

# Occupational Health and Safety



Safety, security, and occupational health are critical issues in the petroleum industry due to the potential for accidents in operations, production processes, transportation, and distribution, which can have diverse impacts on stakeholders. These include injuries, fatalities, and property loss for workers and surrounding communities, business disruptions from production halts to address incidents and aid affected parties, and environmental impacts such as pollution leaks. Therefore, the Company has established policies regarding safety, security, and occupational health to ensure that employees and contractors have duties and responsibilities for their own safety and that of their colleagues, in compliance with local laws and international standards such as ISO 45001. The Company has operated in line with Process Safety Management (PSM) under the Safety, Security, Health, Environment, and Energy (SHEE) management structure to formulate policy, review, recommend, support on resources, and appoint committees to promote continuous and sustainable improvement in SHEE management systems (Disclosure 403-1). The safety management system includes identifying work-related hazards, assessing risks, and investigating and improving incidents with potential risks. The Company mandates internal audits, such as safety inspections and meetings to

report audit findings and monitor corrective actions by the Safety Committee at least once a month as required by law. External audits, such as ISO 45001 standard assessments, are conducted to ensure comprehensive coverage of safety management systems and monitoring results for all employees and contractors (100%) working at Bangchak Refinery and Oil Depot at Sukhumvit 64 and the head office.

## Targets

- Overall illness and injury frequency rate (OIFR) from work-related injuries equals zero.
- Lost time injury frequency rate (LTIFR) from work-related injuries equals zero.
- Fatality rates from work-related injuries are all zero.
- There are no significant oil or chemical spills into the environment.
- Tier-1 incidents involving the release of flammable or hazardous substances from primary containers or production processes, as per API 754 requirements, equals zero.

## Guidelines for Managing Safety and Occupational Health

The Company is dedicated to continuously improving and enhancing the Safety, Health, Environment, and Energy (SHEE) management system in accordance with ISO 45001 standards, including Process Safety Management (PSM). This ensures that safety operations align with objectives and promotes safety activities both during and outside of working hours (“Safety 24/7”) to instill safety consciousness, knowledge, understanding, and safe practices among employees at all levels and contractors.

Activities to promote safety culture in operations include the following:

- Promoting safety culture transformation initiatives, such as management line walks in work areas, prioritizing safety and demonstrating concern for employee work, along with conducting Field Risk Assessments (FRA) to enable employees to proactively identify hazards and risks for prevention.
- Conducting monthly meetings with the safety officers of contracted companies, and performing joint workplace inspections with contractors on a weekly basis.
- Presenting the Contractor Safety Management Recognition award to contractors who adhere correctly to procedures and serve as exemplary models to their colleagues.
- Setting safety goals and plans collaboratively between the Company and contracted companies through Contractor Safety Management Workshops.
- Celebrating achieving safety hours without any accidents resulting in work stoppages for both employees and contractors.
- Safety promotion activities facilitated by the Safety Committee, involving meetings and idea exchanges between management and employees.

Activities to promote safety outside the work area include the following:

- Advocating for safe driving practices, employees are encouraged to wear safety helmets every time they ride motorcycles and fasten seat belts before embarking on a journey.

Through continuous safety operations and activities, the Company achieved a total of 8,000,000 safe work hours by its employees without any work stoppages due to accidents or medical treatment incidents. Additionally, the Company successfully reached its target of 750,000 contractor-safe work hours without work stoppages due to accidents. Moreover, in 2023, the Company was honored with the prestigious Outstanding Model Business Establishment Award for Safety, Occupational Health, and Environmental Conditions in the Workplace at the national level for the 7<sup>th</sup> consecutive year from the Ministry of Labor.

### Work-related Hazards Identification, Risk Assessment, and Incident Investigation [Disclosure 403-2]

The Company has procedures for identifying hazards, assessing risks, and implementing corrective actions, utilizing methods such as “What if” and HAZOP. These procedures cover the activities of both employees and contractors and include the following key processes:

1. Hazard identification, risk assessment, and corrective action procedures are implemented to reduce and control risks to an acceptable level, with a review conducted at least once a year or when there are changes in work procedures.
2. Job Safety Analysis (JSA) processes are in place for non-routine tasks to identify hazards, assess risks, and provide control measures, integrated with the Online Work Permit system.
3. Safety communication is conducted through safety talks before commencing work, and safety compliance is verified against work permit requirements.
4. Risk assessments are conducted by trained engineers or supervisors who have undergone risk assessment training and assessment reports and control measures are then submitted for review and approval by management.

The results of the risk assessment review in 2023 revealed that word-related hazards posing a high risk of causing high consequence injuries include fire hazards, chemical spills, and falling or impact hazards. Therefore, appropriate hazard prevention and control measures based on the hierarchy of

controls was implemented, such as safe process design, periodic risk assessment reviews, safety management system audits, and provision of personal protective equipment for employees and contractors.

The Company encourages employees to report unsafe acts and conditions through safety observation reports, aiming to prevent incidents before they occur. Therefore, employees and contractors are encouraged to observe and report any unsafe work practices or conditions that may pose risks to themselves or others. Moreover, workers have the authority to cease work and report to their supervisors and area owners if they identify unsafe conditions.

In addition, key performance indicators (KPIs) have been established with incentives provided to reporters based on the number of safety observation reports submitted. This is considered beneficial in preventing incidents and managing risks, thereby reducing the likelihood of accidents. Furthermore, there are procedures in place to inspect and rectify safety issues before authorizing work or conducting activities. Moreover, employees are encouraged to identify hazards and risks in the workplace through various reporting channels, such as the Field Risk Assessment (FRA), Safe Work Practice (SWP), Contractor Safety Management, Operation Audit Team (OAT), PSM Daily Audit, and SHEE Committee which plans are devised for collaborative inspections and providing guidance to workers to enhance their awareness and understanding of potential hazards, leading to proactive prevention measures. Furthermore, the Company has procured personal protective equipment that meets standards, allowing employees easy and rapid access through the warehouse system and automated dispensers.

## Work-related risk and incident investigation process (Disclosure 403-2)

The reporting and investigation of incidents with associated risks and accidents are central to the Company's safety management system in identifying the true causes and establishing controls and preventive measures to prevent recurrence. Incident reporting and abnormal event recording are systematically carried out, covering incidents occurring

in the production process and near-miss events. When such events occur, individuals involved or those who witness them must report to the area owner and relevant personnel within 24 hours. Subsequently, an incident investigation team is appointed to determine the root causes through tools such as Why Tree Analysis and establish measures to prevent recurrence, including recommendations for improvement (Opportunity for Improvement - OFI). The progress of corrective actions is monitored, adjusted based on investigation results, and lessons learned are compiled into learning materials and disseminated to employees and contractors through various Company channels.

## Work-related health services (Disclosure 403-3)

The Company employs a proactive approach to occupational health by conducting Health Risk Assessments (HRAs) covering all areas of the refinery which is aimed at identifying health risks and implementing control measures. Regular monitoring and environmental assessments are conducted in the workplace, including measurements for light, noise, heat, and chemical substances, to ensure the safety of workers' health. Any necessary adjustments to work areas and/or procedures are made, and follow-up actions are taken if safety standards are exceeded during assessments. For office spaces, air quality is monitored in accordance with the recommendations of Singapore Standard 554 : 2016 in which parameters measured include temperature, relative humidity, wind speed, carbon dioxide (CO<sub>2</sub>) levels, carbon monoxide (CO) levels, particulate matter smaller than 10 micrometers, particulate matter smaller than 2.5 micrometers (PM 2.5), total volatile organic compounds (VOCs), and formaldehyde. Additionally, airborne total bacteria count and total fungi count are also monitored. Results from the monitoring activities have consistently met standards from 2018 to 2023.

Furthermore, the Company provides specialized occupational health and medical personnel who are responsible for controlling and advising employees and contractors on occupational health issues. They monitor the health of employees and contractors, including:

- Health examinations are conducted for employees when they begin work, during their work, and upon leaving.
- Employees undergo annual health check-ups, including

general health assessments and assessments for occupational health risk factors, conducted by Company occupational physicians and health professionals. The health check-up protocols are tailored to assess specific occupational risk factors and the results of these health assessments are analyzed internally and externally. If an employee's health check-up reveals abnormalities, they are required to consult with a physician for continuous health monitoring and care. Additionally, there are additional health check-ups based on age-related risks, including screenings for testicular cancer, liver cancer, and gastrointestinal cancers. These health assessments cover lifestyle-related diseases, and employees are encouraged to continuously monitor their health.

- The Company conducts medical emergency response drills with its in-house emergency response team and hospital emergency response teams under contract which aim to foster agility in coordinating efforts and enhance the efficiency of emergency assistance.
- The Company has hired a specialist occupational health physician to assess and improve both the general health screening program and the risk factor-based health assessments. Additionally, the Company has prioritized employee health by establishing an audiometric testing room for annual health check-ups.
- The Company mandates that the contracted Company conducts health screenings for all contracted employees, including monitoring and tracking the results of the health assessments. If any abnormalities are detected during the health screenings, the Company ensures that the employees receive counseling from a physician. Additionally, the results of the health assessments are provided to relevant supervisors and safety representatives.

The Company considers the health data of employees and contractors as personal data under the Personal Data Protection Act. The Company's objective in using this data is solely to promote health and prevent workplace hazards when the health of employees and contractors is deemed unfit for work. Employees and contractors have the right to lodge complaints if their health data is inaccurately used through various channels such as labor unions, the Company's whistleblower channel, and the hotline 1651.

## Participation, Consultation, and Communication with Employees on Occupational Health and Safety (Disclosure 403-4)

The Company appoints a Safety, Health, and Environment Committee in accordance with the law to ensure compliance with safety, health, and environmental principles in the workplace and to continuously improve. The committee comprises operational-level representatives elected separately by job categories, constituting no less than 50% of the total committee members. Regular meetings are held at least once a month to disseminate information, track progress, and discuss future plans. Additionally, high-level management conducts periodic reviews of safety performance.

The Company facilitates communication and encourages employee and contractor involvement in occupational health and safety matters through various activities, including SHEE Excellence Day, communication through outlook, bulletin boards, and a safety radio channel broadcasting news, knowledge, warnings, and Life-Saving Rules Promotion activities. Moreover, the Company simplifies communication by using easily understandable formats for conveying IOGP's life-saving rules.

## Occupational Health and Safety Training (Disclosure 403-5)

The Company conducts safety, health, and emergency response training for all employees and contractors before they begin their duties, tailored to their job positions or the risks associated with their work. Training plans are developed, sessions are organized, outcomes are assessed, and records of training are maintained to enhance knowledge, skills, and understanding of potential hazards, accident prevention methods, and hazard control measures while performing tasks safely.

The Company conducts training and issues electronic contractor cards (Express Safety Pass) by recording contractor data for site access and submitting documents through an electronic system. Additionally, contractors can access safety videos online for convenience and to reduce the time required for training.

## Employee and Contractor Health Promotion (Disclosure 403-6)

The Company promotes employee and contractor health beyond work-related issues through various means such as:

- The Company provides daily nursing and medical services at its onsite medical facility, services include basic healthcare and emergency treatment at no cost to employees and contractors.
- The Company offers annual health check-ups and provides vaccinations for influenza and COVID-19 to its employees.
- The Company has a health promotion program aimed at preventing non-communicable diseases (NCDs), including monthly physical activity initiatives such as step-counting challenges, running events, and simple cardio exercises. Additionally, there are e-Sport competitions like dancing and boxing, nutritional activities are also organized to promote vitamin-rich diets, such as campaigns advocating for sufficient vitamin intake and encouraging the consumption of vegetables to reduce sugar intake.
- The Company organizes hearing conservation activities to promote awareness among employees about the importance of hearing health and prevention measures both in the workplace and in daily life.

### Performance

In managing both employee and contractor safety, the Company tracks and measures performance through key indicators including the Lost Time Injury Frequency Rate (LTIFR), Total Recordable Injury Rate (TRIR), and the rate of high-consequence work-related injuries among both employees and contractors. Operational findings are as follows:

Total Injury Rate of Employees	2021		2022		2023	
	Male	Female	Male	Female	Male	Female
Lost Time Injury Frequency Rate (LTIFR) Employees	0	0	0	0	0	0
Total Recordable Injury Rate (TRIR) Employees	0	0	1.38	0	0	0
High-consequence work-related injuries rate* Employees	0	0	0	0	0	0

\* Injuries resulting in an inability to fully recover within a period of 6 months due to work-related activities.

The Company has implemented a Contractor Safety Management system to ensure that contractors adhere strictly and consistently to safety regulations, including conducting incident investigations. The primary nature of work-related injuries in 2023 mainly stemmed from impact materials and pinch tools. Lessons learned have been incorporated into work practices, with controls put in place to prevent recurrence. Moreover, short-term and long-term improvement plans have been devised, with progress monitored and communicated to stakeholders. This is complemented by activities promoting personal safety to foster a sustainable safety culture. Additionally, the Company has implemented safety measures and initiatives in collaboration with contractors, resulting in zero work stoppages due to accidents (LTIFR = 0) this year.