Appendix

Semi-structured Interview Guide

- 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?

 Table 1. Participant demographics.

| Gender | 17 males 2 females |
|--|---|
| Employment type | 12 Building trades union workers 1 Contractor 2 Direct hires 4 Staff |
| Position type | 4 Labourers 2 Pipefitters 4 Foremen, specific trade 2 General foremen 4 Supervisors 2 Safety advisors 1 Site manager |
| Length of time working in construction and/or technical services | 3 (≥ 35 years) 4 (≥ 20 years but < 30 years) 7 (≥ 10 years but < 20 years) 4 (≥ 1 year but < 10 years) 1 (1 < year) |
| Length of time working with participant organization | 3 (≥ 10 years) 10 (≥ 1 year but < 10 years) 6 (< 1 year) |

Appendix 1. Workplace pressures identified by participants related to safety performance metrics.

| Participant Quotes | Levels of Attitude Formation Involved | Concept (Subtheme) |
|--|--|--|
| So eventually those reports stack up and it goes against the company, and eventually | Basic underlying assumptions | |
| the company is gunna be punished because I have seen companies get kicked off of site because of their safety record. Now, are those major incidents that's the reason behind | Espoused beliefs and values | There is a perception that an accumulation of safety incidents will result in repercussions for the contractor organization at the judgement call of site owner/operator. |
| getting kicked off or an accumulation of everything? I don't know. (P3, Q13) | Artifacts (tangible and intangible) | organization at the judgement can of site owner/operator. |
| | Basic underlying assumptions | As contractor organizations experience repercussions from site owners/operators for poor safety performance, they |
| I don't mean to say it in a mean way, this is where you got to remove these people because if you don't, I mean we've already got kicked off site once (P14, Q11) | Espoused beliefs and values | implement their own repercussion measures to reduce the likelihood of incident reoccurrence, including employment termination. |
| | Artifacts (intangible) | |
| 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) | Basic underlying assumptions | 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. |
| | Espoused beliefs and values | |
| Less backlash that would definitely make a difference That's not just through | Basic underlying assumptions | Site owners/operators and contractor organizations play significant roles in developing safety performance standards and associated post-incident repercussion measures; "backlash" (repercussions) measures are identified by some workers as a contributing factor to non-reporting practices. |
| contractors that through client and everything because it's usually the client that does the pushing (P18, Q19) | Espoused beliefs and values | |
| | Artifacts (intangible) | |
| The safety pyramid, well eventually that banged knee and that cut finger is going to work its way up to a maybe cut off finger or worse so The way you are working is unsafe 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, so you gotta go. In the employers defence I understand that side of it (P3, Q11) | Basic underlying assumptions | Heinrich's (1931) safety triangle/pyramid is leveraged as a |
| | Espoused beliefs and values | guide by some organizations to determine anticipated accident ratios (including the number of minor incidents) |
| | Artifacts (tangible and intangible) | and continued employment decisions. |

| A lot of encouragement from the supervision is kind of a big part of it Especially the older fellows around here who have been around when you're were not allowed to report anything right, you know especially from them they're saying oh they're just lying. You report that, you're gone (P10, Q13) | Basic underlying assumptions Espoused beliefs and values Artifacts (intangible) | Although there is encouragement from supervision to report, some personnel influence other workers and suggest that reporting will result in termination. |
|--|---|---|
| Honestly, pre-existing conditions with people that come to site; it's hard not to let that creep in to your decision. Because you're judged on your safety. As a supervisor, as a manager in the company, you are judged on your safety. 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 a statistic in the safety world against you. (P11, Q13) | Basic underlying assumptions Espoused beliefs and values Artifacts (intangible) | If workers with pre-existing injuries reinjure themselves on site, this can count as an incident against the contractor organization. |

Appendix 2. Reporting policies, processes, and procedures identified by participants.

| Participant Quotes | Levels of Attitude Formation Involved | Concept (Subtheme) |
|--|--|---|
| With a 25 percent turnover, you know it's hard to get them to buy in because they're only here for a short period. It's more about the money for them, and then off they go (P11, Q15) | Basic underlying assumptions | High turnover rates give the impression that some personnel |
| 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 | Espoused beliefs and values | are there for the financial benefits and are less likely to adopt reporting and other safety practices. |
| accountable to make his job easier. So it's more just the people who are here to make a quick buck and get out that won't report (P19, Q11) | Artifacts (intangible) | |
| Lycouldn't report a small out or whotever I take ears of myself (D17, O20) | Basic underlying assumptions | Some personnel prefer to not report minor incidents that they believe they can adequately manage on their own. |
| I wouldn't report a small cut or whatever. I take care of myself (P17, Q20) | Espoused beliefs and values | |
| A piece flew up under my glasses into my eye, and I couldn't get that out. Drug and alcohol test. So to avoid things like that, you don't report I had to do two post- | Basic underlying assumptions | To avoid potential repercussions, such as mandatory drug and alcohol tests and layoffs, some personnel do not report |
| incident tests in seven days. 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) | Espoused beliefs and values | incidents (particularly minor ones). This avoidance is not necessarily due to substance use. It can be due to a feeling of |
| Next layoff, he's gone. That's another reason why people might not report the minor things. (P3, Q8) | Artifacts (tangible and intangible) | distrust experienced from their supervisory/management personnel. |
| He cut his hand or something, now he's got to go for a D&A (drug and alcohol test), and he's gotta fill out a big page about what happened. And they make a big deal about the smallest little thing (P16, Q11) | Basic underlying assumptions | Safety investigations for minor incidents can include extensive procedures, such as filling out paperwork, as well as drug and alcohol testing. |
| | Espoused beliefs and values | |
| | Artifacts (tangible and intangible) | |
| 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 minuscular. (BC Q12) | Basic underlying assumptions | The reporting process (which can include paperwork, investigation interviews, and drug and alcohol testing) can be cumbersome. Parts of the process can also generate |
| incidents are minuscule (P6, Q12) I think what detours it is for people who are used to being in the field is the | Espoused beliefs and values | |
| amount of paperwork that's associated with it, being sequestered and taken aside and having those conversations, having the interviews. The fear of the A&D (alcohol and drug) policy and process (P12, Q10) | Artifacts (tangible and intangible) | feelings of fear amongst some personnel. |

| | Basic underlying | |
|---|-------------------------------------|--|
| When somebody actually does report something, thinking that it is gunna be that it's | assumptions | Misalignment between what is told to personnel and actual |
| just for information, just for data, they usually seem to go through a lot more than what | Espoused beliefs and | post-incident follow-up actions can influence reporting |
| is told to the It becomes an incident, then its paperwork and meetings, and they got a | values | practices. It can also create a feeling of having a "target on |
| target on your back. (P1, Q10) | Artifacts (tangible and intangible) | your back." |

Appendix 3. Effective post-incident report feedback identified by participants.

| Participant Quotes | Levels of Attitude Formation Involved | Concept (Subtheme) |
|--|--|---|
| Sometimes the investigations take so long, and can't really get in to the details, but the problem with that if you don't share the feedback, that's when rumours start (P12, | Basic underlying assumptions | |
| Q14) You get rid of all the rumours. Because if don't give them the information, they'll | Espoused beliefs and values | Timely feedback is key for avoiding rumours. |
| make it up (P11, Q14) | Artifacts (intangible) | |
| I would say positive feedback is the key (P1, Q14) | Basic underlying assumptions | Feedback through the form of positive/constructive messaging, delivered in a method that is effective for the audience, is appreciated by personnel. |
| When we talk about feedback and sharing that within our own group I just try to keep it clean and simple and to the point. When you start rolling out huge programs that | Espoused beliefs and values | |
| that are very complicated, you lose the crowd (P12, Q14) | Artifacts (intangible) | |
| It would help with guys understanding why and not just like being oh that guy reported something he's gone They don't say nothing; they just say he's gone. (P16, Q14) | Basic underlying assumptions | 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. |
| | Espoused beliefs and values | |
| | Artifacts (intangible) | |
| For the most part, we try to get that right across the whole site (P11, Q14) | Espoused beliefs and values | Feedback can be leveraged to inform the whole contractor's site team and is not limited select crews; this supports further incident prevention. |
| | Artifacts (intangible) | |
| 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 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 (P15, Q14) | Espoused beliefs and values | Feedback can be used to prevent additional incidents and to |
| | Artifacts (intangible) | inform personnel of trends. |

Appendix 4. Characteristics of supervisory/management and safety personnel identified by participants that contribute to the development of trust and encourage reporting.

| Participant Quotes | Levels of Attitude Formation Involved | Concept (Subtheme) |
|--|--|--|
| I think a lot of it would be communication with safety officials the safety guy stopped us and said, "Okay, do you feel safe about everything that you're doing? Is there different ways that you think this should be approached?" That I actually appreciated. | Basic underlying assumptions | Safety personnel play a key role along with |
| (P15, Q13) | Espoused beliefs and values | supervisory/management personnel in developing a psychologically safe working environment. |
| \dots Even the safety \dots coming around. I love seeing that because I know they are looking out \dots (P8, Q20) | Artifacts (intangible) | page a signal grant and grant and a |
| I think number one, communication, to have communication amongst your coworkers | Basic underlying assumptions | Fostering a professional relationship centered on open |
| and everyone around you, even other trades that are working around you. I think that is a huge part of creating that trust and that bond amongst your peers and treating people with respect. And you'll get that right back (P7, Q13) | Espoused beliefs and values | communication and mutual respect supports the development of trust between workers and supervisory/management and safety personnel. |
| people with respect. That you is get that right odek (17, Q15) | Artifacts (intangible) | |
| 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 if that | Basic underlying assumptions | Approachability, including an open-door policy and |
| reaction was a little bit different it would encourage people to approach a little differently, a little more. (P1, Q20) | Espoused beliefs and values | constructive responses to reports (e.g., not swearing when personnel report), helps workers believe that human safety is valued and reporting is encouraged. |
| We tell all of these people all of our doors are always open (P13, Q13) | Artifacts (intangible) | varied and reporting is encouraged. |
| I like to be one-on-one with all my crew, and my peers, and my coworkers always keeping their spirits up. (P7, Q11) | Basic underlying assumptions | Effective engagement, such as one-on-one coaching and |
| The foreman took the group and took them one by one. And sat down with them, and asked them that question: "How would you feel if something happened? Could you, | | mentoring (if required), demonstrates personal value to the |
| would you be able to come and talk to me?" (P14, Q13) | Artifacts (intangible) | |
| When you report stuff, they say: "Oh we want you to report everything and nothing's going to happen." But then you see a guy report something and then something happens it scares a guy (P16, Q19) | Basic underlying assumptions | Misalignment between espoused values and enacted values |
| | Espoused beliefs and values | negatively impacts relationships between workers and their leadership personnel. |
| | Artifacts (intangible) | |

| 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 That's what I encourage to my workers (P7, Q10) | Basic underlying assumptions | Regular reporting encouragement that focuses on reoccurrence prevention helps communicate the message that reporting is indeed encouraged and used to prevent incidents. |
|---|------------------------------|--|
| | Espoused beliefs and values | |
| | Artifacts (intangible) | metaents. |
| 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 Companies have to prove themselves, if they don't, people are going to be a little nervous of reporting incidents or accidents. (P2, Q13) | Basic underlying assumptions | |
| Give them some validation that their job isn't on the line for reporting would be the | Espoused beliefs and values | Evaluating incidents on a case-by-case basis demonstrates commitment to a fair investigation. |
| 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) | Artifacts (intangible) | |
| I think the more info you can give out to the people and try to be as transparent 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 Would that be something I'd wanna know? Well yah, I'd wanna know (P11, Q14) | Basic underlying assumptions | Delivering partnered feedback to the reporting workforce |
| | Espoused beliefs and values | through the appropriate level of transparency informs personnel what the company is doing to prevent future reoccurrences, while maintaining applicable confidentiality. |
| ,, (, Q) | Artifacts (intangible) | |

Appendix 5. Observable behaviours identified by participants that contribute to a fear of reporting.

| Participant Quotes | Levels of Attitude Formation Involved | Concept (Subtheme) |
|---|--|---|
| But what I ended up doing was I just went and washed it up and threw a glove on. And the reason being I just didn't want to go to the hospital; I was still fairly new; I figured okay new guy; I'm going to lose my job over something silly like this. So yah, but I should have reported it (P5, Q12) | Basic underlying assumptions | Some new personnel are hesitant to report; they can be |
| Paper work, meetings, finger pointing when I started as an apprentice the older fellows would say you better lose a limb before you report something around here But | Espoused beliefs and values | discouraged by other workers that discuss repercussions and "finger pointing." |
| it seems to be changing I haven't seen any of that here this time around I'd say it is a pretty predominate culture that you don't want to say anything (unless) you absolutely have to (P1, Q7) | Artifacts (intangible) | |
| Scared, scared that that they might lose their job because years ago, and it was years ago, | Basic underlying assumptions | |
| if you got hurt, they waited for you to get better and first layoff you were gone. (P14, Q10) | Espoused beliefs and values | The industry's history of laying people off after reporting an incident continues to create fears about job security. |
| | Artifacts (intangible) | |
| | Basic underlying assumptions | 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. |
| If a guy goes he cuts his finger and reports it, and it's an incident it's that guy is usually next to go. (P1, Q10) | Espoused beliefs and values | |
| | Artifacts (intangible) | |
| You get nervous to report something for sure 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 visibly scared and like didn't know what was going to happen and worried for their jobwhen he told me he was almost in tears thinking he | Basic underlying assumptions | Personnel who fear losing their jobs due to reporting |
| was going to lose his job over it right, so that seems to be the idea that everyone has (P1, Q12) | being scared, and crying. The appr | demonstrate physical signs of fear, including nervousness, being scared, and crying. The approach of the personnel investigating a safety incident influence this fear response. |
| One guy told me: "I literally left the room crying." He said: "I don't cry, but he said: "Being drilled at, what I was asked, wasn't right" (P14, Q14) | Artifacts (intangible) | congaining a carety meracine infraence this feat response. |
| There was no guardrail and I went right off over the end I had to go to the hospital and then I was on light duty for a couple of weeks. And then soon as I was off light duty, they were like oh your laid off (P16, Q20) | Basic underlying assumptions | 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. |
| | Espoused beliefs and values | |

| | Artifacts (intangible) | |
|---|------------------------------|--|
| I've had incidents and reported them and Yah, I'm still here. (P2, Q11) | Basic underlying assumptions | The perception that reporting an incident will result 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. |
| I've never seen it yet where someone actually reported something and they got in trouble over it it's not all employers that actually do that. (P4, Q7) | Espoused beliefs and values | |
| | Artifacts (intangible) | job termination of layon, embercates the real of reporting. |
| I can definitely say they don't look at it as the person; the first thing they do is they look | Basic underlying assumptions | Tendencies to blame the worker versus assessing the situation vary from organization to organization. Organizational predominance to blame the worker reinforces the perception that reporting will result in the worker being blamed. |
| 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. (P5, Q12) | Espoused beliefs and values | |
| | Artifacts (intangible) | |
| Companies call it a zero tolerance there's a lot things that you see, just small, tiny, little infractions you see people get fired over it, and that is a huge, that's huge on people saying: "Well shut up." (P15, Q9) | Basic underlying assumptions | When personnel witness other workers being fired for minor incidents, they give advice to other workers, sometimes suggesting to not report minor incidents. |
| | Espoused beliefs and values | |
| | Artifacts (intangible) | |
| Definitely within the craft level, it seems to there still a little bit of fear and hesitation around that [reporting]. I think it stems from the type of safety advisors and safety | accumptions | Supervisory/management and safety personnel leadership |
| officers that people traditionally think of (P12, Q9) | Espoused beliefs and | styles influence the existence/nonexistence of reporting fears |
| You need supervision to be able to be approachable and I understand there's situations they can't be. But safety, yes, you have to be approachable. (P14, Q20) | values | amongst personnel. |
| situations they can't be. But safety, yes, you have to be approachable. (F14, Q20) | Artifacts (intangible) | |
| 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. We just fire you, off you go hired by another company. He's got bad taste in his mouth about the company he left, not knowing what he did wrong. Before we fire people, we should train them (P19, Q16) | Basic underlying assumptions | When personnel are fired post-incident without |
| | Espoused beliefs and values | feedback/training, they move on to the next job with the same unsafe habits and a new fear of reporting. |
| | Artifacts (intangible) | |

Appendix 6. Pressures of self-image preservation, social perceptions, and bullying/ostracism identified by participants.

| Participant Quotes | Levels of Attitude Formation Involved | Concept (Subtheme) |
|---|--|--|
| Whether you like it or not, we do get singled out for incidents and injuries and | Basic underlying assumptions | Some workers experience being singled out for safety incident involvement and personal performance, which in turn influences self-image and social perceptions. |
| performance based on your personal performance. Whether you're a good worker, bad worker, or prone to get injured (P6, Q12) | Espoused beliefs and values | |
| | Artifacts (intangible) | |
| 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 | Basic underlying assumptions | A negative connotation is sometimes associated with |
| ups gunna be and you don't want to be associated with it either If it is something that there's gunna be a negative connotation attached to it a lot of people don't wanna go | Espoused beliefs and values | personnel who are involved in incidents and reporting; this negative connotation impacts self-image and social perceptions. |
| down with that ship that's why people would turn and kind of look away. (P12, Q12) | Artifacts (intangible) | re |
| It's working alone or somebody relies too much on a really good employee to go do | Basic underlying assumptions | 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. |
| 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 prove this to somebody. It's almost one male trying to outdo another one (P19, Q17/Q18) | Espoused beliefs and values | |
| amost one made aying to cause another one in (175, Q177 Q10) | Artifacts (intangible) | |
| I'm not gunna reporting it he's like, "go report it," so I did (P17, Q12) | Espoused beliefs and values | Personnel who are encouraged by other industry professionals and coworkers to report incidents feel safe to |
| | Artifacts (intangible) | report because social permission is granted. |
| He got a good bruise on his leg and he reported it and all the older guys teased him | Basic underlying assumptions | Some personnel tease other workers for reporting minor incidents; teasing could impact self-image and a willingness to report future incidents. |
| for forever but he never reported nothing after that so I don't know if he never got hurt or just got scared to report stuff (P17, Q20) | Espoused beliefs and values | |
| | Artifacts (intangible) | |
| They don't want report things 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; they don't want to seem weak that's how it is in society Guys don't cry; they don't get hurt. (P17, Q 11) | Basic underlying assumptions | Societal perspectives that reinforce strength as a value and |
| | Espoused beliefs and values | discourage weakness amongst men influence reporting decisions when a perceived threat to self-image and social perceptions exist. |
| | Artifacts (intangible) | perceptions exist. |

| A foreman he ran around and told everybody. By the time it got back to the worker, the worker had to leave. He got so picked on in the plant, and it was a personal issue (P14, Q13) | Espoused beliefs and values Artifacts (intangible) | Supervisory/management personnel can influence social perceptions dependent on how they handle personal issues of their workers. |
|---|---|--|
| 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 it would lead back to bullying Because this guy was different; he had his different beliefs. And they really went at him. And he just couldn't take it. They isolated him; he got isolated. From everybody (P14, Q18) | Basic underlying assumptions Espoused beliefs and values Artifacts (intangible) | Bullying and ostracism are workplace pressures present on oil sands sites in Northern Alberta. |
| One of the guys was just bullying him, and I told the foreman, I told supervisors: "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 committed suicide. Yah, because of the young fellar. And that stuff out here on all these sites happens. Bullying, we have it in office, we have it out in the field (P14, Q18) | Espoused beliefs and values Artifacts (intangible) | 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 results in suicide. |