In relation to this last point, the participant disclosed that reporting can sometimes be associated with an individual looking weak because the person got hurt, centering on a “guys don’t cry” societal perspective (P17, Q11). All of these examples demonstrate how self-image and social perceptions are influenced on a work site.

Participant Quotes	Levels of Attitude Formation Involved	Concept (Subtheme)
<p>Whether you like it or not, <u>we do get singled out for incidents and injuries and performance based on your personal performance.</u> Whether you’re a <u>good worker, bad worker, or prone to get injured...</u>(P6, Q12)</p>	<p>Basic underlying assumptions</p> <p>Espoused beliefs and values</p> <p>Artifacts (intangible)</p>	<p>Some workers experience being singled out for safety incident involvement and personal performance, which in turn influences self-image and social perceptions.</p>
<p>...I can only imagine if someone isn’t in the regular conversations that we have how apprehensive they would be to bring it forward because you don’t know what the follow ups gunna be and <u>you don’t want to be associated with it</u></p>	<p>Basic underlying assumptions</p> <p>Espoused beliefs and values</p> <p>Artifacts (intangible)</p>	<p>A negative connotation is sometimes associated with personnel who are involved in incidents and reporting; this negative connotation impacts self-image and social perceptions.</p>

<p>either...If it is something that there's gunna be a <u>negative connotation</u> attached to it a lot of people...don't wanna go down with that ship...<u>that's why people would turn and kind of look away.</u> (P12, Q12)</p>		
<p>...It's <u>working alone</u> or somebody relies too much on a really good employee to go do something and they'll send them to do a job alone without explaining the rules and regulations of working alone...They feel like, oh, I can <u>prove this to somebody.</u> It's almost <u>one male trying to outdo another one...</u>(P19, Q17/Q18)</p>	<p>Basic underlying assumptions  Espoused beliefs and values  Artifacts (intangible)</p>	<p>Some personnel feel pressure to perform jobs that require them to take on additional risk by working alone in order to preserve their self-image and social perceptions.</p>
<p>...I'm not <u>gunna reporting it...</u> <u>he's like, "go report it,"</u> so I did...(P17, Q12)</p>	<p>Espoused beliefs and values  Artifacts (intangible)</p>	<p>Personnel who are encouraged by other industry professionals and coworkers to report incidents do not feel as though their self-image will be threatened by reporting.</p>
<p>...He got a good bruise on his leg...and he <u>reported it</u> and all the older guys <u>teased him</u> for forever...but <u>he never reported nothing after that</u> so I don't know if he <u>never got hurt or just got scared to report stuff...</u>(P17, Q20)</p>	<p>Basic underlying assumptions  Espoused beliefs and values  Artifacts (intangible)</p>	<p>Some personnel tease other workers for reporting minor incidents; teasing could impact self-image and a willingness to report future incidents.</p>
<p>...<u>They don't want report things</u> because they don't want other people to think they are XXXXXXX. I guess at the end of the day that's what it comes down to; <u>they don't want to seem weak...</u>that's how it is in society...<u>Guys don't cry; they don't get hurt.</u> (P17, Q 11)</p>	<p>Basic underlying assumptions  Espoused beliefs and values  Artifacts (intangible)</p>	<p>Societal perspectives that reinforce strength as a value and discourage weakness amongst men influence reporting decisions when a perceived threat to self-image and social perceptions exist.</p>
<p>...A <u>foreman...he ran around and told everybody.</u> By the time it got back to the worker, the worker had to leave. <u>He got so picked on</u> in the plant, and it was a personal issue...(P14, Q13)</p>	<p>Espoused beliefs and values  Artifacts (intangible)</p>	<p>Supervisory/management personnel can influence social perceptions dependent on how they handle personal issues of their workers.</p>

<p>...But out here, yah between incidents and bullying, I believe too that if they had to really investigate a lot of incidents, I can tell you <u>it would lead back to bullying</u>...Because this guy was different; he had his different beliefs. And they really went at him. And he just couldn't take it. <u>They isolated him; he got isolated. From everybody...</u> (P14, Q18)</p>	<p>Basic underlying assumptions  Espoused beliefs and values  Artifacts (intangible)</p>	<p>Bullying and ostracism are workplace pressures present on oil sands sites in Northern Alberta.</p>
<p>...<u>One of the guys was just bullying him</u>, and I told the foreman, <u>I told supervisors</u>: “This has got to stop, this is not right. This guy is getting stressed out.” So they pulled the young fellar in; they talked to him. He told them to talk to guy: “yah, I’ll lay off”...He never showed up for the three days. And a foreman called to find out what happened. And they found out he <u>committed suicide</u>. Yah, because of the young fellar. And that stuff out here on <u>all these sites</u> happens. <u>Bullying, we have it in office, we have it out in the field...</u>(P14, Q18)</p>	<p>Espoused beliefs and values  Artifacts (intangible)</p>	<p>Bullying is being experienced on multiple oil sands sites, both in the office and in the field. Some supervisory staff do not know how to effectively address and mitigate these situations when reported. In some instances, workplace bullying is resulting in suicide.</p>

**Table 8. Pressures of self-image preservation, social perceptions, and bullying/ostracism identified by participants.**

Another participant spoke of a time when the individual witnessed a foreman spreading a rumour about a worker to other site personnel, which resulted in the worker being picked on (P14, Q13). This incident demonstrates a supervisory personnel using his/her position to influence social perceptions. In turn, the individual’s self-image was impacted. Further, when behaviours such as these are exhibited by supervisory/management personnel, team morale is negatively impacted. These kinds of behaviours enacted by supervisory/management personnel create barriers for reporting; workers lose trust in their supervisory personnel and are less likely to disclose incidents that influence social perceptions and threaten self-image.

Bullying and ostracism are unfortunate factors that are present on some work sites in Northern Alberta. Participant 14 also spoke of a time when the individual was working on a different site north of Fort McMurray where another worker performed dangerous acts against the individual and other workers using heavy equipment; the dangerous acts performed by the perpetrator resulted in one person ending up in the hospital (P14, Q18). The participant reported the dangerous act; however, nothing was done to address the dangerous behaviour because the perpetrator had a relationship with supervision. The participant was also told by a colleague that this dangerous act was a repeat offence. Another worker had also reported a similar dangerous act carried out by the perpetrator, and again, nothing was done by supervision to address the problem. According to the participant, six individuals (including the participant), quit after this incident. As a result of incidents such as this, dangerous behaviours against other workers are not addressed, and in turn, individuals feel discouraged to report these acts. In addition, the participant had witnessed incidents of older women being made fun of and bullied on oil sands sites. This participant also spoke of an incident on another site where a worker committed suicide because the individual was bullied. In this case, the participant reported the bullying to supervision, who spoke to the perpetrator; however, there were no repercussions. Further, this participant spoke of another person who committed suicide at yet another site. The individual who committed suicide was ostracised because of the individual's religious beliefs; other workers would not sit at the same table with this individual or would leave the table if the individual sat down at a table where other workers were already sitting. Unfortunately, acts of bullying and ostracism are not always reported because individuals feel the situation will not improve or will become worse.

### Discussion

In line with Gadd and Collins' (2002) assertion that suggests subcultures create an absence of safety culture cohesion, it can be concluded that cultures of non-report present themselves as subcultures which are existent because some work groups but not others, and some personnel within the respective work group but not others, engage in non-reporting practices. Yet, some individuals are under the perception that all personnel report. For example, one participant discussed that reporting is encouraged by the participant organization, and that to the participant's knowledge, all incidents do get reported (P10, Q9). This is an important perception to acknowledge, as the perception that all incidents are reported has been proven incorrect by the data disclosed by other participants. In order to address and solve problems of non-reporting pressures and practices, personnel and organizations must first acknowledge the existence of cultures of non-report.

Drawing on the results, the five core factors that contribute to the presence of a culture of non-report within organizations that provide construction and technical services in the oil and gas sector of Alberta are as follows:

- Workplace pressures from oil and gas companies/site owners, contractor organizations and coworkers/other industry professionals related to safety performance metrics
- Ineffective reporting processes and procedures, particularly for minor incidents
- Lack of trust between workers and their supervisory/management and safety personnel
- Fear of repercussions
- Workplace environments that negatively impact self-image and social perceptions

These findings support the study's predictions that asserted a relationship exists between the presence of a culture of non-report and a deficiency of humanistic components (beliefs, values, human welfare, dignity, etc.) and the human side of safety, which results when safety performance metrics are valued over human safety.

Safety cultures need to center on providing personnel with environments that value humanistic components, acknowledging the human side of safety versus solely focusing on physical safety (i.e. proper PPE, training, etc.) in order to address cultures of non-report. A culture of non-report exists when humanistic components and the human side of safety are not integrated as organizational values in to safety culture and supportive organizational messaging (artifacts, policies, processes, reporting procedures, training, espoused values, etc.). Furthermore, a culture of non-report, which is present due to a deficiency of humanistic components and the human side of safety, produces a work environment conducive to workplace injuries and unethical acts, such as non-reporting practices. As such, the following definition is proposed for cultures of non-report:

*When safety performance metrics are valued over human safety, attitude formation in relation to reporting values and practices are influenced, leading to non-reporting practices amongst some members of the employee team/group. A culture of non-report presents itself as a subculture of safety culture when there is a deficiency of humanistic components and the human side of safety (elements that do not fit within the traditional physical safety model [i.e. focusing solely on preventing injuries versus supporting the overall wellbeing of personnel]), which results when safety performance metrics are valued over human safety. Factors that contribute to cultures of non-report include: workplace pressures from oil and gas companies/site owners, contractor organizations*

*and coworkers/other industry professionals related to safety performance metrics; ineffective reporting processes and procedures, particularly for minor incidents; lack of trust between workers and their supervisory/management and safety personnel; fear of repercussions; and workplace environments that negatively impact self-image and social perceptions.*

The five core factors and their influence on cultures of non-report can be better understood by viewing them through Schein's (2010) three levels of attitude formation, which include: 1) artifacts (tangible artifacts such as process and procedural documents, written policies, manuals, posters, etc.; intangible artifacts such as observable behaviours), 2) espoused beliefs and values (ideals and ideologies, goals, values, aspirations, rationalizations, etc.), and 3) basic underlying assumptions (unconscious and taken-for-granted beliefs and values) (2010, p. 24). These five factors will be discussed in greater detail in the subsequent subsections. In these subsequent sections, recommendations are made for increasing trust and/or motivation to report safety incidents in the workplace, leading to benefits for employees, contractor organizations, and oil and gas companies/site owners alike.

### **Addressing Workplace Pressures Related to Safety Performance Metrics**

In Alberta's oil and gas sector, the industry standard to evaluate contractor safety performance is an organization's Total Recordable Injury Rate (TRIR), which measures an organization's safety performance by calculating its Occupational Safety and Health Administration (OSHA) recordable incidents (incident that is serious enough to warrant off-site medical attention requiring hospitalization [i.e. broken leg, shard of metal in an eye, etc.]), multiplying the number of recordable cases by 200,000, and then dividing by the number of workhours of the company. It is common practice for oil and gas companies/site owners to

inquire about TRIR and other incident rates (i.e. first aids) when they solicit an Expression of Interest (EOI), a Request for Information (RFI), or a Request for Proposal (RFP) from multiple competing contractors in a bidders evaluation process for a project opportunity. If an organization's TRIR is above the industry standard, it is unlikely a company will be awarded work. Moreover, a contractor organization's TRIR plays a critical role in a company's ability to preserve their reputation, win work, and succeed in the industry. As such, TRIR is closely tied to a company's survival in the oil and gas industry of Alberta.

Key to addressing cultures of non-report, oil and gas companies/site owners and contractor organizations need to understand their role in influencing cultures of non-report by tying contracts to safety performance metrics. This is important because as asserted by Westrum (2004), "Culture shapes an organisation's response to problems." When contracts are tied to safety performance metrics, an oil and gas company/site owner puts pressure on the contractor organizations working for them, requiring the contractor organizations to maintain good safety performance/reduce their number of safety incidents in order to protect the continuation of current project contracts, as well as the award of additional contracts for future projects. These actions of oil and gas companies/site owners can be tied to the basic underlying assumption that if they put measures in place to control the safety outcomes of contractor organizations, less incidents will occur. Contractor organizations respond to these pressures from the oil and gas company/site owner (client to the contractor organizations) by leveraging their supervisory/management and safety personnel to maintain good safety performance/reduce their number of safety incidents. Supervisory/management and safety personnel of the respective contractor organization then put pressure on their workers to maintain good safety performance/reduce the number of safety incidents. Moreover, espoused safety values and



beliefs are communicated to personnel and influence attitude formation when organizations communicate the importance of safety performance metrics through its safety program, processes and procedures. Personnel then talk about workplace pressures and the observations they have made related to safety performance metrics with their coworkers and other industry professionals (i.e. personnel working for other contractor organizations on the same site, as well as other oil sands sites in Northern Alberta).

Through these conversations, some personnel encourage reporting; however, some personnel discourage reporting and share stories of times where reporting an incident resulted in: layoffs or job terminations of one or more workers, contractor organizations receiving temporary work suspensions, or project contracts being terminated indefinitely. These stories communicate espoused values and beliefs that influence reporting practices of others through the observable behaviours (intangible artifacts) of either reporting or not reporting. As a result of attitude formation, the individual worker's decision to report or not report an incident is influenced by: pressures from the oil and gas company/site owner, pressures from the supervisory/management and safety personnel of the contractor organization he/she works for, and pressures from coworkers and other industry professionals. This relationship of workplace pressures is demonstrated by Figure 1.



**Figure 1. Workplace pressure application on the individual worker.**

In summary, this workplace pressures model can be likened to a chain reaction. The oil and gas company/site owner sets their safety expectations and make it known to the contractor organizations that the continuation of a project contract is tied to good contract safety performance; the supervisory/management and safety personnel of the contractor organization then set their safety expectations and make it known to their personnel that the continuation of the project contract, and therefore job stability, is tied to good contract safety performance. As a result, workers and other industry professionals experiencing these pressures on site share their insights on reporting with other personnel. When this model is enacted, centralization (control) is valued over decentralization (autonomy) and teamwork (cooperation), and we can begin to understand the pressures felt by the individual worker when deciding to report or not report and incident. Moreover, the oil and gas company/site owner, contractor organizations

(supervisory/management and safety personnel) and coworkers/other industry professionals all play strong influencer roles on the individual worker when he/she is deciding to report or not report an incident. In addition, other external pressures such as family, health, finances, etc. also play an influencing role on individual's decisions surrounding reporting practices.

These workplace pressures impact an individual's level of employee engagement, which in turn impacts the worker's attitude in relation to safety, reporting, and personal commitment to employee retention with his/her employer. However, if this workplace pressures model is inverted, a solution-based approach is created that leverages oil and gas companies/site owners as the foundation for solving workplace pressures related to non-reporting practices. If oil and gas companies/site owners and contractor organizations move away from processing information through pathological and bureaucratic tendencies, these organizations are then able to create generative work environments by adopting Westrum's (2004) inquiry process that focuses on proactively finding the root cause problem that is attributing to incident occurrence in the first place. This inverted model that supports the individual worker in decision making surrounding reporting practices is demonstrated by Figure 2.



**Figure 2. Model of workplace support focused on human safety.**

With oil and gas companies/site owners as the foundation for this model, these organizations must first understand the implications that an overemphasis of safety performance metrics has on reporting practices. From this understanding, oil and gas companies/site owners and contractor organizations can work together to create stronger safety cultures that value human safety over safety performance metrics. Moreover, with the oil and gas companies/site owners understanding their fundamental role in the development of a strong site safety culture, oil and gas companies/site owners and contractor organizations can work together to support enacted safety values that are in alignment with espoused safety values. With personnel of contractor organizations observing alignment between espoused safety values and enacted safety values from both the oil and gas company/site owner and contractor organization, it is anticipated that stories and observations of undue layoffs and job terminations caused by

reporting an incident would be lessened and begin to be replaced with additional reporting encouragement, particularly for minor incidents. The individual worker, who is now the head of the model, then becomes supported by the positive influencers that value human safety over safety performance metrics. This model represents the application of Keidel's (1990; 1995) triangular design framework where decentralization (autonomy) and teamwork (cooperation) are valued over centralization (control). As a result, attitude formation of the individual worker changes in relation to employee engagement and reporting practices, and in theory, reporting increases. This approach that puts the wellbeing of workers at the head of the model would need to be tested in order to determine if this theory would support stronger safety cultures in the oil and gas industry, providing a framework that centers on the human side of safety/humanistic components and leads to stronger reporting cultures amongst contractor organizations providing construction and technical services.

**Minor incidents and safety performance pressures.** As one participant disclosed, the individual is seeing less major injuries as safety practices have improved over the years, and more minor incidents are now being reported (P11, Q17). As a result, oil and gas companies/site owners are starting to put more emphasis on evaluating contractor safety performance based on first aids. (An example of a minor first aid would be a worker obtaining a small cut or burn on site and going to an on-site medical centre to get a band aid.) Although there is not currently an industry standard for first aids, due to there being fewer major injuries occurring, some oil and gas companies/site owners are starting to look at first aid rates through the bidders evaluation process. This evaluation of first aids by oil and gas companies/site owners further discourages the reporting of minor incidents.

Instead of valuing low first aid numbers, oil and gas companies/site owners should consider the benefits of valuing high reporting of minor incidents. With oil and gas companies/site owners encouraging the reporting of minor incidents, contractor organizations will in turn encourage their personnel to report more. Increased reporting of minor incidents provides oil and gas companies/site owners and contractor organizations alike with additional knowledge of unsafe conditions and unsafe work behaviours, including the identification of solutions required to prevent incident reoccurrence. Moreover, oil and gas companies/site owners and contractor organizations would benefit from working together to shift the view that a high number of minor incidents reported is negative thing. Instead of viewing high numbers of reported minor incidents as a component of a poor safety culture, oil and gas companies/site owners and contractor organizations could shift safety culture perspectives in the industry to start viewing high numbers of reported minor incidents as a positive safety culture attribute that demonstrates personnel are actively engaged in the safety observation and reporting process. If more minor incidents are reported, it is more likely that the incident causes will be addressed, solutions will be created, and future reoccurrences will be prevented.

**Evaluating pre-existing injuries in relation to safety performance metrics.** Oil and gas companies/site owners and contractor organizations would also benefit from working together to develop processes and procedures for reporting reinjured pre-existing injuries/conditions. It is a common practice that if a worker reinjures a pre-existing injury/condition while they are on site, this injury counts against the contractor organization's project safety record. This creates a barrier for personnel with pre-existing injuries/conditions in the recruitment stage; some supervisory/management personnel will consider pre-existing injuries/conditions as a reason to not hire an individual if disclosed during the recruitment

process. This also creates a barrier for reporting if personnel believe their pre-existing injury/condition will be taken in to consideration during the incident investigation (i.e. if they are more likely to be laid off post-incident because management fears another re-injury could occur, which would further impact their safety record). Further, personnel who are concerned about their organization's safety record might not report a re-injury of a pre-existing injury/condition out of fear of its potential impact on the contract. Procedures should be established between oil and gas companies/site owners and contractor organizations to determine if a re-injured pre-existing injury/condition that has been disclosed by a worker should rightfully count towards the contractor organization's safety record. It is anticipated that this would encourage additional reporting of reinjured pre-existing injuries/conditions.

**Heinrich's 1931 safety triangle/pyramid theory and its impact on reporting.** Three participants mentioned Heinrich's safety triangle/pyramid theory and how it is used as a guide to anticipate when a major injury or fatality will occur. The safety triangle/pyramid in Heinrich's (1931) book, "Industrial Accident Prevention: A Scientific Approach," can be seen as an artifact that becomes converted to an espoused organizational value/belief when it used by organizations as a guide to determine when a major injury or fatality will occur. Heinrich's book focuses on unsafe personnel acts, and he states that in the case of 330 accidents, 300 will not cause an injury, 29 will result in a minor injury, and one incident will result in a major injury/fatality. This safety triangle/pyramid has been adapted by many organizations in an attempt to put ratio numbers to Heinrich's above listed outcomes, as well as at-risk behaviours, near misses and specific injury types. When used as an espoused value/belief by organizations, a basic underlying assumption appears to develop amongst some personnel that suggests: if a worker is involved in a minor incident(s), the worker is conducting his/her work in an unsafe manner and is more

likely to be the cause of a serious incident in the future. When this thinking is communicated to workers by supervisory/management and safety personnel as an espoused value/belief, it becomes a widely-adopted basic underlying assumption that influences personnel's perception of incident occurrence and reporting in the industry. As a result, Heinrich's safety triangle/pyramid theory can negatively impact attitude formation in relation to reporting practices.

The implication of Heinrich's safety triangle/pyramid theory is that it tries to propose standard ratio numbers. Moreover, there are oil and gas companies/site owners and contractor organizations that are using Heinrich's safety triangle/pyramid as a guide for determining what is an acceptable number of incidents that cause no injury or a minor injury before they believe a more serious injury/fatality will occur. However, oil and gas companies/site owners, contractor organizations, coworkers/other industry professionals, and the individual worker's values/work behaviours all play important influencing roles in a safety culture which is supported by a larger system, not just the actions of the individual worker. When the theory of this safety triangle/pyramid is repetitively communicated to personnel, it becomes understandable why some personnel experience feelings of apprehension in relation to reporting incidents, particularly minor ones. Further, by following Heinrich's safety triangle/pyramid model that suggests several minor incidents will culminate in a major injury/fatality, the industry ignores the importance of encouraging the reporting of minor incidents in order to determine incident causes, develop solutions, and prevent incident reoccurrence.

### **Importance of Effective Reporting Processes and Procedures for Encouraging Reporting**

There appears to be a divide in opinion on how minor incidents are best handled. Some participants disclosed that they would not report a minor incident. Reasons identified for not reporting minor incidents included: paperwork (tangible artifact), lengthy investigations



(intangible artifact), mandatory drug and alcohol testing (tangible artifact), desire to handle the incident on their own (basic underlying assumption, espoused value and belief), experiences of being picked on by coworkers (basic underlying assumption, espoused value and belief, intangible artifact), and concern that an accumulation of reported minor incidents would negatively impact an organization's contract safety performance record (basic underlying assumption, espoused value and belief, intangible artifact). These factors, which largely represent reporting processes and procedures, influence attitude formation in relation to an individual's reporting values and practices. As one participant stated: "I don't report a lot of stuff because I don't want to affect the stats in one way but that's actually low on my list; it's more so I can handle myself" (P5, Q11). This quote summarizes two key points that have been common themes throughout the study's findings: 1) some incidents are not reported because individuals know reporting can result in negative implications for the project contract with the oil and gas company/site owner, and 2) there is a greater tendency to not report minor incidents that are easier to handle by the individual worker, versus going through the cumbersome reporting processes and procedures. This second item, which highlights the importance of effective reporting processes and procedures, will be discussed in further detail in this subsection.

Other participants identified the importance of reporting all incidents. Reasons identified for the importance of reporting all incidents included the possibility of the minor injury developing in to a more serious injury (such as an infection), as well as the need to identify the root cause of the incident in order to accurately address it and prevent reoccurrence. This divide in opinion on reporting needs to be addressed by contractor organizations and oil and gas companies/site owners. Although paperwork is mandatory for all incidents, organizations can look for ways to simplify the reporting and investigation processes and procedures, particularly

for minor incidents. Safety campaigns that encourage the reporting of minor incidents and near misses, where positive reinforcement is given from superiors, would be beneficial. In addition, encouraging personnel to report minor incidents and near misses can help those experiencing fears of reporting become familiar with the reporting and investigatory processes and procedures through a non-threatening encounter.

Over the course of their careers working in the oil and gas industry, some participants had witnessed strict disciplinary actions for minor incidents. This included the use of mandatory drug and alcohol testing, where trust can sometimes be violated when a worker is required to do a drug and alcohol test for coming forward and reporting a minor incident. Participants expressed frustrations with this expression of distrust. As such, overuse of drug and alcohol testing appears to be having a negative impact on the development of trusting relationships between workers and their supervisory/management and safety personnel. Although drug and alcohol testing might be required for some incidents, its use should be considered by organizations on a case-by-case basis for minor incidents, such as worker bumping his/her head or getting a flat tire, in an effort to support the development of trust between workers and their supervisory/management and safety personnel. It is also important that the oil and gas company/site owner, who guides drug and alcohol testing requirements for contractor organizations, understands the impact these procedures have on reporting. If personnel do not report minor incidents that they would have otherwise because mandatory drug tests violate their trust with the organization, organizations are unable to mitigate potential hazards that would have otherwise been reported.

### **Supervisory/Management and Safety Personnel's Role in Supporting Reporting Practices**

The participant interviews demonstrated the need for supervisory/management (i.e. foremen, general foremen, supervisors, superintendents, site/project manager and other site

leadership positions) and safety personnel that create an environment of trust through effective verbal and non-verbal communication styles. Management's role in developing a strong workplace safety culture is a well-researched concept (Gadd and Collins, 2002); however, participants also highlighted the importance of their relationship with the site safety team as a key factor to a culture that encouraged reporting. Observing safety personnel engaged in the field, as well as receiving post-incident feedback from the safety team, were identified as factors that support the development of a trusting relationship between workers and their site safety personnel. Furthermore, safety personnel that coached and mentored personnel in the field on safe work practices supported the development of trust between field personnel and safety personnel, versus taking an auditing approach where the safety personnel monitored work practices in the field and then reprimanded personnel. As outlined in the results section, participants identified the following key traits that should be demonstrated by supervisory/management and safety personnel for developing trusting relationships and encouraging reporting:

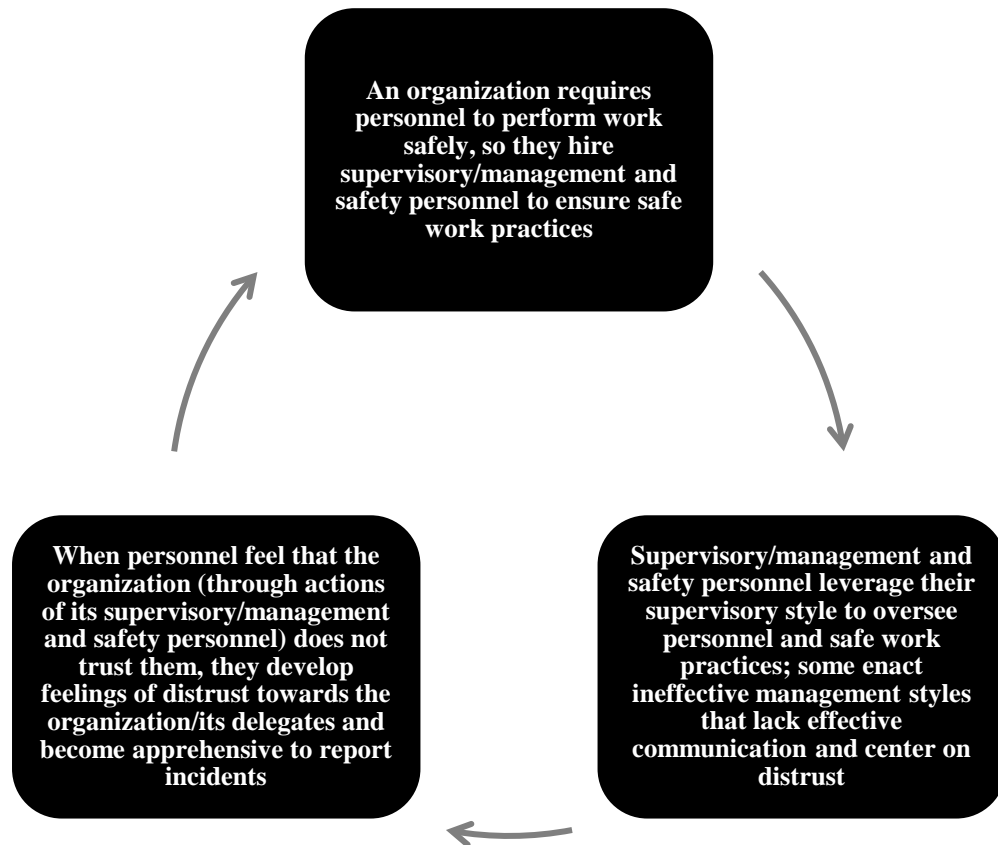
- Fosters a professional relationship centered on open communication and mutual respect
- Demonstrates approachability, including an open door policy and constructive responses to reports (i.e. not swearing when personnel report)
- Values employee engagement, including engagement that demonstrates personal value to the individual such as one-on-one coaching and mentoring (if required)
- Aligns enacted values with espoused values
- Provides regular reporting encouragement to personnel that focuses on reoccurrence prevention

- Demonstrates commitment to a fair investigation that is evaluated on a case-by-case basis
- Delivers partnered feedback to the reporting community through the appropriate level of transparency, informing personnel what the company is doing to prevent future reoccurrences

Characteristics such as these observable behaviours (intangible artifacts) communicate personal value and respect to workers, influencing attitude formation in relation to reporting practices.

Through a relationship that centers on personal value and respect, workers are able to develop a basic underlying assumption that they can trust their supervisory/management and safety personnel. Supervisory/management and safety personnel with these above characteristics support the reporting community by creating a safety culture that places value on the human side of safety and humanistic components. Moreover, trusting relationships between workers and their supervisory/management and safety personnel are key for supporting reporting practices in the oil and gas sector of Alberta, Canada.

As one participant phrased it, workers do not always trust safety personnel and contractor organizations do not always trust their employees (P15, Q12/Q13), which results in a cycle. Organizations often implement controls and supervision to try and manage the unpredictable and diverse nature of people in an effort to minimize the occurrence of safety incidents. This attempt by organizations to control personnel actions can be interrupted as a sense of distrust by their personnel. Based on data from other participants in relation to the importance of being able to also trust supervisory/management personnel, this cycle of distrust is expanded to include both supervisory/management and safety personnel as demonstrated by Figure 3.



**Figure 3. Cycle of distrust within construction and technical services organizations.**

As asserted by Schein (2010), “If supervisors and their managers fail to create a climate of psychological safety that stimulates upward communication, both safety and organizational effectiveness will be compromised” (p. 397). In addition, misalignment between investigatory/disciplinary actions and incident severity (particularly in the case of minor incidents [i.e. not treated on a case-by-case basis]), as well as misalignment between espoused safety culture/reporting values and enacted values, further contributes to the development of this distrust. This cycle of distrust can be mitigated through a change in the management style. The action of controlling personnel can be shifted to the action of providing personnel with supportive training, mentoring and coaching. Supervisory/management and safety personnel that are approachable, engage in open dialogue, and are willing to coach and mentor their personnel

contribute to the development of trust between workers and the supervisory/management and safety personnel. Personnel that have a trusting work relationship with their supervisory/management and safety personnel feel safer and more comfortable reporting incidents. In turn, this positive climate also encourages personnel to approach other workers to intervene with unsafe acts and to be approachable themselves, thus creating an environment where workers trust supervisory/management and safety personnel and feel safe to intervene and report incidents.

Positive words/phrases used by some of the participants such as “try to be more of the persons friend and get to know them,” “show we care,” “human touch,” “mutual respect,” “react in a positive way,” “keeping their spirits up... let them know you care about them,” “directly speaking and engaging with your crew all the time,” “coach and mentor,” “be more...family-oriented,” and “they can trust and come to you and report things” suggest personnel feel more comfortable to report when they are in a trusting environment where coworkers are more like family and friends than people one has a distant relationship with. As one participant framed it, “You put that trust factor in there, and they feel comfortable coming to talking to you and that’s exactly what we need” (P5, Q11). This participant also said, “I usually get out there and try to be more of the person’s friend, and get to know them and get in there, and they feel more prone to talk to you” (P5, Q10). Moreover, reporting typically becomes less intimidating for personnel when they feel they are in a supportive environment.

The data collected suggests that traditional management styles that are very hierarchical and deliver an “I am the boss” message to personnel do not support the reporting community on oil and gas sites. This style of management does require balance; supervisory/management and safety personnel still need to maintain a professional relationship with their personnel. While hiring for these positions, organizations should consider personality dynamics and the ability to

be a leader that personnel trust. Organizations should also provide training to supervisory/management and safety personnel in the areas of effectively communicating with personnel and developing work environments that help personnel feel safe and encouraged to report incidents. Supervisory/management and safety personnel also play a key role in dissolving fear amongst personnel related to reporting. As previously discussed, there is a fear-based perception amongst some personnel that being involved in an incident and reporting it will result in job termination or layoff; moreover, there is a perception amongst some personnel that this will be the outcome, regardless if they were at fault or not. Supervisory/management and safety personnel need to work to break down this reporting barrier by providing personnel with feedback about incidents when personnel are terminated for unsafe acts. For example, personnel need to understand the reasons why someone was let go and not simply that they were fired. Personnel will continue to be discouraged to report incidents to their supervisory/management and safety personnel and experience fear of repercussions if they believe that reporting will result in immediate grounds for dismissal without a fair investigation.

### **Addressing Fear of Repercussions**

To encourage increased reporting, efforts need to be made by oil and gas companies/site owners and contractor organizations to assess both unsafe acts and situational factors in order to avoid the tendency to blame the worker that was highlighted by McKinnon (2013). After all, safety incidents involve organizational factors, local workplace factors, and unsafe acts (Reason 1997, p. 17). Throughout the interviews, words and phrases were used by various participants to express feelings of uneasiness/discomfort in relation to reporting practices and this tendency to blame the worker. Words/phrases such as “fear,” “finger pointing,” “target on your back,” “visibly scared,” “if the punishment fit the crime better,” “left the room crying,” “some

companies will frown upon a worker that do report things,” “you get nervous to report,” and “scared to lose their jobs or other repercussions,” demonstrates a fear of reporting and potential repercussions associated with it. Words such as “crying,” “scared,” “nervous,” and “punishment” convey observable behaviours (intangible artifacts) that suggest reporting incidents creates feelings of uneasiness amongst some individuals. These feelings of discomfort represent attitude formation related to reporting practices, which are demonstrated as a fear of repercussions.

When individuals are laid off or fired after reporting an incident they were involved in, both coworkers and those directly impacted by the repercussions take note if the organization’s enacted reporting values do not align with their espoused reporting values. For example, personnel are encouraged by an organization to report for information purposes and to help support a safe working environment; however, disciplinary actions do not always correlate with the severity of the reported incident. Misalignment between an organization’s espoused reporting values and enacted reporting values can cause individuals to distrust the organization’s espoused reporting value, developing a basic underlying assumption that reporting incidents can lead to the same repercussions for themselves. This is another example of how attitude formation in relation to reporting practices is influenced by industry observations and experiences. As such, fear of repercussions associated with reporting are developed amongst some personnel. This perception is accurate for some incidents/injuries but not all, and for some organizations but not all. As one participant stated:

“Some companies will frown upon a worker that do report things. And some companies take it as yah you know what we can learn from it. But a lot of these guys they’ve worked in companies that actually did frown upon it. And if you did get injured or you did report



something, it seemed like you were complaining a lot. And then they didn't want you around right?" (P4, Q7)

As suggested by this participant, not all organizations evaluate incidents on a case-by-case basis. Although some participants identified that incidents *are* evaluated on a case-by-case basis with a fair investigation, there continues to be an assumption amongst some individuals that an incident will result in undue grounds for immediate layoff or job termination. To address this perception, organizations need to reassure their personnel that the situation will be evaluated on a case-by-case basis with a fair investigation of all factors, accurately evaluating errors in the system in order to prevent future reoccurrences (i.e. job hazards, training and supervision, actions of the worker(s), etc.). This in turn helps employees overcome a fear of repercussions.

In line with employee voice theory, employee silence can be seen as a response to perceived risks associated with speaking up (Bringsfield, 2012). As stewards of safety in the industry, contractor organizations and oil and gas companies/site owners alike must acknowledge the existence of fear of repercussions and the barrier it presents in relation to employee silence and reporting practices. To overcome this barrier, organizations can:

- Regularly assure that reporting is encouraged during site safety meetings
- Ensure personnel know that all incidents will be evaluated on a case-by-case basis
- Appoint supervisory/management and safety personnel that have the ability to inspire trust amongst personnel so that workers feel comfortable reporting incidents to them
- Provide feedback to team members when an incident does occur, particularly highlighting what the company is doing to prevent reoccurrence, as well as explaining the outcomes of personnel who were not found at fault, and therefore were not terminated or laid off

It is anticipated that organizations that value reporting, support fair investigations, and communicate these values to their personnel will be successful in influencing attitude formation by removing barriers of reporting related to fear of repercussions.

### **Importance of Positive Workplace Environments**

As discussed in the results section, self-image, social perceptions, bullying and ostracism are factors that are present on oil sands sites in Northern Alberta. Incidents where individuals are picked on, teased, bullied and/or ostracised sometimes go unreported. In other instances, cases are reported and the perpetrator does not experience repercussions for their behaviours. As such, acts of bullying/ostracism are not addressed, and in turn, individuals feel discouraged to report acts that threaten their personal safety and workplace environment. This example of encapsulation, where personnel are isolated so that the report is not heard by the right people or at all, is typically the response of a bureaucratic work environment (Westrum, 2004). Bullying on work sites creates a particularly dangerous work environment because personnel who are bullied are going to be in altered mindset when they execute their work duties, which in turn could impact the likelihood of an incident occurring. Moreover, work environments that negatively impact self-image and social perceptions have harmful affects on attitude formation and the overall wellbeing of employees.

Positive workplace environments are also critical in supporting employee retention. When self-image preservation is threatened and social perceptions are negatively influenced, an employee's commitment to an organization becomes decreased because the environment does not provide a climate of psychological safety. Oil and gas companies/site owners and contractor organizations need to address the existence of bullying/ostracism on work sites in Alberta in order to provide safe work environments for their personnel. Anti-bullying policies and

campaigns should be implemented on sites in order to address this problem, including policies that clearly define repercussions for offenses and the introduction of “Report Bullying” campaigns to encourage personnel to come forward and report incidents of bullying. In order to better assess to what degree bullying is taking place on oil and gas sites in Alberta, a follow-up study that includes multiple site locations and a large sample size is required.

### **Conclusion**

In conclusion, factors that contribute to cultures of non-report amongst organizations that provide construction and technical services in the oil and gas industry of Alberta include: workplace pressures from oil and gas companies/site owners, contractor organizations and coworkers/other industry professionals related to safety performance metrics; ineffective reporting processes and procedures, particularly for minor incidents; lack of trust between workers and their supervisory/management and safety personnel; fear of repercussions; and workplace environments that negatively impact self-image and social perceptions. These pressures can begin to be shifted by developing solutions such as the ones proposed in this paper that incorporate the human side of safety as a part of safety culture and supportive organizational messaging, centering on the humanistic components of organizational culture with the goal of helping organizations and their personnel value human safety over safety performance metrics.

### **Limitations**

Original participant recruitment plans included email communications informing personnel of the study and inviting them to participate voluntarily. However, due to the nature of the majority of the participant organization’s personnel being contracted through building trades/labour unions (not permanent staff), the majority of the personnel did not have company emails. As such, email communications were not utilized to recruit participants. Therefore,

recruitment methods included flyers on site and announcements at mandatory safety meetings and mandatory crew-specific meetings. Moreover, it is anticipated that the majority of personnel working on the site for the participant organization were made aware of the study.

Due to the remote location of the oil sands site, travel was required to the site in order to conduct interviews with the participants. Although interviewing participants off site or via Skype was offered to potential participants, this option was not requested. Conducting the interviews on site included use of a private room in the participant organization's facilities. Due to the interviews having been conducted on site and in a private room of the participant organization's facilities (at the discretion of the participants), it is anticipated that this arrangement might have made some personnel feel less comfortable to speak openly and freely about non-reporting practices. In addition, this arrangement might have led some otherwise potential participants to not volunteer to partake in the study. For future studies, a combination of sites in remote locations and sites near employees' cities/communities of residence would be considered beneficial in order to encourage more participants to meet for off-site interviews. Interviews as a source of research method must also be considered as a study limitation, as some individuals are uncomfortable participating in one-on-one interviews. Future study considerations could include a combination of interviews, focus groups and questionnaires (survey or statistical study).

Although this paper addresses human, workplace/organizational, and external factors, individual personality psychology/individual psychological differences were not addressed, as they are areas of expertise outside of organizational culture and communication. For example, some participants identified personality traits such as personal risk tolerance and laziness as factors that impact workplace behaviours and willingness to take risk. These personal characteristics/personality traits relate to personality psychology/individual psychological

differences; therefore, they are not discussed in further detail in this paper. Personality psychology/individual psychological differences such as these identified factors would require additional research alongside a researcher in the area of psychology in order to determine if a correlation with individual reporting practices exists.

Subjectivity must also be considered as a limitation in relation to the results and recommendations as they pertain to cultures of non-report in oil and gas. The practice of not reporting incidents may be practiced by some individuals but not others, on some work sites but not others, and in some organizations but not others. Theories proposed in this paper would benefit from further investigation on other sites and with other organizations, including a larger participant sample size. In addition, researcher subjectivity on any research study must be addressed. In order to minimize a researcher bias, a qualitative approach was taken in an effort to ensure results would not be limited by a researcher bias based on previous observations made of non-reporting practices. The qualitative approach enabled participants to discuss factors they provided versus weighting factors that were identified for them.

### **Future Studies**

This study serves as a starting point to understanding cultures of non-report in oil and gas. Additional studies are warranted to develop further scholarship on the concept of cultures of non-report in oil and gas and other industries (mining, manufacturing, commercial construction, etc.), including further exploration of workplace bullying/ostracism and its impact on reporting practices. A primarily quantitative approach inclusive of a large sample group and engagement from multiple sites and contractor organizations within the oil and gas industry would be warranted in order to determine statistical generalizations. Questionnaires/surveys using positive averages or Likert scale analysis have been successfully utilized by researchers on previous

safety culture studies to draw statistical generalizations (Grote & Kunzler, 2000; O'toole, 2000), and these methods would be considered for use in a future quantitative study. In addition, a participatory action research (PAR) study, that tests the recommendations proposed in this paper and further engages field personnel in creating effective solutions to address and dissemble cultures of non-report, would be beneficial and is recommended.

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## Appendix A

## Interview Questions

Note: *All participants will be asked to sign a consent form to participate in the study.*

*Participants will be assured, verbally and via the participant consent form, that their name, job title and any other identifiable characteristics will not be included in the final research paper in order to protect the identity of the individual, maintaining privacy and confidentiality from their employer and any other audience that will potentially read the final paper. Participants will also be assured, verbally and via the participant consent form, that they will be able to withdraw from the study without prejudice if desired. Interviews will also be transcribed after the interview session.*

1. How long have you been working with the organization?
2. Are you a contractor or work directly for the organization?
3. How long have you been working on this project?
4. What is your role on the project?
5. How many years have you been working in construction and/or technical services?
6. Over the course of your career, what industries have you worked in?
7. Over the course of your career, was not reporting workplace injuries and incidents encouraged in these industries?
  - What did you see that told you this?
  - What did you hear that told you this?
8. What industry/ies do you primarily work in now?
9. Is not reporting workplace injuries and incidents encouraged currently in this industry/ies?
  - What do you see that tells you this?
  - What do you hear that tells you this?

10. What factors encourage or discourage the reporting of incidents and/or injuries?
11. What is prompting these behaviours?
12. Have you ever felt apprehensive of reporting an incident and/or injury?
  - Why or why not?
  - Have you ever felt apprehensive of reporting an incident and/or injury due to fear of repercussions?
  - Why or why not?
13. How can these pressures be shifted and solved?
14. When you or fellow coworkers report an incident, is feedback or status updates given?
  - Would you have liked to receive feedback or status updates if it was not given?
15. Do you think anonymous reporting for near misses would increase reporting?
16. Do personnel get disciplined for acts that are deemed unsafe?
17. What are you noticing are risky behaviours that are happening on work sites?
18. What do you notice is leading to these kinds of behaviours?
19. What do you think are the factors that lead to a culture of non-report?
20. What do you think needs to change in safety cultures to ensure a culture of non-report does not develop?