Health and Safety

Pictured above: Employee at Highland Valley Copper Operations, Canada.

Health and Safety

In 2020, the COVID-19 pandemic transformed the world of work across all industries, including mining. Governments, employers, workers and their respective organizations have responded with significant changes to workplace practices, and new protocols and approaches to protecting health and safety. Technology and automation present new opportunities to improve employee health and safety, often by taking people out of hazardous situations or areas and by enabling social distancing; however, they can also present new challenges.[13] COVID-19 has shown that health and safety risks represent material risk and challenges to business continuity.

The response to COVID-19 comes in addition to the ongoing work of the mining sector to reduce the health and safety hazards and risks associated with handling of large volumes of materials, the use of heavy equipment and potentially hazardous production processes. Teck and other member companies of the International Council on Mining and Metals (ICMM) have set the collective goal of zero fatalities, and are implementing measures to reduce injuries.

Safety has long been a core value and strategic priority for Teck. In 2020, the onset of the COVID-19 pandemic was the most critical short-term health and safety issue facing our company. Teck has implemented extensive preventive measures across our offices and operations in order to safeguard the health of our employees and contractors while continuing to operate safely and responsibly maintain employment and economic activity to the extent possible. We continue to closely monitor and follow guidance from public health agencies, external experts and government.

In 2020, we experienced no work-related fatalities for Teck controlled locations or activities, and we continued to build on our efforts to improve safety performance and to reduce incident frequency. However, we were deeply saddened by a fatal incident that occurred on a production drill at our Red Dog Operations in early 2021.

In 2020, the High-Potential Incident Frequency at Teck was 32% lower year over year and our Lost-Time Disabling Injury Frequency was 23% lower. Total Recordable Injury Frequency also decreased year over year by 17%. While these improvements are encouraging, we remain vigilant as we work to reach our ultimate goal of everyone going home safe and healthy every day.

GRI Indicators and Topic Boundary

403-103, 403-8, 403-9, 403-10

This topic is considered one of the most material by our employees, contractors and regulators in the context of all Teck sites and in contractor selection and management.

How Does Teck Manage This Topic?

Information about how we manage health and safety, including relevant policies, procedures, management practices and systems, is available for download on our website.

[13] Mine 2019: Resourcing the future. PricewaterhouseCoopers. 2019.

2020 Highlights

32% reduction in High-Potential Incident Frequency

23% reduction in Lost-Time Disabling Injury Frequency (LTDIF)

99% employees trained in hazard identification across operations, exploration sites and projects against a target of 95%

Successfully completed our Nanozen real-time monitoring pilot for key occupational exposures at Greenhills, Fording River and Highland Valley Copper; the results represent a paradigm shift in understanding occupational exposures at a task and activity level.

Our Performance in Health and Safety in 2020

Our Targets and Commitments Health and Safety is a core value and strategic priority at Teck; nothing is more important than the health and safety of our people. We engage and develop our people, and work to ensure everyone goes home safe and healthy every day. The following table summarizes our performance against our new sustainability strategy and goals for health and safety.

Sustainability Strategy Goals	Status	Summary of Progress in 2020
Strategic Priority: Eliminate fatalities, serious injuries and occupational disease		
Goal: Contribute to the elimination of fatalities and serious injuries through significantly enhanced critical control verification for fatal hazards.	On track	Commenced a major update of our critical control standards and critical control verification (CCV) criteria and processes. This included the development of 12 new/updated critical standards with CCV criteria. Six have been released and six are in the final review stage. Implemented Introduction to Hazard Identification training across the business. Continued to advance our Vehicle Safety Strategy to eliminate serious injuries and fatalities from vehicle-related incidents, including critical control standards for heavy mobile equipment, light vehicles, buses and transportation, medium-duty wheel assemblies and in-vehicle monitoring systems (IVMS) to reduce vehicle-related high-potential incidents. Updated requirements for Traffic Management Plans are in development.
Goal: By 2025, contribute to the elimination of occupational disease by implementing new technologies in real-time exposure monitoring to improve exposure controls for dust and welding fumes.	On track	Completed the Nanozen real-time monitoring technology pilot project at Greenhills, Fording River and Highland Valley Copper. Tracked progress of Exposure Reduction Plans throughout the year, with an aggregate level of completion of 90% across operations. Developed a new critical control standard (with CCV criteria) for respirable particulates in mining.

Key Performance Indicators

Indicator[1],[2]
Work-related fatal injuries

Target
Zero fatalities

2020:	0
2019:	1
2018:	2

Indicator[1] [2]
Lost-Time & Disabling Injury Frequency

Target
10% year-over-year reduction

2020:	23% reduction
2019:	18% reduction
2018:	No change

Indicator[1],[2]
Total Recordable Injury Frequency

Target
10% year-over-year reduction

2020:	17% reduction
2019:	24% reduction
2018:	No change

Indicator[1] [2]
High-Potential Incident Frequency

Target
Year-over-year improvement

2020:	32% reduction
2019:	16% reduction
2018:	28% reduction

(1) All indicators include employees and contractors.
(2) Key Performance Indicators are related to performance of Teck managed operations.

Building a Positive Culture of Health and Safety

Launched in 2009, Courageous Safety Leadership (CSL) focuses on challenging existing values, beliefs and attitudes towards safety, and builds commitment from individuals to work safely. More than 18,000 employees have been trained in CSL since the inception of the program. In 2020, we implemented sustaining activities to realize our commitments from the fourth phase of our CSL program. We also continued to train new employees and contractors in the Introduction to CSL course. Approximately 560 directors, employees and contractors participated.

In 2020, we established health and safety cultural improvement plans at all operational sites using feedback from the results of our 2019 Health and Safety Culture Survey. Implementation of these cultural improvement plans is a business performance metric. Our implementation progress is monitored and reported on a monthly basis to ensure that operations are addressing opportunities identified in the 2019 Health and Safety Culture Survey. The next survey is planned to be conducted in 2022. In 2020, Teck reported an aggregate completion rate of 90% for health and safety cultural improvement plans.

High-Potential Risk Control

As of the end of the year, all operations met or exceeded their 2020 High-Potential Risk Control targets for risk assessments and effectiveness reviews. These targets were to conduct four Work Team Risk Assessments and six Effectiveness Reviews per operation. As a result of our improved risk assessment efforts across the company, we identified and shared stories of positive change. Teams across the company have improved their controls for several key serious injury and fatality risks.

In 2020, we continued our company-wide training module, Introduction to Hazard Identification, which was launched in 2019. The training equips employees and contractors with skills and a common understanding of hazard identification, and gives employees a clear understanding of key terms such as hazard, hazard types, risk and controls. To date, 99% of employees have completed this module at operations, exploration sites and projects.

We also commenced the next phase of our High-Potential Risk Control (HPRC) strategy, which includes the review and development of critical control standards, and critical control verification criteria to routinely monitor that critical controls are in place and effective. Teck has identified 22 fatal hazards that are forming the basis of our major standards review schedule. Each standard has been developed to highlight the critical controls that must be in place, together with a set of associated verification criteria that must be assessed routinely to inform the management of the control effectiveness. In 2020, 12 new or updated critical control standards were developed with thorough internal and external stakeholder engagement.

In addition to the overarching HPRC Strategy, Teck has continued to advance its Vehicle Safety Strategy to eliminate serious injuries and fatalities from vehicle-related incidents. Vehicle-related incidents represent Teck's single largest category of high-potential incidents. Vehicle-related incidents

typically result from a combination of three factors: the driver, the road environment and the vehicle. Improvement actions have been defined for each of these three key factors. Teck has a business performance metric to reduce vehicle-related high-potential incidents. To support this goal, five vehicle-related critical control standards were developed in 2020 for heavy mobile equipment, light vehicles, buses and transportation, medium duty wheel assemblies and IVMS. Updated requirements for Traffic Management Plans are in development.

Teck continues to pursue technological innovation in relation to vehicle safety, including:

- Autonomous haulage systems
- Proximity detection and collision avoidance

Occupational Health and Hygiene

We work to continuously enhance our occupational health and hygiene risk assessments, and monitoring and exposure controls to protect the long-term health of employees. All of our operations were required to continue implementing exposure reduction plans in 2020. By the end of the year, Teck achieved an aggregate level of exposure reduction plan completion of 90%. Updated plans for 2021/22 were developed towards the end of 2020; their implementation progress will be monitored throughout 2021.

Our Occupational Health and Hygiene Committee continued to implement a comprehensive sampling training program in 2020. An additional 17 employees were trained to support the collection of quality occupational hygiene sampling. The objective of the program is to provide all personnel who have a role in collecting hygiene samples with standard training for the collection of quality samples, including the collection of respirable particulate samples as well as noise monitoring and mapping.

In 2020, we completed our extensive Nanozen real-time occupational dust exposure monitoring pilot project at our Greenhills, Fording River and Highland Valley Copper operations. The objective of the project was to confirm that the technology could reliably provide real-time insights into occupational exposures at a task or activity level — to enable us to improve our focused application of exposure reduction controls. The outcomes of the pilot are very promising, and we believe that the technology represents a paradigm shift in both occupational exposure monitoring and critical control identification at a task or activity level. Recommendations for operationalizing the technology are in development.

We also advanced a project to improve the management of data from our routine occupational medical assessment programs. This project will continue in 2021.

COVID-19 Response

Nothing is more important than the health and the safety of our employees, our contractors and the communities where we operate, and we have implemented rigorous protocols following guidance from public health agencies and government in response to COVID-19.

Preventive Measures

Teck has implemented extensive preventive measures across our offices and operations in order to safeguard the health of our employees and contractors while continuing to operate safely and responsibly maintain employment and economic activity to the extent possible. These include:

- Implementing a personal COVID-19 specific risk assessment tool that must be completed by employees before attending work each day
- Undertaking testing at operations and projects as approved by governments or as testing resources become available to industry
- Weekly COVID-19 crisis response and communications meetings
- Engaging external experts and specialists to provide guidance on the management of COVID-19 risk
- Operating with reduced crew sizes, reducing the number of on-site staff as much as possible and implementing work from home where feasible
- Reducing or eliminating in-person meetings and large gatherings
- Supporting physical distancing practices on-site, such as staggering shift start times, reducing the number of passengers on buses, separating groups of employees at work, cancelling large group meetings and changing meetings from in-person to electronic, e.g., holding crew meetings by radio
- Enhanced cleaning and disinfecting protocols, including frequent disinfecting of employee buses and work areas
- Promoting personal preventive measures, such as frequent handwashing
- Ensuring adequate supplies of critical COVID-19 prevention materials are available on-site, including personal protective equipment (PPE) and disinfectants
- Following all health orders requiring the use of PPE to prevent transmission of COVID-19
- Screening all contractors and external visitors at sites for risk factors and symptoms

- Requiring employees who show symptoms, or who are in close contact with someone with symptoms, to stay home from work, and requiring employees returning from international travel to self-isolate
- Monitoring and maintaining communication with employees and contractors who have reported symptoms and are self-isolating
- Expanded sick leave coverage for affected employees
- Collaborating with public health authorities on COVID-19 controls, testing and contact tracing

Communications

We provide regular updates to employees on preventive measures, COVID-19 symptoms, protecting themselves and others, and how to self-assess before coming to work. Learn more on the Employee Resources page on our website.

We also have COVID-19 response teams in place at all of our operations and offices, in order to respond rapidly to concerns raised by employees, contractors and others. These individuals are responsible for coordinating effective implementation of the response protocols.

Assessing Effectiveness

Teck has conducted tens of thousands of assurance checks against the preventive measures put in place and continues to achieve very high rates of control conformance. These assurance checks cover Teck employees as well as contractors.

Mental Healthcare Services

Our Employee and Family Assistance Programs ensure all employees and their families have access to immediate and confidential support services, crisis counselling support and/or referrals to community resources. We also provided our employees and their families in Canada, the U.S. and Chile with access to an on-demand team of primary care providers via a mobile health app. See page 84 of the Inclusion, Diversity and Our People section for more details.

Communities and Public Health

Teck is also supporting critical social initiatives and increased healthcare capacity in areas where Teck operates and contributing to international relief efforts. See page 78 of the Our Relationships with Communities section for more details.

Other Community Health and Well-Being Initiatives

As a major producer of copper and zinc, Teck is working to promote best practices in our industry and to help improve the lives of people around the world through initiatives such as our Zinc & Health and Copper & Health programs.

Teck is committed to helping solve the global health issue of zinc deficiency through therapeutic zinc, zinc supplementation, food fortification, crop nutrition, awareness and advocacy. To date, we have reached more than 160 million people worldwide through our Zinc & Health program. See more details about the program on our website.

With our Copper & Health program, Teck is building partnerships, raising awareness and improving health outcomes for those most at risk and as we move through our daily lives. See more details about the program on our website.

Through our initiatives, we are working toward advancing the United Nations Sustainable Development Goal 3: good health and well-being.

Case Study: Supporting Community Healthcare with Copper

As a major copper producer, we have an opportunity to support the use of antimicrobial copper in healthcare facilities and in public spaces to reduce the spread of infections. Modern research has demonstrated that copper has natural antimicrobial properties, killing up to 99.9% of harmful bacteria and viruses on high-touch surfaces. In recognition of these benefits, there is growing use of antimicrobial copper around the world to reduce the spread of healthcare-acquired infections in healthcare facilities. To date, antimicrobial copper has been installed in more than 300 healthcare facilities in 26 countries globally. Through our Copper & Health program, Teck is supporting research and infrastructure investments and raising awareness for the use of antimicrobial copper to reduce the spread of bacteria and viruses in communal areas. Program activities include supporting research on long-term copper durability in Canada and Chile, partnering with several hospitals to install copper-infused surfaces to address healthcare-acquired infections, supporting a new Canadian standard for healthcare cleaning and disinfection, and partnering to test copper on public transit in Metro Vancouver. Read the full case study at teck.com/news/stories.

Safety Performance

Teck has in place a set of standards, policy guidelines, operating procedures and systems that describe accountabilities, controls and other minimum requirements for managing health and safety risks. These apply to all Teck sites and projects (except projects or operations in which Teck has/had an ownership interest but is not the principal operator), including 100% of employees and contractors.

In 2020, we continued to build on our efforts to improve safety performance in areas of greatest risk. We experienced no work-related fatalities for Teck-controlled locations or activities. Teck is a joint venture partner in the Fort Hills oil sands mine in Alberta, Canada, which is operated by Suncor. On December 28, 2020, a mine operations dozer at Fort Hills collided with a light vehicle and two mine operations contractors were fatally injured. Teck is providing support to the Fort Hills team during their investigation and we will apply the learnings once the investigation has been completed.

In 2020, our Total Recordable Injury Frequency (TRIF) was 17% lower than in 2019 and our Lost-Time Disabling Injury Frequency decreased year over year by 23%.

Table 12: Health and Safety Performance – Teck Total[1],[3],[4],[5],[6],[7]

	2020	2019	2018	2017
Total Recordable Injury Frequency	**0.73**	0.82	1.01	1.01
Lost-Time Injuries	**85**	90	73	89
Lost-Time Injury Frequency	**0.29**	0.34	0.36	0.45
Disabling Injury Frequency	**0.14**	0.20	0.26	0.17
Lost-Time Disabling Injury Frequency	**0.43**	0.54	0.62	0.62
Lost-Time Injury Severity	**27.52**	41.00	73.35	24.40
Number of Fatalities	**0.4[8]**	1.2	2	0
Fatality Rate	**.001**	.004	.010	.000

Table 13: Health and Safety Performance – Teck-Operated[2],[3],[4],[5],[6],[7]

	2020	2019	2018	2017
Total Recordable Injury Frequency	**0.73**	0.88	1.16	1.25
Lost-Time Injuries	**81**	86	69	85
Lost-Time Injury Frequency	**0.31**	0.38	0.44	0.62
Disabling Injury Frequency	**0.14**	0.20	0.27	0.18
Lost-Time Disabling Injury Frequency	**0.45**	0.58	0.71	0.80
Lost-Time Injury Severity	**21.64**	43.16	94.59	34.66
Number of Fatalities	**0**	1	2	0

(1) Safety statistics in Table 12 include both employees and contractors at all of our locations (operations, projects, closed properties, exploration sites and offices). For sites where Teck owns more than 50%, safety statistics are weighted 100%; for sites where Teck owns 50% or less, safety statistics are weighted according to Teck's ownership of the operation. This includes the Antamina mine (22.5% interest), Fort Hills mine (21.3% interest), Neptune Bulk Terminals (46% interest) and NuevaUnión (50% interest). We define incidents according to the requirements of the U.S. Department of Labor's Mine Safety and Health Administration. Severity is calculated as the number of days missed due to Lost-Time Injuries per 200,000 hours worked.
(2) Safety statistics in Table 13 include both employees and contractors at all of our locations in which Teck holds majority ownership and directly manages (operations, projects, closed properties, exploration sites and offices). For sites where Teck owns more than 50%, safety statistics are weighted 100%. We define incidents according to the requirements of the U.S. Department of Labor's Mine Safety and Health Administration. Severity is calculated as the number of days missed due to Lost-Time Injuries per 200,000 hours worked.
(3) Decrease in severity in 2020 is a consequence of having no fatalities in 2020 versus one fatality in 2019. Each fatality results in counting 6,000 lost days.
(4) A Lost-Time Injury is an occupational injury that results in loss of one or more days beyond the initial day of the injury from the employee's scheduled work beyond the date of injury.
(5) A Disabling Injury is a work-related injury that, by orders of a qualified practitioner, designates a person, although at work, unable to perform their full range of regular work duties on the next scheduled work shift after the day of the injury.
(6) A fatality is defined as a work-related injury that results in the loss of life. This does not include deaths from occupational disease or illness.
(7) Frequency indicators in this table are calculated by the number of events in the period multiplied by 200,000 and divided by the number of exposure hours in the period, which refers to the total number of actual hours worked by employees/contractors at a site where one or more employees/contractors are working or are present as a condition of their employment and are carrying out activities related to their employment duties. Hours of exposure may be calculated differently from site to site; for example, time sheets, estimations and data from human resources are inputs into the total number of exposure hours.
(8) There were fatalities at Fort Hills oil sands mine, which is operated by Suncor. See their sustainability report for further information.

High-Potential Incidents

In 2020, our High-Potential Incident Frequency was 32% lower compared to 2019. Two Potentially Fatal Occurrences were reported at Teck-operated locations, which were investigated and for which corrective actions were developed. Where relevant, the results are shared with all of our business units and operations in order to facilitate a local gap analysis against the findings to prevent similar occurrences. We investigate potentially fatal occurrences to the same standard as actual fatalities.

While our total High-Potential Incident (HPI) frequency and severity have declined since 2017, our business units and operations continue to experience HPIs. As such, we continue to focus on improving our understanding of high-potential risk and control effectiveness.

Figure 14: High-Potential Incident Performance — Teck Total[1],[2]

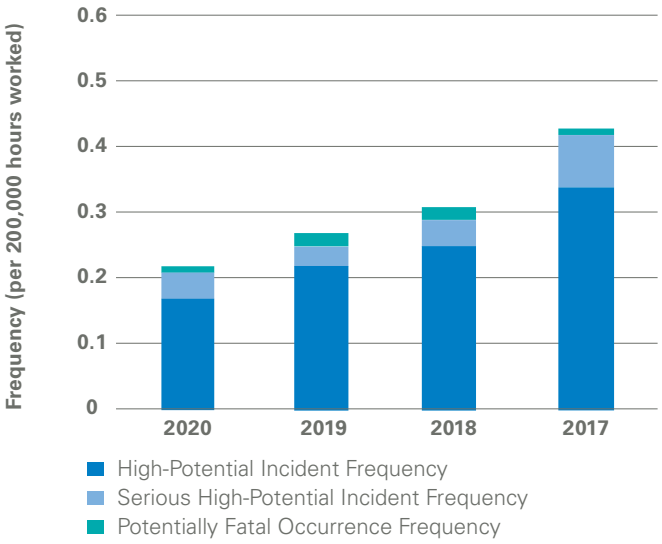
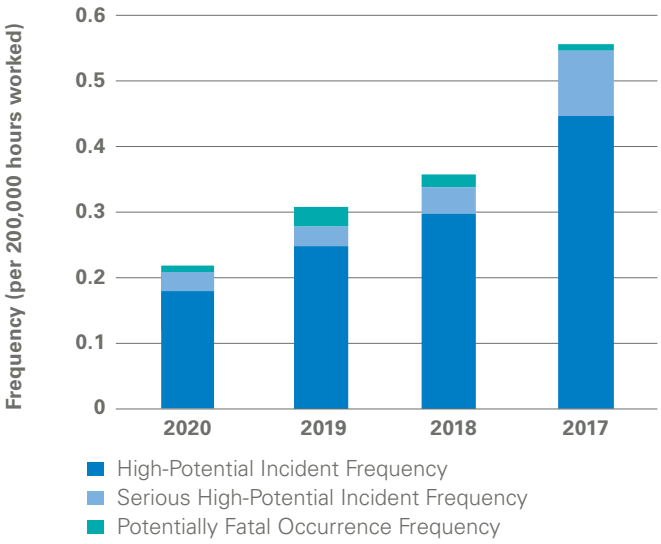


Figure 15: High-Potential Incident Performance — Teck Operated[1],[3]



(1) Frequency indicators in Figures 14 and 15 are calculated by the number of events in the period multiplied by 200,000 and divided by the number of exposure hours in the period, which refers to the total number of actual hours worked by employees/contractors at a site where one or more employees/contractors are working or are present as a condition of their employment and are carrying out activities related to their employment duties.
(2) Safety statistics in Figure 14 include both employees and contractors at all of our locations (operations, projects, closed properties, exploration sites and offices). For sites where Teck owns more than 50%, safety statistics are weighted 100%; for sites where Teck owns 50% or less, safety statistics are weighted according to Teck's ownership of the operation. This includes the Antamina mine (22.5% interest), Fort Hills mine (21.3% interest), Neptune Bulk Terminals (46% interest), and NuevaUnión (50% interest).
(3) Safety statistics in Figure 15 include both employees and contractors at all of our locations in which Teck holds majority ownership and directly manages (operations, projects, closed properties, exploration sites and offices). For sites where Teck owns more than 50%, safety statistics are weighted 100%.

Process Safety Events

Process safety events are those that typically involve an unexpected mechanical integrity failure in a pipeline system or processing facility that may result in a fire, explosion, rupture or hazardous chemical leak. All high-potential incidents (including process safety events) were thoroughly investigated to identify corrective actions to minimize the potential for reoccurrence.

Table 14: Process Safety Events – Teck-Operated[1]

	2020	2019	2018	2017
Process-Related HPIs	**5**	2	7	6
Frequency (per 1,000,000 hours)	**0.10**	0.04	0.22	0.22

(1) Teck-operated data covers all operations in which Teck holds majority ownership and directly manages.

Collaboration with Industry

We work with various local, national and international organizations and programs to incorporate best practices of health and safety into our system. We actively participate in health and safety programs and initiatives of the ICMM, the Earth Moving Equipment Safety Round Table (EMESRT) and the Mining Association of Canada (MAC).

In 2020, Teck became a founding member of the International Mining Standards (IMS) Hub to collaborate on the development and sharing of critical control standards and associated communication tools. We have committed to contributing our standards to the hub so others can leverage our work in health and safety.

Occupational Diseases

We report the incidence of occupational diseases at Teck, based on accepted workers' compensation claims from each jurisdiction in which we work, for the disease categories set out in Table 15. In some cases, as our systems for reporting occupational diseases continue to mature, occupational disease cases and rates may increase in the short to medium term. This is a reflection of the long latency period associated with the development of occupational disease. We continue to enhance our application of improved risk-based controls to prevent occupational diseases.

Table 15: Occupational Disease Cases[1],[2],[3]

Disease Category	2020	2019	2018	2017
Respiratory Diseases	**2**	1	1	3
Hearing Loss[4]	**0**	4	2	5
Musculoskeletal Disorders	**23**	11	6	6
Cancer	**0**	2	0	0
Other Medical Disorders	**5**	1	8	4
Total	**30**	19	17	18

Table 16: Occupational Disease Cases by Gender[1],[2],[3]

	2020	2019	2018	2017
Female	**6**	1	4	2
Male	**24**	18	13	16
Total	**30**	19	17	18

Table 17: Occupational Disease Rate[1],[2],[3]

	2020	2019	2018	2017
Total Occupational Disease Rate (per 200,000 hours)	**0.31**	0.18	0.17	0.19
Total Occupational Disease Rate (per 1,000,000 hours)	**1.57**	0.90	0.84	0.94

(1) Occupational disease data is collected from insurance providers such as WorkSafeBC; global exploration sites or marketing offices are not included.
(2) Occupational diseases are defined as an adverse, generally chronic and irreversible health effect associated with overexposure to chemical, physical or biological agents in the workplace (e.g., silicosis, bladder cancer, berylliosis, metal fume fever, asthma).
(3) Workers' compensation claims data is for accepted claims over the past four years and is for employees only; contractor data is not included.
(4) The reporting for hearing loss may be under-reported, due to limited data availability.

Case Study: Using Advanced Analytics to Improve Occupational Health

Occupational disease, a potential outcome of occupational exposure, represents the single most significant health and safety risk in the mining industry globally. In 2020, we completed the Nanozen pilot project to collect real-time dust exposure data, leveraging the power of advanced analytics to identify opportunities to improve occupational health. The 2020 project included dust exposure monitoring at three of Teck's active operations, and included a broad range of roles with different occupational exposure profiles.

Using advanced monitoring and analysis of the data collected, we were able to pinpoint the specific activities and times where dust exposures occur and prioritize approaches to mitigate them. Real-time dust monitoring will continue to be implemented at our operations going forward. This innovative and industry-leading initiative serves a key role in improving exposure controls and working towards Teck's goal of eliminating occupational disease. Read the full case study at teck.com/news/stories.