

Potentially Serious Incidents Summary

January 2021

2019 Q1 - 2020 Q3 Data

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EXECUTIVE SUMMARY

OVERVIEW

This report provides a summary of Potentially Serious Incident (PSI) data from the Alberta oil and gas industry for the period of 2019 Q1 to 2020 Q3, for the purposes of understanding common trends and encouraging broader conversations around industry prevention efforts.

SUMMARY

Changes to the PSI definition back in 2018 and pending in 2021 are very important to ensuring that PSIs are targeted at the right level to maximize the learning potential in the prevention of serious incidents. However, the evolving optimization of the PSI definition is likely, in part, associated with the declining yearly trend in PSI submittals.

Only a small portion (4%) of active oil and gas companies have submitted PSI reports. This 4% makes up approximately a third of the industry activity. Opportunities exist to encourage more reporting across the entire industry.

Approximately half of the PSIs are line of fire related, with the most significant category being “struck by falling object” involving “construction materials” and “hand tool - non-powered”.

Approximately half of the PSIs involving inhalation of substances are exposures to H2S.

The average percentage of injury to non-injury, or near miss, PSIs across the entire data set is 18%, indicating more PSI near misses being reported than injury PSIs. There are companies within the dataset that have submitted numerous PSIs that are predominately injury PSIs, indicating a potential opportunity to increase reporting of near miss PSIs. Companies are encouraged to reflect on their own ratio and consider if anything needs to be done to influence reporting.

The most common follow-up actions were training and changed policies. Although this is often an appropriate control depending on the context of the incident, a stronger focus on elimination, substitution and engineering controls is worthy of future consideration.

Improved tracking of PSIs by industry companies would enable more insightful conversations around industry learnings.

PSI DEFINITION

According to Alberta OH&S, a PSI is “any event where a reasonable and informed person would determine that under slightly different circumstances, there would be a high likelihood for a serious injury to a person.”

Employers can report PSIs online, and must include a description of the event, the number of people involved and/or injured during the event, and any follow-up actions they implemented as a result.

The definition of PSI was revised at the end of 2018 by Alberta OH&S, therefore only data from 2019 onwards is included in this report.

1.0 INTRODUCTION & OBJECTIVE

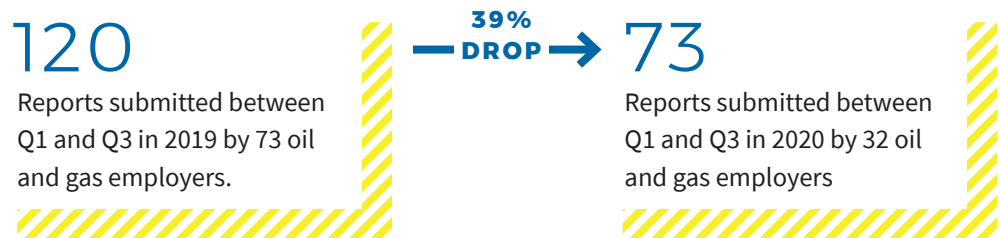
In 2018, it became mandatory for Alberta employers to report potentially serious incidents (PSIs) to Alberta Occupational Health and Safety (OH&S). OH&S has provided some of the resulting data to Energy Safety Canada (ESC), for ESC’s funding industry codes.

This report provides a summary of potentially serious incident data from the Alberta oil and gas industry, for the purposes of understanding common trends and encouraging broader conversations around industry prevention efforts.

Data represents the time period of 2019 Q1 to 2020 Q3.

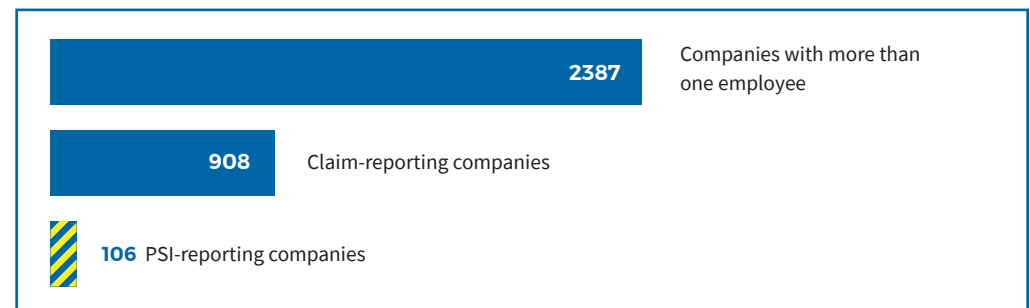
2.0 REPORTING RATES & TRENDS OVER TIME

The number of reports has dropped over time.



Over the last two years, there were about 2,400 registered companies in Alberta’s oil and gas industries with more than one employee. Only a small portion of active oil and gas companies (4%) have submitted PSI reports since the program began. For comparison, about one third, 900 companies, had an incident that became an injury claim with the WCB.

COMPANY COUNTS IN ALBERTA O&G



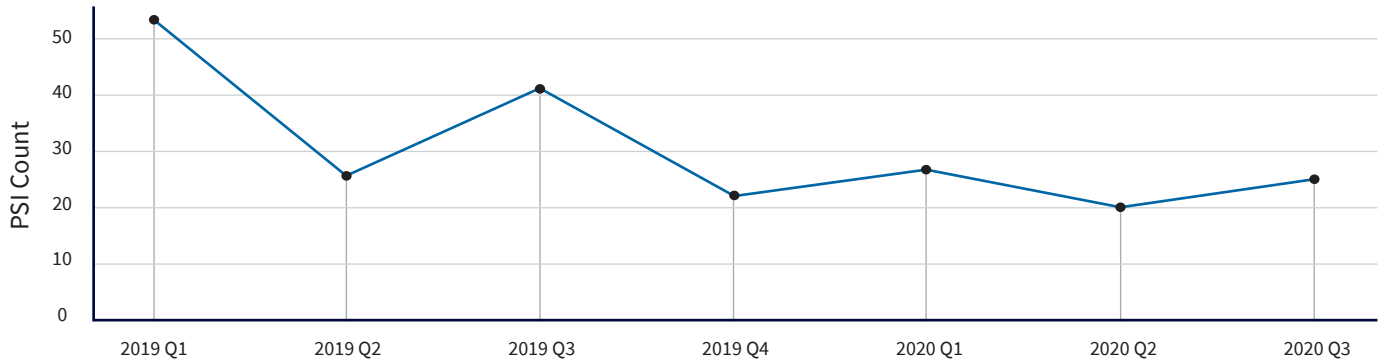
ACTIVITY IN ALBERTA O&G (PERSON YEARS)



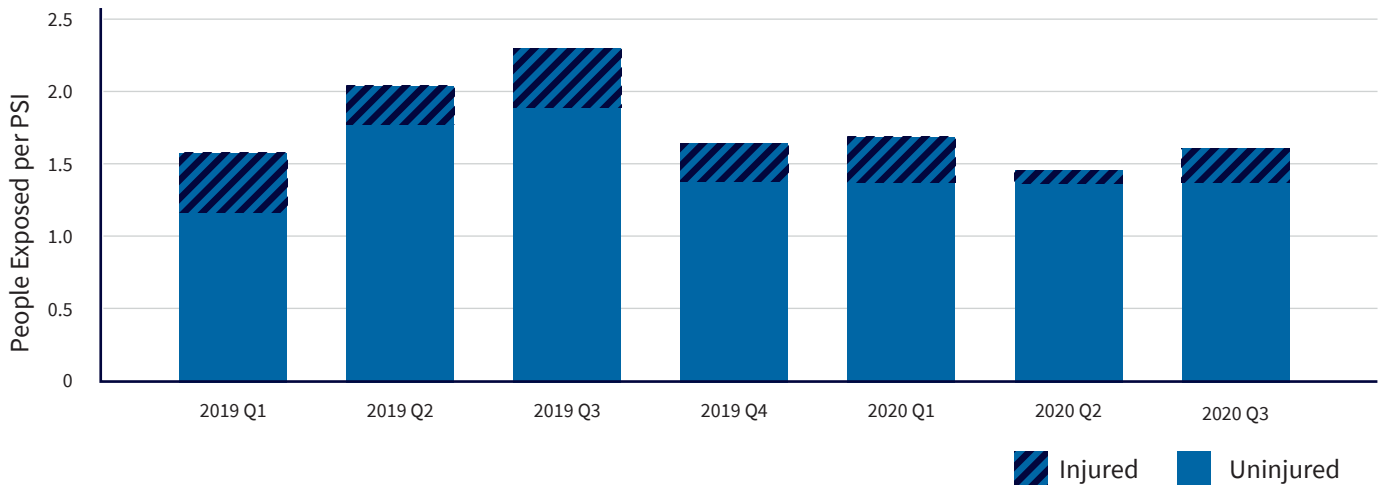
2.0 REPORTING RATES & TRENDS OVER TIME

Opportunities exist to encourage more reporting across the entire industry.

REPORTED POTENTIALLY SERIOUS INCIDENTS, BY QUARTER.



EXPOSURE RATE, BY QUARTER



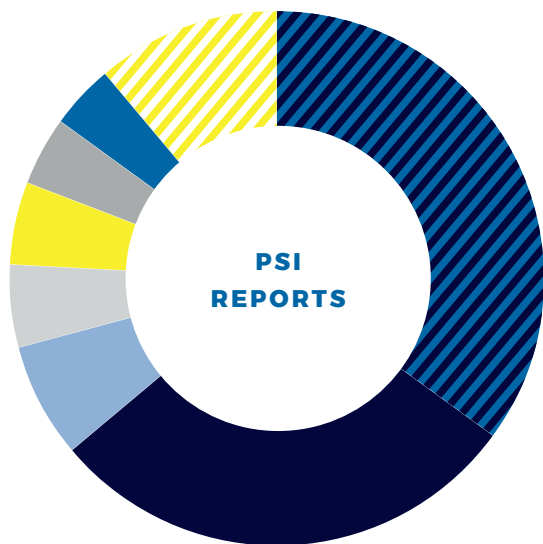
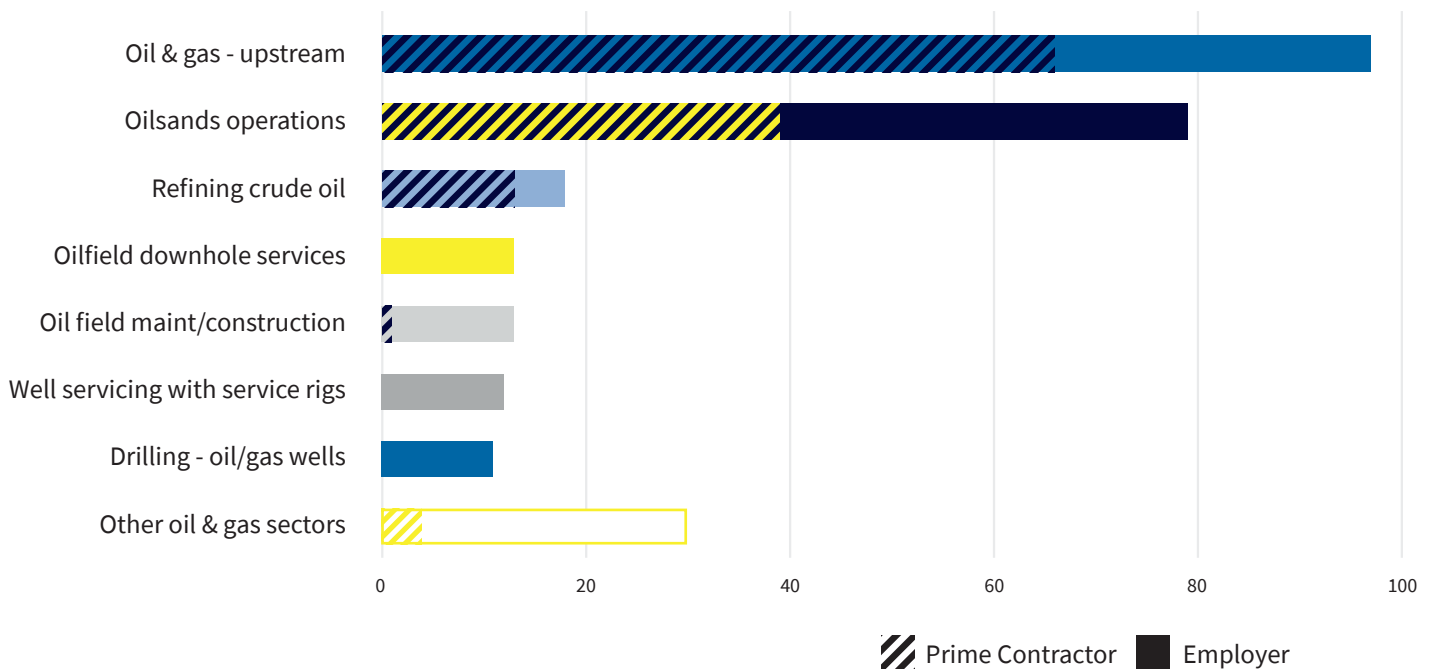
On average, 1.8 people are exposed to a typical PSI and 18% of incidents resulted in an injury. Companies are encouraged to reflect on their own ratio of near miss PSIs to injury PSIs.

Year	Participating companies	PSI report count	People exposed	People injured	Average exposed per PSI	% Injured per exposed
2019	84	142	266	52	1.87	20%
2020 Q1-Q3	32	73	116	17	1.59	15%
TOTAL	106	215	382	69	1.78	18%

3.0 REPORTS PER INDUSTRY SECTOR

Reports where both a prime contractor and the employer were involved are double counted.

PSI REPORTS (INCIDENT RELATIONSHIP BY SECTOR)



- 35% Oil & gas - upstream
- 29% Oilsands operations
- 7% Refining crude oil
- 5% Oil field maint/construction
- 5% Oilfield downhole services
- 4% Well servicing with service rigs
- 4% Drilling - oil/gas wells
- 11% Other

4.0 INCIDENT CLASSIFICATIONS

The graphs below show the most common types of incidents that could have caused serious injuries, and the sources of those potential injuries.

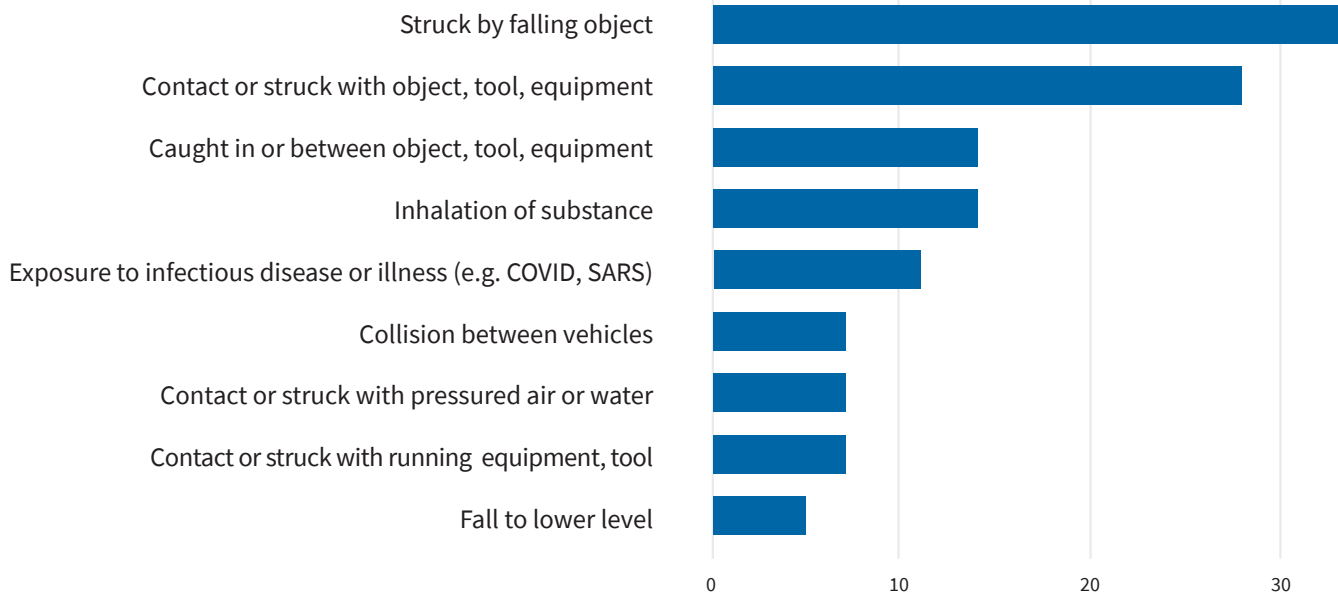
Approximately half of the PSIs are line of fire related, with the most significant category being “struck by falling object” involving “construction materials” and “hand tool - non-powered”.

Approximately half of the PSIs involving inhalation of substances are exposures to H2S.

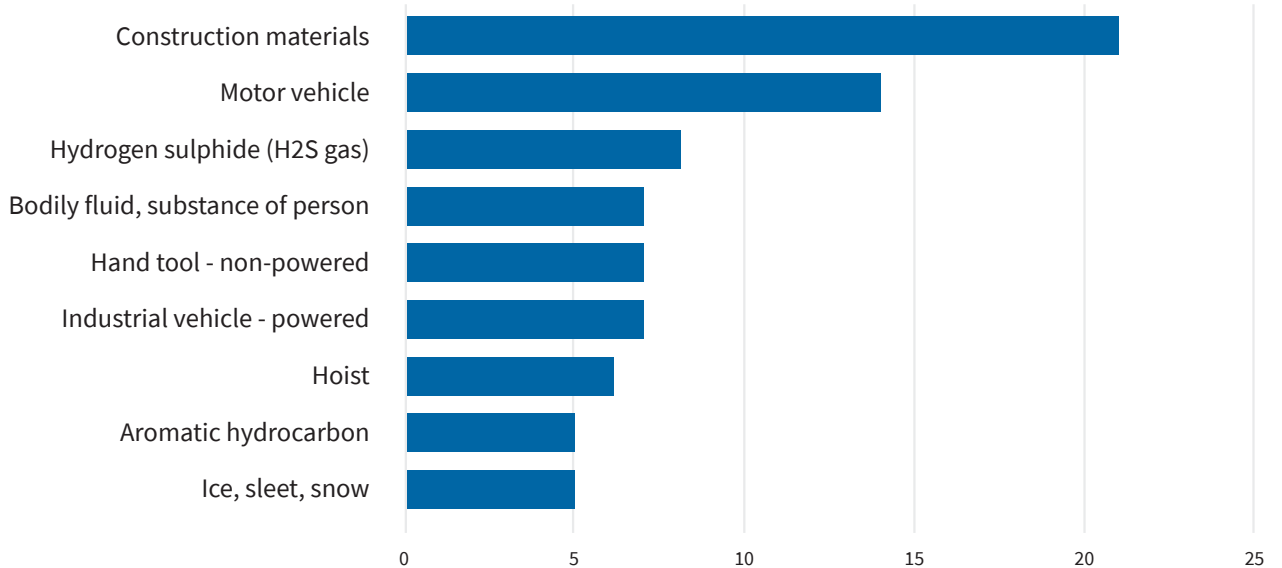


LINE OF FIRE

TOP TEN INCIDENT TYPES (INCIDENT COUNT)



TOP TEN SOURCES OF INCIDENT (INCIDENT COUNT)



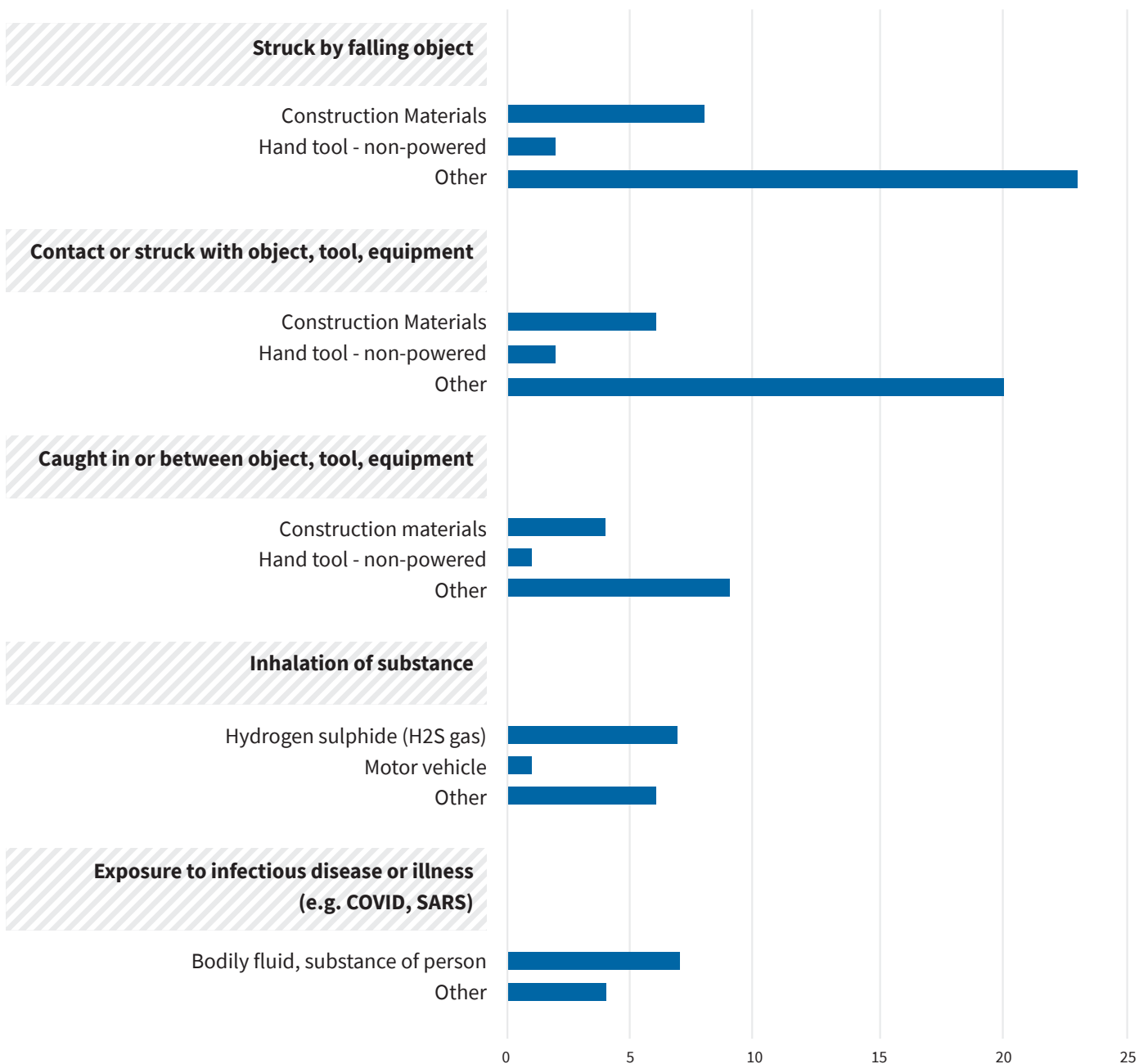
4.0 INCIDENT CLASSIFICATIONS

4.1 SOURCE PER TYPE

The main sources of the top five incident types are listed below.

Note that *Struck by falling object* and *Contact or struck with object, tool, equipment* each have a large *Other* category for source of incident. This is simply due to the large number of potential sources (hoists, machinery, ice, fasteners, etc.); there is no major source of incident that is not shown.

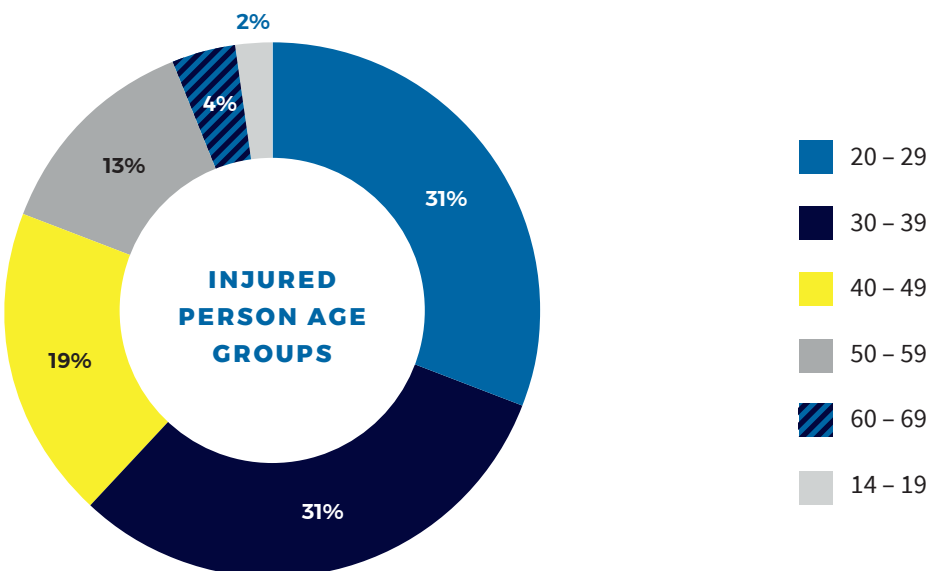
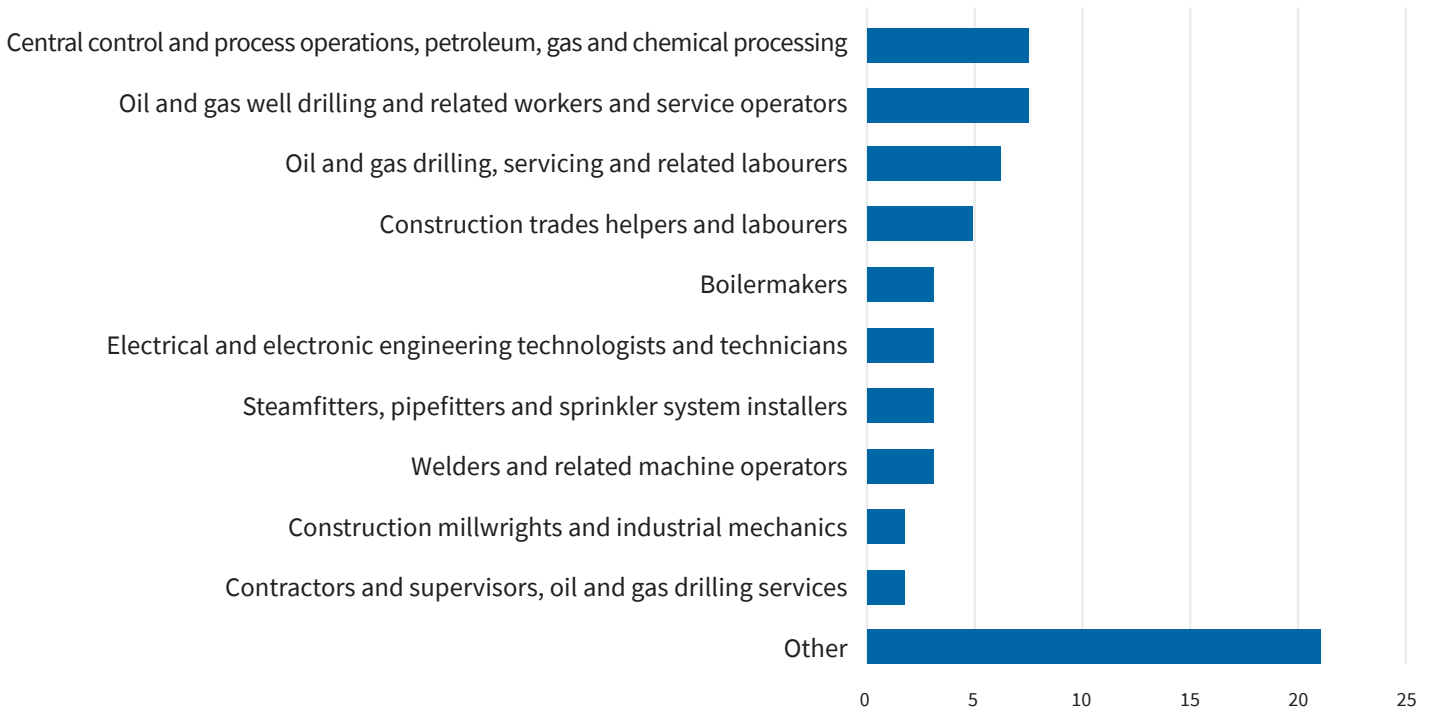
SOURCES OF THE TOP FIVE INCIDENT TYPES (INCIDENT COUNT)



5.0 INJURED PERSON DEMOGRAPHICS

The graphs below show the demographics of people who were injured during a PSI. PSIs where no people were injured are not accounted for. Some PSIs were not available at the time of writing, and are not included in the charts below.

INJURED PERSON OCCUPATIONS



6.0 INCIDENT FOLLOW-UP

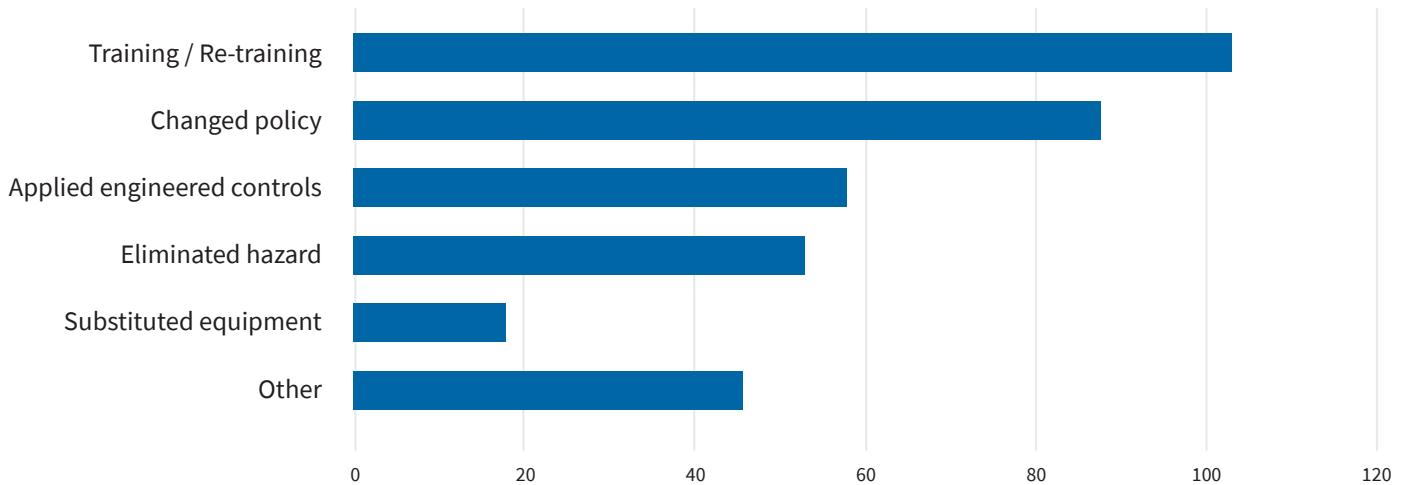
On average, one or two follow-up actions are implemented after a potentially serious incident is reported.

“Training” and “Changed Policy” have been the most common follow-up actions over the last two years.

A stronger focus on elimination, substitution and engineering controls is worthy of future consideration.



FOLLOW-UP CONTROLS IMPLEMENTED



YEAR	2019	2020	TOTAL
Total PSI Count	142	73	215
All Controls	210	156	366
Training / Re-Training	55	48	103
Changed Policy	56	32	88
Applied Engineered Controls	26	32	58
Eliminated Hazard	36	17	53
Substituted Equipment	11	7	18
Other	26	20	46
Controls per PSI	1.5	2.1	1.7

RESOURCES

Energy Safety Canada PSI Program:

<https://www.energysafetycanada.com/Standards/Programs/Potentially-Serious-Incidents>

Energy Safety Canada PSI Guideline:

<https://www.energysafetycanada.com/Attachments/DownloadResource?attachmentGuid=43682b9f-8eb0-41fe-b841-eb784c3f363a&open=True>

Alberta OH&S Reporting and investigating Potentially Serious Incidents Bulletin:

<https://ohs-pubstore.labour.alberta.ca/download/sample/513>

List of oil and gas industry sectors:

https://admin.energysafetycanada.com/getmedia/d16c7e8e-2f1a-486b-aefc-ea95b6a670cc/EnergySafetyCanada_WCB_Codes.pdf

GLOSSARY

Industry Sector

Groupings of employers who have similar businesses and risks as one another. Defined by WCB Alberta. This report contains data from all Alberta oil and gas industry sectors.

Person

The Alberta definition is not limited to workers and includes other persons, such as the public, that may be impacted as well.

PSI

Potentially Serious Incident. Any event where a reasonable and informed person would determine that under slightly different circumstances, there would be a high likelihood for a serious injury to a person.

WCB

Workers Compensation Board. The mandate of the WCB is to provide compensations to workers who are injured on the job, and help them recover and return to work.

DISCLAIMERS

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