

Quest for Zero Safety Accidents

SK Innovation strives to realize an accident-free workplace in pursuit of its envisioned “lasting happiness for all employees and stakeholders” and win confidence as a trusted partner growing in harmony with local communities. To make it happen, the company chose SHE management as one of its top priorities and is committed to creating a safe and healthy society through ceaseless improvement and prevention efforts.



2025 Targets

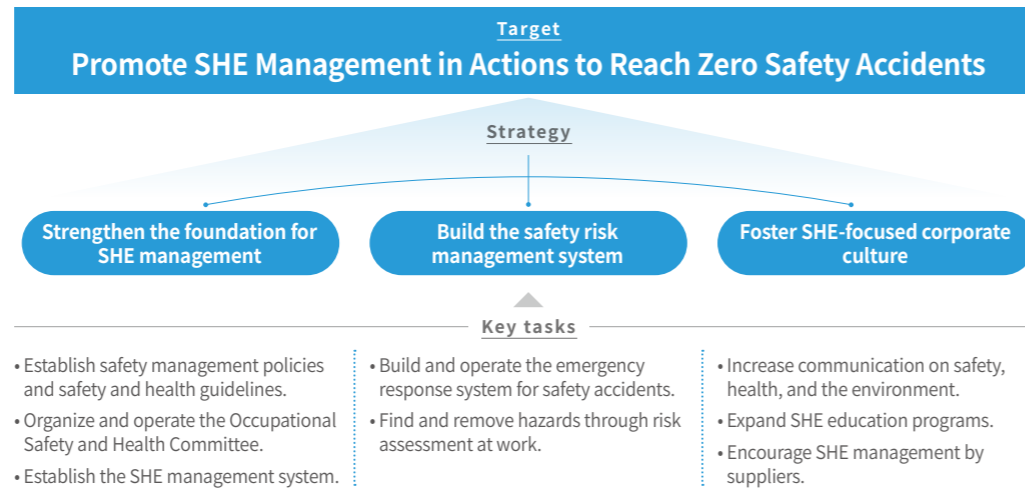
LTIR of domestic business sites

0.062 LTIR

* SK employees and suppliers at domestic business sites (per 200,000 working hours)

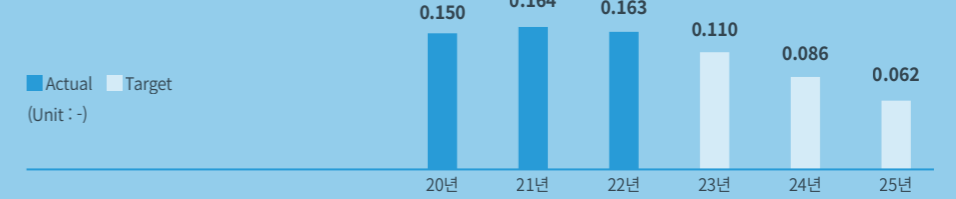
Strategies to Achieve Key Tasks (Mid-to Long Term)

Our mid-to long term target is to lower the lost time incident rate (LTIR) to 0.062 across the domestic business sites by 2025. LTIR is tied to the evaluation and compensation for the CEO and the CSO, as a way to secure momentum to keep actions going. The company will actively find and remove fundamental risks in work processes to lower safety accidents to global standards and will continue to develop education programs on SHE to build the capacity of its employees at the forefront of these efforts. Furthermore, we prepare measures to prevent the recurrence of accidents, receive external inspections, and follow up on internal inspection results. Any special safety issues are put on the agenda of the ESG Committee under the BOD (Board of Directors) to make sure strict management.



Progress & Roadmap

LTIR



Major Activities Planned for 2023

SK Innovation added progress in both LTIR targets and safety accident reduction targets to the SHE performance evaluation criteria for 2023, in a bid to make a substantial cut to the frequency of human injuries. Improvement measures were chosen last year by type of frequent accident (e.g., falls, burns, constriction) and are currently in progress. This year, the work risk assessment was improved to address “insufficient detection and elimination of risk factors” pointed out in our analysis as one of the major causes of accidents. The company also strives to build employees’ SHE capacity for more effective prevention of accidents. An excellent SHE training program is shared with the domestic business sites, and the company supports the development of a common SHE training program for overseas business sites. Going forward, we plan to tighten SHE performance management by upgrading the human injuries measuring process for overseas business sites.



At SK Innovation, the safety and health management system headed by the Chief Safety Officer (CSO) leads companywide efforts, including the subsidiaries, to prevent serious accidents and enhance legal compliance. Drawing on common SHE values shared across the company and independent safety and health management system in each subsidiary, we are making meaningful progress in safety and health management at each business site.

Our Commitment



Excellent SHE management and reliability are the backbones that enable the company to create profits while promptly responding to rapid market changes and to secure the potential sources of profits while minimizing costs.

We have made considerable improvement in SHE and reliability with diverse efforts and our quest for innovation will never stop till the company reaches global excellence.

- Interview on the 60th anniversary of SK Innovation

CEO Choi Yun-seok, SK Incheon Petrochem



Activities and Achievements in 2022

Achievement 1 Safety Risk Management

Finding Risks and Rectification

The Safety Committee is a companywide decision-making body that promotes “safety, technology, and trust”, the core values of the Ulsan CLX, and meets once a month. The Committee pursues to improve our safety culture to global standards, fulfill corporate social responsibility by addressing various SHE issues and preventing serious accidents, and foster an environment where all employees can stay healthy and feel happy. The Safety Committee is supported by subcommittees conducting activities to improve safety and eradicate serious accidents.

Roles of the subcommittees under the Safety Committee

Jedaero (“do-it-right”) Subcommittee	• Select and implement tasks to root out serious accidents, and conduct SHE inspections at work.
SHE Subcommittee	• Make preemptive and active responses to the Serious Accidents Punishment Act and various SHE-related laws.
Safety Culture Innovation Subcommittee	• Spread safety culture campaigns and codes of conduct to plants and provide guidelines.
Safety Control Performance Subcommittee	• Manage safety control performance in ways customized to the characteristics of respective plants and offices.

Risk Assessment on Business Sites

SK Innovation conducts risk assessments on all processes, facilities, tasks, projects, and chemicals at its business sites. In the assessment, we identify hazards and risk factors based on exposures to chemical and physical risks, impact on occupational health, etc., and implement measures to reduce them. At the Ulsan CLX, the records of all inspections and assessments, such as the risk assessment and the pre-commissioning safety inspection, are meticulously managed by Ocean-H (Optimized & Connected Enterprise Asset Network – Hub) introduced in 2021. A total of 713 work risk assessments were registered with Ocean-H last year. Material issues found by the risk assessment are put on the agenda of the management and the BOD(Board of Directors) for review and strategic management.

Achievement 2 Promotion of Culture of Safety and Health

Safety Talk

The Institute of Environmental Science & Technology holds Safety Talk to enhance employees’ safety awareness of the prevention of irregular and atypical accidents as part of its continuous efforts to spread safety culture. Every month, we also conduct safety inspections to check on how Safety Talk is followed up with actions and operate the SHE Bulletin as a channel of communication helping our employees pick up safety-related knowledge with ease and efficiency.

Safety and Health Council with Suppliers

At SK Innovation, every business site operates a safety and health council led by the head of the business site and participated by suppliers following the Occupational Safety and Health Act. Every month, the members of the council gather to discuss the start time of work, emergency contact, evacuation from disaster risks, risk assessment, etc., and discussion results are documented. While complying with these legal requirements, the company makes further efforts to enhance suppliers’ safety management, by holding safety culture workshops for suppliers, active use of the right to suspend work, and operating a task force to eliminate blind spots.

Safety Culture Innovation Week

The Ulsan CLX runs the “Safety Culture Innovation Week” twice a year to enhance employees’ safety awareness and behaviors at work. The purpose of the safety week is consistently communicated with the employees through in-house broadcasting and local media and a range of events unfold, such as “the on-site risks detection challenge” and “safety pledge event” involving all employees, and “safety commitment by leaders”. As such, the company is looking for ways to help employees understand and practice industrial safety by introducing programs they can participate in that are fun.

Safety and Health Training

The company provides safety and health training to leaders and SHE managers for 16 hours or more per year following the Occupational Safety and Health Act. Plant workers and office workers take at least six hours of safety and health education every quarter (24 hours a year), which exceeds the legal education requirement, and newly hired employees take at least eight hours of education pursuant to the law. Our training program consists of regular training for leaders, training for the newly hired, training for changed work activities, training before process maintenance, and training for suppliers. Special safety and health training (16 hours) is mandatory before proceeding with work that involves hazards or risks.



The Ulsan CLX held the safety culture workshop for suppliers.

Achievement 3 Prevention of Safety Accidents

Safety Control with Smart Robots

At the Ulsan CLX, we use smart robots in safety management to provide our employees with a safe workplace and ensure reliable facilities operation. Moving around the Ulsan CLX, these “Smart Robots” check the conditions of facilities, like temperatures and gas leaks, and prove particularly useful in measuring noise and vibration that is hard to sense by humans. We plan to upgrade the functions of smart robots to meet special purposes, such as initial containment of fire and 3D scanning of facilities. Currently, we use “robotic snakes” to inspect the inside of pipelines, which is quite hard to access by other means. Going forward, IT-based, digitalized devices will become an integral part of our safety control system to prevent safety accidents.

Emergency Response Drills

Each business site of SK Innovation prepares various emergency response scenarios by on-site organizations to enable organic and speedy response in real situations and repeats initial response drills with the disaster response organization on a regular basis. These drills include establishing and operating an emergency response HQ and an on-site command HQ led by the head of the business site and the plant head. We start the drills by watching the UCC (user created content) of each scenario beforehand in a bid to make the most of them. These drills enable us to maintain an organic response system where our employees and suppliers know their respective roles and responsibilities and closely collaborate in real disasters and thus minimize damage.

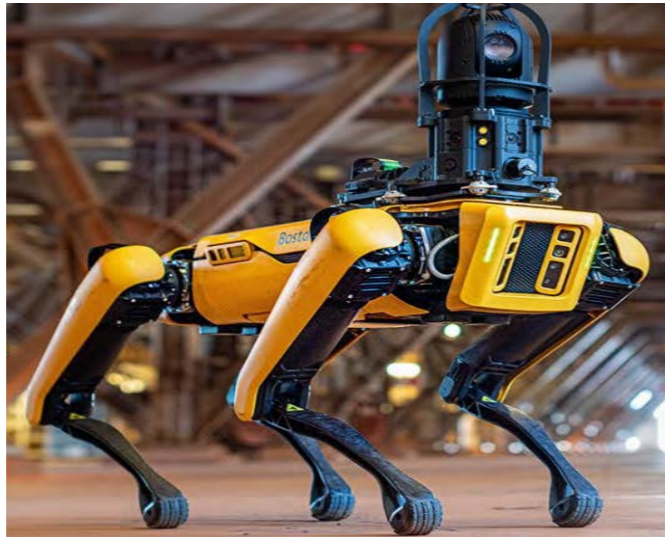
Emergency Response Drills in 2022

(Unit: case)

Category	No. of drills
Hazardous substance leak	71
Rescue for lifesaving	102
Fire and explosion	139
Total	314

Eradication of Serious Accidents

SK Innovation has carried out various activities to root out serious accidents, particularly at the refining and petrochemical business sites since 2019. In 2022, the company made investments to improve facilities exposed to fire or explosion risks by oil mist, assess the feasibility of early detection systems for fire and leaks, improve a leak prevention system for rotating machinery prone to fire, and follow the glass installation and inspection standards. We also established a framework for fast response to and containment of serious accidents and improved management standards and procedures. Among other efforts are frequent inspections on the execution of these activities, a task force to tighten the code of safety leadership behaviors, and various activities to internalize safety culture and engage our employees in action. These activities will continue this year and we will make our best efforts to prevent accidents and minimize damages, if ever.



“Smart robots” work as safety watchdogs at the Ulsan CLX of SK Innovation.



Inspection of the inside of pipelines at the Ulsan CLX of SK Innovation (robotic snake)

* This image is copyrighted by Sarcos.

Department's Comments

[Learn more about pursuing zero safety accidents.](#)