

OCCUPATIONAL HEALTH, SAFETY AND INDUSTRIAL SECURITY

GRI 403-1, GRI 403-2, GRI 403-3, GRI 403-4



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INVESTING
IN THE FUTURE

MANAGEMENT SYSTEM FOR INDUSTRIAL SAFETY, OCCUPATIONAL HEALTH, AND ENVIRONMENTAL PROTECTION

GRI 403-1, GRI 403-2, GRI 403-3, GRI 403-4

The management system for industrial safety, occupational health, and environmental protection (HSE) has been developed in accordance with the legislation of the Republic of Kazakhstan, international standards ISO 14001 and ISO 45001, and the Company's internal regulatory documents. The system incorporates best global practices, recommendations of the International Association of Oil & Gas Producers (IOGP), and industry standards. The HSE system includes 10 core elements based on fundamental principles: goal setting, leadership, risk management, and continuous improvement.

Since 2006, KMG has implemented an Integrated Management System (IMS) in the areas of quality, environmental protection, occupational health, and safety, in accordance with ISO 9001, ISO 14001, and ISO 45001. Subsidiaries and dependent entities with high energy consumption are certified to ISO 50001. The effectiveness of the IMS is confirmed through regular independent audits. To further improve the management system, certification according to ISO 45001 is ongoing.

The management system is aimed at effectively managing risks and opportunities in the HSE field. Its expected outcomes include injury prevention, minimizing harm to employees' health, and ensuring safe working conditions. One of the Company's top priorities is to eliminate or reduce risks in the area of industrial and occupational safety through the implementation of effective preventive measures.

To enhance the involvement of management and employees in health and safety matters, the Company operates a two-tier committee system:

- First level – The Health, Safety, Environment and Sustainable Development Committee (HSESDC) of the KMG Board of Directors;
- Second level – HSE committees in subsidiaries and dependent entities.

In 2024, as part of the improvement and updating of the management system, the following corporate HSE documents were approved and revised:

- Rules for Reporting on Key Industrial Safety Indicators for KMG Group and Contractors;
- Standard for Waste Management in the KMG Group of Companies;
- Standard for Environmental Impact Assessment (EIA) of Planned Activities in the KMG Group of Companies.

On a quarterly basis, HSE risks are monitored, including environmental risks as well as risks related to climate change and water scarcity. KMG analyzes environmental performance and benchmarks it against leading international oil and gas associations (IOGP, CDP). Particular attention is paid to environmental aspects and risk assessments.



Case Examples

IX Annual Forum "Leadership in Developing a Safety Culture"

On January 25, 2025, the IX annual forum of KMG's subsidiary general directors was held in Astana under the theme "Leadership in Developing a Safety Culture." The event was attended by KMG CEO Askhat Khassenov, heads of subsidiaries, and representatives of leading oil and gas companies – NCOC, Tengizchevroil, and Karachaganak Petroleum Operating.

The forum reviewed the 2024 results in industrial safety, occupational health, and environmental protection and discussed relevant issues. In his speech, A. Khassenov emphasized that ensuring safe working conditions, protecting employee health, and preserving environmental balance are Company priorities.

Representatives from NCOC, TCO, and KPO presented their practices in the field. Achievements of KMG subsidiaries in occupational health and industrial safety were recognized during the event.

"Qorgau" Program: Encouraging Best Practices

During the event, awards were given to the best "Qorğau" safety card observers for identifying potentially hazardous situations:

- **Exploration and Production:** Ruslan Azhgereyev – Electrician of the Production and Technical Department, Ural Oil and Gas LLP;
- **Transportation:** Batyrzhan Aybekov – Lead Mechanic for Motor Vehicles, Karazhanbas OPS, KazTransOil JSC;
- **Processing:** Amangeldi Demegen – Head of Gas and Gas Condensate Transportation Unit, KazGPZ LLP;
- **Oilfield Services:** Anuarbek Sabikhov – Senior Engineer of the Dispatch Group, Mangistauenergomunay LLP.

One of the key events is the annual forum of KMG Group CEOs in the field of HSE organised by the KMG HSE Department.

The Company continues to improve occupational health and environmental safety standards, implementing best practices and ensuring high engagement of leadership and staff in HSE risk management.

KEY INDICATORS

GRI 403-9

NC KazMunayGas JSC places the highest priority on occupational health and safety, as well as the protection of the health of residents living in the regions where the company operates. Our employees acknowledge that the Company ensures safe working conditions and implements the highest standards for workplace safety.

In 2024, the number of work-related injuries decreased by 28% compared to the previous year – from 29 cases in 2023 to 21 cases in 2024. A significant reduction was also recorded in the number of road traffic accidents – down by 68% (from 19 cases in 2023 to 6 cases in 2024). As in 2023, no fires were registered.

One fatal occupational accident occurred in 2024. The incident took place at Ozenmunaigas JSC during tire inflation using a compressor unit. As a result of a lock ring being ejected from the wheel rim, the operator sustained fatal injuries.

The investigation revealed that the causes of the incident included negligence by the injured party, violation of safety requirements, and

unsatisfactory organization of the work process. In response to the incident, KMG implemented a comprehensive set of safety measures:

- Additional briefings and awareness sessions were conducted;
- Work sites were equipped with protective barriers;
- The tire inflation process was reviewed;
- Safety instructions and risk assessments were revised;
- Safety signs were installed, and a ban on tire inflation in undesignated areas was introduced.

Additionally, 57 "Wall"-type safety barriers were installed across 12 KMG subsidiaries to ensure safe tire inflation for vehicles and special equipment. Compressor units were equipped with quick-release nozzles to enhance safety during tire inflation.

These measures are aimed at further reducing injury rates and creating safe working conditions for company employees.

KEY OCCUPATIONAL HEALTH AND INDUSTRIAL SAFETY INDICATORS

Key Occupational Health and Safety (OHS) Indicators	2022	2023	2024	Change 2024/2023	%
Accidents, No. of cases	35	28	21	-7	-25
Injured persons in accidents, No. of people	36	29	21	-8	-28
including fatalities, No. of people	1	2	1	-1	-50
Road traffic accidents, No. of cases	24	19	6	-13	-68
Fires, No. of cases	1	0	0	-	-

INJURY AND FATALITY RATES

Indicator	2022	2023	2024	IOGP ¹⁰
Lost Time Injury Rate (LTIR), per 1 million man-hours	0.36	0.30	0.22	0.22
Fatal Accident Rate (FAR), per 100 million man-hours	1.0	2.11	1.03	0.68
Road Traffic Accident Rate per 1 million kilometers traveled	0.26	0.25	0.08	0.10

SAFETY MANAGEMENT OF PRODUCTION PROCESSES

In 2024, as part of efforts to enhance process safety and prevent emergency situations, KazMunayGas Group continued to develop its Process Safety Management (PSM) system.

One of the key areas was the implementation of a Management of Change (MOC) system at downstream subsidiaries: Pavlodar Refinery, Atyrau Refinery, PetroKazakhstan Oil Products (PKOP), and Kazakhstan Petrochemical Industries Inc. (KPI). As part of this initiative, the following were developed and implemented:

- An MOC Regulation detailing business processes and workflows;
- A Change Management Procedure, including the functions of a Change Control Group;
- A Process Hazard Analysis (PHA) Procedure to improve the identification and evaluation of process risks.

At the end of 2024, a review of corporate documentation across KMG and its subsidiaries was conducted to align it with international standards. Based on the results, a documentation development plan was established, including a PSM Standard and the 20 elements of the CCPS RBPS (Center for Chemical Process Safety – Risk-Based Process Safety) methodology.

One of the highlights of 2025 will be obtaining corporate permission to use the CCPS RBPS standard, enabling the integration of global best practices into process safety management.

Membership in the CCPS will grant access to international expertise and advanced risk analysis methodologies, enhancing industrial safety and minimizing the risk of major accidents.

As part of the MOC system, the following key databases are planned:

- PSI (Process Safety Information) – process safety information, including technical documentation;
- Process Risk Register – a database for assessing and classifying risks;
- MOC Database – a centralized platform for managing change processes;
- Incident Register – a system for tracking and analyzing incidents to prevent recurrence.

Additionally, a training plan will be developed for employees at subsidiaries on the new change management business process and HAZOP risk assessment methodology. The preparation and certification of functional consultants in the CCPS RBPS standard is also planned, who will train subsidiary personnel, supporting sustainable competency development within the company.

The comprehensive set of activities planned for 2025 aims to systematically improve safety management, implement modern risk assessment methodologies, and enhance the professional competencies of subsidiary employees in process safety.

¹⁰ Available IOGP indicators for 2023 (<https://www.iogp.org>).

TRANSPORT SAFETY

In 2024, KMG continued to implement initiatives to improve transport safety, reduce road incidents, and foster a culture of safe driving.

As part of scaling the “Travel management” project, an automated vehicle monitoring system was deployed at Oil Services Company LLP. In Oil Transport Corporation LLP and Oil Construction Company LLP, the automation of vehicle requests and travel scheduling was completed, digitizing the transport request and management processes.

To raise employee awareness about the importance of wearing seat belts, two new “Convincer” crash simulators were purchased

and deployed, bringing the total number in KMG Group to five. As part of the “Stop Road Accidents” campaign, live demonstrations of the simulators were conducted, involving 19,755 employees.

An important component of enhancing transport safety was training in Defensive Driving, which was completed by 5,943 employees of subsidiaries and contractors, including certification under international RoSPA standards.

These measures contribute to lowering transportation risks, improving personnel awareness, and implementing advanced transport safety technologies.

FIRE SAFETY

In 2024, no fires were recorded at KMG facilities. However, there were 16 incidents of smoldering and 3 cases of combustion. In accordance with legislation, these events are classified separately and are not included in official fire statistics.

To strengthen fire protection, as part of the Comprehensive Fire Safety Plan for 2022–2024, scheduled fire tactical drills were conducted at KMG subsidiaries throughout 2024. These included joint exercises at Kazmortransflot LLP with the participation of Samruk-Kazyna JSC and the Ministry for Emergency Situations of the Republic of Kazakhstan.

At the KMG Corporate Center, two fire drills were conducted, including employee evacuation and response procedures for a simulated fire.

Throughout the year, subsidiaries received methodological guidelines to enhance fire safety during high-risk periods – such as the heating season and holidays – and clarifications on fire safety regulations.

Planned initiatives for 2025 include:

- Completion of the long-term activities under the Comprehensive Fire Safety Plan;
- Evaluation of subsidiaries’ and private fire services’ readiness to prevent and extinguish fires at Company facilities.

The implementation of these measures will minimize the risk of ignition and improve the overall level of fire safety across the KMG Group.

INTERACTION WITH CONTRACTORS

GRI 403-7

In 2024, KMG continued its efforts to improve contractor safety by focusing on the identification, assessment, and reduction of risks at production sites.

As part of this effort, a corporate standard for contractor interaction in the areas of industrial safety, occupational health, and environmental protection (HSE) was introduced and recommended for adoption by subsidiaries. This has established uniform safety requirements and clarified the functional responsibilities of contractors.

During the year, KMG’s Health, Safety and Environment (HSE) Department conducted audits at 18 subsidiaries, issuing 824 recommendations to improve safety. A total of 5,883 safety inspections of contractors were carried out at subsidiary facilities and branches.

In 2024, 941 contractor organizations provided services and performed work for KMG subsidiaries. Main activity areas included:

- Equipment maintenance and repair – 15.73%;
- Transport services – 22.02%;
- Cleaning services – 9.89%;
- Sanitary services – 9.44%;
- Oilfield services – 26.5%.

An HSE Forum with contractors was held on November 1, 2024, helping to strengthen partnerships and discuss key safety topics. Core issues addressed at the forum included:

- Engagement with contractors on industrial safety, labor protection, and environmental matters
- Analysis of process management challenges
- Tools to improve the efficiency of contractor collaboration

KMG’s comprehensive approach to managing contractor safety aims to reduce risks, enhance the culture of safe work, and minimize accident rates at Company sites.

Key focus areas for working with contractors in 2025:

- Audits of subsidiaries for compliance with corporate requirements;
- Monitoring contractor compliance with industrial safety, occupational health, and environmental regulations as part of contractual obligations;
- Strengthening pre-mobilization audits of contractors;
- Advancing digitalization of contractor reporting;
- Ranking contractors based on their safety performance.

OCCUPATIONAL INJURIES AMONG CONTRACTOR ORGANIZATIONS

Indicator	2022	2023	2024	IOGP ¹¹
Lost Time Injury Rate (LTIR) per 1 million man-hours	0.52	0.15	0.32	0.24
Fatal Accident Rate (FAR) per 100 million man-hours	1.28	5.08	3.86	0.90
Road Traffic Incident Rate per 1 million kilometers traveled	0.17	0.28	0.05	0.058

DIGITALIZATION IN THE FIELD OF INDUSTRIAL SAFETY, OCCUPATIONAL HEALTH AND ENVIRONMENTAL PROTECTION

In 2024, KMG continued its efforts to digitize processes in the areas of industrial safety (IS), labor protection (LP), and environmental protection (EP), with the aim of enhancing risk management efficiency and minimizing incidents.

As part of the phased implementation of the "Trip Management" project, an assessment of transportation processes within the oilfield service organizations – Oil Service Company, Oil Transport Corporation and Oil Construction Corporation – was conducted. Additionally, roadmaps for the project's rollout were developed and approved. In 2024, the "Trip Management" system was launched in pilot operation at Oil Service Company. The system is planned for implementation at Oil Transport Corporation, Oil Construction Corporation, and Ozenmunaiservice in 2025.

Furthermore, in 2023–2024, an electronic work permit system was successfully implemented at Embamunaigaz JSC and KazGerMunay LLP as part of the digitalization of industrial safety.

Additionally, in 2024, the development of an automated intelligent system for industrial safety, "TUMAR," was underway. This system is designed to prevent incidents during high-risk technological operations and well repairs.

Ongoing digitalization efforts in IS, LP, and EP will enable KMG to enhance safety oversight at production facilities, reduce human error, and implement advanced technologies in industrial safety management.

OCCUPATIONAL HYGIENE AND INDUSTRIAL SANITATION

GRI 403-6, GRI 403-8, GRI 403-10

KMG manages employee health protection in accordance with the legislation of the Republic of Kazakhstan and international standards. The company implements comprehensive

measures to protect employee health, prevent occupational diseases, and improve working conditions.

EMPLOYEE HEALTH MANAGEMENT PROGRAM

As part of the strategic initiative "Employee Health Management," a dedicated program is being implemented, aimed at:

- Improving medical services at production sites;
- Promoting healthy lifestyles among employees;
- Enhancing working and rest conditions.

A roadmap for the 2025–2027 wellness program has been approved, focusing on:

- Preventing occupational diseases and monitoring employee health;
- Comprehensive wellness activities;
- Improving working conditions;
- Health education campaigns.

In 2024, KMG held working meetings with the Ministry of Health of the Republic of Kazakhstan and industry associations to discuss regulatory improvements.

On November 1, 2024, KMG hosted the seminar "Health Matters: Sanitary Control and Medical Support in the Oil and Gas Industry" with representatives from subsidiaries and medical organizations.

15,126 employees were trained in first aid skills.

¹¹Available IOGP indicators for 2023 (<https://www.iogp.org/>).

OCCUPATIONAL SANITATION AUDITS

In 2024, 26 subsidiaries underwent audits for compliance with occupational hygiene and sanitation standards. A total of 168 non-conformities were identified, of which 42 (25%)

were resolved and 92 (55%) were in the process of being addressed. The audits helped improve oversight of medical services and health protection standards.

MEDICAL EMERGENCY DRILLS (MED)

To enhance preparedness for first aid, 91 medical drills were conducted. These included scenarios such as falls, unconsciousness, poisoning, and

cardiac arrest. Emergency response units and ambulance crews participated in the exercises.

ELECTRONIC MEDICAL EXAMINATION SYSTEM (EMES)

Since 2021, subsidiaries have been implementing the Electronic Medical Examination System (EMES) to automate health monitoring. In 2024, 64 EMES units were installed across KTO, Atyrau Refinery, Pavlodar Refinery, PKOP, KazGPZ, Caspi Bitum, MEM, EMG, KBM, KGM, MMG, KTM, and KOA.

EMES advantages:

- High-quality pre- and post-shift medical check-ups.
- Elimination of human error and inaccurate data.
- Reduced examination time.
- Electronic records with photo and video documentation.

MONITORING OF OCCUPATIONAL HAZARDS AND DISEASE PREVENTION

KMG monitors harmful occupational factors (e.g., noise, vibration, microclimate, aerosols) and their health effects. In 2024, KMG adopted a unified occupational sanitary control program aligned with Ministry of Health requirements.

2024 results:

- No occupational diseases reported.
- No health or safety non-compliances related to products and services reported.

Plans for 2025:

- Approval of the Employee Wellness Program.
- Signing a memorandum with the Ministry of Health on radiation safety.
- Conducting medical emergency drills at subsidiaries.
- Implementing a pilot project for digital health monitoring of employees at EMG JSC.

These initiatives will support the development of KMG's employee health protection system and improve the efficiency of medical services across the Group.

