

SAFETY AND HEALTH

Performance Overview

- 2011 safety performance on-target
- Maintenance turnaround executed with best ever safety performance
- Addressed exhaust fume exposure hazard in heavy equipment after it was identified as a health risk to operators
- Alberta government investigation ongoing after contract worker dies as a result of a workplace incident

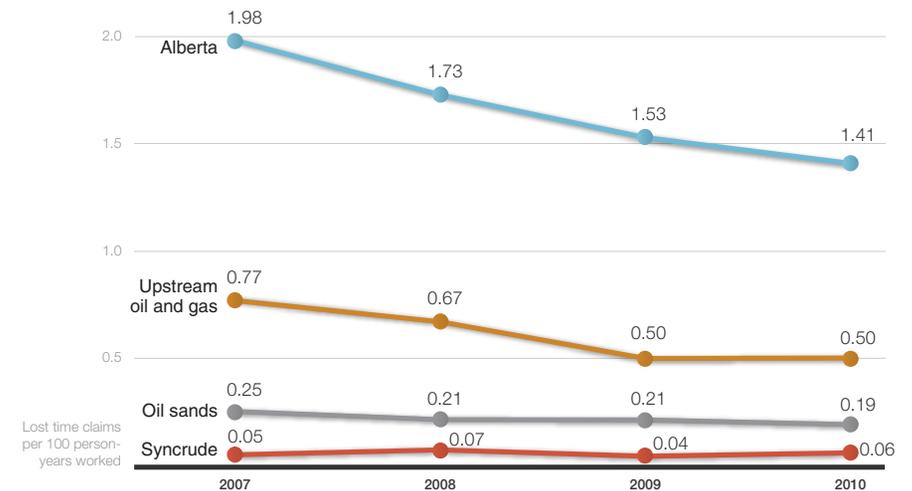
Safety & Health Management System

Syncrude is in the process of adopting the ExxonMobil Operations Integrity Management System (OIMS) as our primary tool for managing personnel and process safety, and workforce health. The new system is expected to be fully implemented by 2013. It focuses on identifying and managing hazards through more clearly defined work processes and workforce responsibilities.

In 2011, an internal team assessed the status and effectiveness of all 11 OIMS elements; the group determined how well hazards are systematically identified, evaluated and controlled; how the risks of these hazards are managed; and that Syncrude is compliant with safety, security, health and environmental regulations. (See [Management Systems](#) for more detailed discussion on OIMS).

We are committed to achieving year-over-year improvement in safety performance towards an injury-free workplace.

Alberta Lost-Time Claim Rate Comparison



Data source: Workers Compensation Board

New Incident, Injury & Hazard Loss Reporting Structure

Syncrude changed its illness and injury classification and reporting system effective January 1, 2011. Occupational illnesses are now included in the calculation of Total Recordable Injury Rate (TRIR) and Lost-Time Injury Rate (LTIR). The new system provides for clearer classification parameters and enables Syncrude management to improve safety performance by focusing on the types of injuries and illnesses sustained by workers. It also enables more accurate benchmarking against other petroleum producers and other Imperial Oil/ExxonMobil worksites.

Syncrude Joins Highway Safety Coalition

In an effort to promote responsible driver behaviours on busy Wood Buffalo region highways, Syncrude joined the [Coalition for a Safer 63 and 881](http://www.safer63and881.com) in 2010. The Coalition aims to engage drivers, help them identify potentially dangerous driving habits and foster long-term behavioural change. The coalition includes oil sands companies, local businesses and government. In 2011, it launched a major multi-media awareness campaign and held an educational Summer Safety Jam that attracted more than 1,500 Wood Buffalo residents. Highways 63 and 881, which carry high volumes of commuter traffic, have seen hundreds of vehicle-related injuries and dozens of fatalities in recent years. The current multi-year project to twin Highway 63 should also help improve traffic safety.



Billboard from Tunnel Vision campaign

Investigation Concluded into 2009 Workplace Death

Separate investigations by the Alberta government and Syncrude have concluded that three factors led to the November 2009 collision between two hauler trucks at Syncrude's North Mine that claimed the life of employee Lyanne Jackson.

The investigations showed that the primary retarder braking system failed on one hauler and the operator of that truck did not apply the emergency/service brake which was available for use at the time.

Subsequently, Syncrude has enhanced truck retarder control system design and maintenance procedures beyond the original equipment manufacturer's specifications. We have also enhanced operator training about safe vehicle operation and emergency procedures.

Syncrude Fined and Creatively Sentenced for 2008 Workplace Death

In February 2011, Syncrude pleaded guilty to one charge under the Alberta Occupational Health and Safety Act, which was laid after the December 2008 incident that caused the death of employee Thomas Miller. Miller was clearing ice from a pipe rack and was fatally injured when he was struck by a large mass of falling ice. Syncrude paid a \$10,000 fine and a \$1,500 victim impact levy and also paid \$365,000 to Keyano College as part of a creative sentence. Keyano is to develop and implement curriculum enhancements on winter hazards for its Process Operator, Power Engineering and Occupational Health and Safety programs, and also establish a \$100,000 endowment for scholarships in memory of Thomas Miller.

2010 Incident Reinforces Commitment to Safety

In December, emergency crews responded to reports of a contract worker found unresponsive at our emissions reduction project construction site. He was pronounced dead at the scene. All appropriate authorities were notified and a government investigation is ongoing. We are committed to providing a safe workplace and steadfast in preventing a similar incident from occurring in the future.

Reducing Worker Exposure to Exhaust Fumes

Worker exposure to diesel exhaust fumes from mobile mine equipment at the Aurora Mine site was identified as a significant health risk in 2010 as a result of a routine hazardous operations risk assessment. Exposure risks to mobile equipment operators at Mildred Lake also were subsequently identified as a result of Syncrude's adoption of an enhanced Incident, Injury and Hazard Loss reporting structure (IIHL), in 2011. Many actual exposure incidents were recorded.

In response, a Mobile Equipment Exhaust Exposure Reduction Committee, led by our Process Safety Department, was promptly established. The group investigated the ways in which drivers are exposed to such fumes and also researched potential solutions; some were implemented immediately and longer-term work continues with equipment manufacturers on engineering solutions. As well, protocols to detect exhaust leaks were established, as were procedures for operators to follow if they detect leaks while operating equipment. Equipment with higher potential for exhaust leaks was given priority for maintenance and repairs. Also, operators are now trained to be alert to the symptoms of exposure and to take measures to avoid fume build-up. Since the changes were made, exposure incidents have dropped to virtually nil.

Emergency Response Preparation

Syncrude's emergency response personnel deal with many different kinds of situations. They prepare for these in various ways, including by participating in regional and national events that provide training in a competitive atmosphere. Their typically strong performance at these events demonstrates their proficiency to handle real-life situations. In 2011, for example, Syncrude teams participated in the [National Scott FireFit Championships](#) and the Western Regional Mine Rescue Competition.

Community Health Studies

The First Nations community of Fort McKay, which is adjacent to Syncrude's Mildred Lake site, agreed in late 2011 to work with the Alberta government to identify the main health concerns of residents and the studies needed to assess the validity of those concerns. Community members have long had questions regarding the health effects of oil sands operations and the agreement should help provide definitive answers. The process will be community-led, with the government working in a supportive role. Negotiations with the community of Fort Chipewyan for a similar agreement on health studies are continuing; that community has expressed concern about the need to include workplans, budgets and timelines into any such agreement.

Recognition for Safety Performance

Each year, Syncrude presents awards to encourage continuous improvement in safety performance throughout the organization and among contractor companies. These awards also enable the sharing of best practices and lessons learned. Two Syncrude suppliers, Terracon Geotechnique and Willbros Canada,

were recognized for having exemplary safety performance in 2010, and two more, Aluma Systems and Fort McKay Group of Companies, were recognized for having the most improved safety performance. For 2011, Clean Harbors and Aluma Systems received the awards for best safety performance, while Clearwater Welding & Fabrication and Finning were recognized for most improved performance.

In addition, two Syncrude departments received awards for excellent safety performance – Utilities and Offsites in 2010 and Hydroprocessing in 2011.

Community Safety Events Help Seniors and Youth

In support of Wood Buffalo Emergency Preparedness Week in 2010, Syncrude provided funds that enabled about 200 regional seniors to receive kits that provide necessities for 72 hours of survival in case of an emergency. Seniors are an especially vulnerable group when disasters happen and the kits will enable improved emergency outcomes for this demographic. At the 2010 Fort McMurray Family Safety Day, helmets that fit and function properly were distributed to about 95 local area children. The event, which received financial support from Syncrude, attracted more than 1,100 people for a day of information sharing and activities that focused on injury prevention, emergency preparedness and wellness.

Emergency Personnel Respond to McClelland Lake Fire

In May and June of 2011, the second largest forest fire in Alberta history came in close proximity to Syncrude's Aurora North Mine. The situation persisted for weeks, creating reduced visibility and air quality, among other hazards. Keeping people safe was our top priority during this time so Syncrude reduced its site workforce to essential personnel and occasionally called for complete work stoppages.

For five weeks, Syncrude emergency response personnel and heavy equipment operators assisted crews from Alberta Sustainable Resource Development in building fire breaks and directing the fire away from work sites and populated areas.

Air quality monitoring continued at both the Aurora and Mildred Lake sites to ensure it was safe to work both inside and outside. Work exceptions were granted to staff with respiratory issues, such as asthma.

During the work stoppages caused by the fire, some equipment operators used the opportunity to upgrade their skills using simulator training.

Safety and Health

	2007	2008	2009	2010	2011
Employee lost-time incident rate	0.06	0.04	0.05	0.09	0.07
Contractor lost-time incident rate	0.04	0.1	0.03	0.04	0.09
Combined employee and contractor lost-time incident rate	0.05	0.07	0.04	0.06	0.08
Employee lost-time injuries (#)	3	2	3	5	4
Contractor lost-time injuries (#)	2	7	2	4	8
Combined employee and contractor lost-time injuries (#)	5	9	5	9	12
Employee total recordable incident rate	0.69	0.49	0.35	0.36	0.83
Contractor total recordable incident rate	0.71	0.63	0.37	0.47	0.70
Combined employee and contractor total recordable incident rate	0.70	0.59	0.36	0.43	0.75
Employee recordable injuries (#)	33	26	20	21	48
Contractor recordable injuries (#)	33	44	29	43	66
Combined employee and contractor recordable injuries (#)	66	70	49	64	114
Syncrude injury severity rate	2.33	0.20	4.20	6.54	7.55
Contractor injury severity rate	1.97	6.26	0.95	4.18	11.92
Syncrude and contractor injury severity rate	2.15	3.63	2.32	5.09	10.26
Injury-free performance – maximum hours between LTIs (millions of hours)	9.7	11.7	14.3	13.1	10.9
Employee health – temporary disability absenteeism (% of Syncrude workforce)	3.8	3.9	4.3	3.8	3.9
Employee health – new long-term disability (LTD) cases (#)	21	21	14	22	32
Employee health – health centre visits (#)	25,904	28,923	27,871	28,880	29,370
Employee fatalities (#)	0	1	1	0	0
Contractor fatalities (#)	0	0	0	1	0
On-site responses by emergency services ¹ (#)	–	2,312	2,117	2,095	1,986
Off-site responses by emergency services ¹ (#)	–	123	104	72	68
EH&S professionals on staff (#)	124	137	136	107	97
Workforce represented in formal joint management-worker H&S committees (i.e. safe operating committees) ² (#)	–	–	–	–	201
Health and safety convictions (#)	0	0	0	0	1
On-site workforce (#)	9,363	11,766	13,518	14,963	15,178

¹ Not reported prior to 2008.

² Safe Operating Committees are a requirement of the Operations Integrity Management System currently being implemented throughout the organization; participation is officially tracked and will be reported on an ongoing basis.

- A **lost-time incident** is an injury / illness that requires medical attention and results in the worker being absent from work; lost-time incident statistics include all lost time injuries / illnesses and fatalities.
- **Total recordable incident rate** includes all injuries / illnesses requiring medical attention, involving work restrictions, or that resulted in a worker being absent from work (recordable injury / illness statistics include all non-first aid injuries / illnesses); it is expressed as injuries / illness per 200,000 work hours.
- **Injury severity** is the average rate of lost workdays per lost-time injury / illness; only lost-time injuries / illness have days lost.