

Annex No. 2 to the decision of the
Management Board of Samruk-
Kazyna JSC
dated _____, 2022
Minutes No. _____

**CORPORATE STANDARD
ON OCCUPATIONAL SAFETY MANAGEMENT FOR
THE
SAMRUK-KAZYNA JSC GROUP**

Version:1.0

Owner: Occupational Health and Safety Sector

Developer: Occupational Health and Safety Sector

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“Safety of employees of Portfolio Companies of Samruk-Kazyna JSC is the main value for me personally and for the Fund as a whole. Participation of Samruk-Kazyna JSC in investment projects and in activities of Portfolio Companies ensures the safety of workplaces, protection of personnel and the public from the effects of hazardous production factors.”

A.M. Satkaliyev

Chief Executive Officer of Samruk-Kazyna JSC

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Section 1. Goal and General Provisions

- The main goal of the Corporate Standard on Occupational Safety Management for the Samruk-Kazyna JSC Fund Group (hereinafter -the Corporate Standard) is a unified regulatory and methodological support for issues as part of building/improving the occupational safety management system of Samruk–Kazyna JSC (hereinafter - the Fund) and its Portfolio Companies, subject to the legislative requirements of the Republic of Kazakhstan, world’s best practices and approaches, as well as specifics of Portfolio Companies of the Fund.
- Requirements of this Corporate Standard are established in accordance with requirements of the legislation of the Republic of Kazakhstan in the field of occupational safety, safety of the transportation process, industrial, fire, radiation, nuclear safety, etc., fully comply with them and are an addition to them. The need to improve the current occupational safety management system is related to the importance of safety, accident and injury prevention, and introduction of modern proactive models and tools in occupational safety management that ensure the planning, solution and monitoring of the following tasks:
- Achieving a highly organized system for ensuring occupational safety, where the company operates without failures, as the number of malfunctions,

- downtime and problems with the quality of products and services is reduced;
- Improving the culture of occupational safety, as well as involvement of staff at all levels;
 - Implementing a systematic approach to the management of occupational safety processes, simple, transparent and understandable at all levels;
 - Preventive management principle aimed at preventing accidents, injuries and occupational diseases;
 - Preventive identification of hazardous actions and conditions to reduce the number of accidents, failures and incidents, as well as the scale of their consequences (damage);
 - Unifying approaches to ensure compliance with applicable legislative and other requirements in the field of occupational safety, unified data management and elimination of duplication;
 - Organizing a systematic analysis of the root causes of accidents and occupational diseases, causes of accidents and incidents, hazardous conditions and hazardous actions, as well as cases of violation of regulatory requirements;
 - Ensuring rational planning and implementation of measures to create favorable and safe working conditions and timely elimination of non-compliance with regulatory requirements;
 - Ensuring reliable operation of hazardous production facilities in accordance with regulatory requirements for operation and risk management system;
 - Ensuring the effectiveness of production control and realization of an integrated approach to its implementation at all levels, detailed monitoring and analysis of occupational safety processes;
 - Ensuring coordination of employees' actions and awareness in the field of occupational safety.

Section 2. Scope of Regulation

- This Corporate Standard applies to the occupational safety management system in the Fund group engaged in production activities. Requirements of this Corporate Standard do not contradict the current legislation of the Republic of Kazakhstan and the corporate governance standards of the Fund and Portfolio Companies (hereinafter - PCs).

Section 3. Definitions and abbreviations

- This Corporate Standard applies following definitions and abbreviations:
 - **Root Cause Analysis (RCA)** - a structured, step-by-step process that helps identify the main factors or causes of an adverse event. Understanding the factors contributing to a system failure, or the causes that cause it, helps to develop a response plan to eliminate the problem and avoid it in the future;
 - **Life-Saving Rules** - key requirements for the safe performance of work, developed on the basis of international best OS practices of leading companies, as well as analysis of available information about accidents, incidents and failures that have occurred in the Group of companies;
 - **Lagging Indicators** - indicators for assessing the extent and actual consequences in the risk management system, reflecting one or more obstacles (barriers) at the same time;
 - **Safety observation card/Hazard observation card** - a tool that allows employees of PCs and contractors to report unsafe working conditions, actions, behavior, potentially hazardous cases at facilities, as well as make proposals to reduce the impact of hazardous and harmful production factors, improve working conditions, the condition of equipment, buildings, structures and applied mechanisms, tools in the course of work, which is a fundamental element of preventive measures for risk management in the field of OS;
 - **Key performance indicators (hereinafter - KPIs)** - a fundamental element in the process of evaluating the performance of managers. KPI - an indicator that characterizes the degree to which goals are achieved;
 - **The Motor Vehicle Crash Rate (MVCR)** - the number of road accidents that have occurred in the last 12 months, multiplied by 1 million km and divided by the mileage traveled (in the last 12 months);
 - **Fatality Accident Rate (FAR)** - the number of fatalities that have occurred in the last 12 months multiplied by 100 million man-hours and divided by the total number of man-hours worked (over the last 12

months);

- **Lost Time Injury Frequency (LTIF)** - the number of injured (including dead ones) in Accidents with disability that occurred over the past 12 months, multiplied by 1 million man-hours and divided by the total number of man-hours worked (over the past 12 months);
- **Root (main) causes** - factors related to management, such as deficiencies in the management system that influenced the occurrence of an accident or incident;
- **Corrective Measure** -an action taken to eliminate the cause of an identified nonconformity or other undesirable situation and prevent its recurrence;
- **Crisis Situations** – an unplanned disruption of the normal functioning of the PC, endangering the stability of its activities; an incident that can have a significant impact on the PC reputation, its financial well-being or viability in the long term;
- **Safety Culture** - a set of characteristics and features of the activities of organizations and the behavior of individuals, which establishes that OS issues, as having the highest priority, are given attention determined by their significance;
- **Safety Measures** - planned specific activities of an organization aimed at fulfilling the goals in the field of OS, determined by the requirements of legislative and other regulatory legal acts, including the organization's policy and internal regulatory documentation;
- **Microtrauma** - a FAC, First Aid Case, limited to one-time treatment and subsequent examination of minor scratches, cuts, burns, splinters, etc., which does not entail medical care or a more serious injury;
- **Vision Zero** - an approach to prevention that combines three areas - safety, occupational health and the well-being of workers at all levels of production;
- **Hazard** - an industrial factor that can cause injury or other harm to human health;
- **Leading Indicators** - indicators for assessing the extent and actual consequences in the risk management system, reflecting the effectiveness in maintaining the risk management system;
- **Behavioral Audits/Surveillance/Safety Dialogues (SBA/SBS/SBD)** - an observation in which managers of all levels, specialists of all categories, representatives of employees and employees of OS services visit production facilities, places of work, observe the actions of employees and discuss hazardous or safe working methods and involve employees in active compliance with the OS requirements;
- **Contractor** - a legal entity or an individual who performs work, renders services or supplies inventory items on the territory or in the interests of the Fund PC in accordance with a contract (agreement) and which may affect the OS quality;
- **OS indicators** - indicators characterizing the PC activities in the field of OS;
- **Near Miss** – an incident that did not cause injury or damage;
- **Proactive Tools (methods)** - an approach aimed at improving the safety culture, as well as at anticipating the manifestation of negative

consequences on workers and the environment, through prompt and targeted elimination;

- **Occupational Safety (OS)** - a management system that includes processes in the field of occupational safety, industrial and fire safety, as key areas and radiation, nuclear safety, electrical safety, transportation process safety, etc., as specific processes of individual PCs;
- **Accident** - any unplanned event that occurred as a result of or during the production activity of a PC, which led or could lead to an accident related to work, to a fire, explosion, accident, incident or failure, a traffic accident or any other event that has an impact on the business and reputation of the PC;
- **Occupational Disease** - an acute or chronic disease caused by the exposure of an employee to harmful production factors in connection with the performance of their work (official) duties.
- **Risk** - a combination of the probability of occurrence of a hazardous event in the course of work, the severity of injury or other damage to human health caused by this event;
- **Physical Cause** - a malfunction or a change in the quality of the equipment, or when the physical condition of the equipment leads to undesirable consequences. As an example, the following situations can be cited: pipeline rupture/leakage, pump vibration, malfunction of the heat sensor, formation of carbon deposits on the furnace pipes, lightning entering the tank, or a short circuit of the electrical wiring;
- **Human Factor** - a human action or inaction that caused an undesirable physical condition or action.

Section 4. Basic Principles and Approaches

- Basic principles of OS management are as follows:
- **Management Leadership** - managers create unity of goals of the company and management, demonstrate commitment to principles on OS issues, create and maintain an internal environment in which employees could be fully involved in achieving the company's goals;
- **Employee Engagement** - employees at all levels form the basis of the production process, full involvement makes it possible to effectively use their abilities to improve the safety culture;
- **Systematic Approach** - the efficiency and performance of OS are improved by defining, understanding and managing a system of interrelated processes in accordance with established goals;
- **Risk-Based Decision-Making** - effective decisions are based on a proactive analysis of data and incoming information;
- **Continuous Improvement** - continuous improvement should be an ongoing goal of OS management to improve operations and ensure benefits.
- Persons responsible for organizing the OS management system should be senior managers directly reporting to the CEO of the company.
- For the effective and efficient functioning of the OS management system, it is necessary to train and certify personnel of various categories according to legal requirements and internal procedures. Staff training should be continuous, step-by-step, and include basic training for both managers, starting with their senior management, and employees of departments according to applicable

system requirements.

- Along with the training, the staff is constantly informed and familiarized with the goals and tasks in the field of OS.
- Confirmation of the high-quality functioning of the OS management system is the availability of standards, procedures, instructions, manuals and other documents that describe the processes necessary for functioning of the OS management system. The scale and depth of the procedures are determined depending on the size and type of production, the complexity and interconnection of processes, methods used, as well as qualifications and degree of staff training involved in the work.
- For organizing the OS management activities in the Company, the principle of a process approach is applied, including processes of the management system, implementation of senior management responsibilities (defining strategies and goals, planning company activities and resources), resource management (HR, infrastructure and production environment), measurement, analysis and improvement.
- In the effective OS management system, processes are established and maintained in a consistent manner:
 - Responsible persons for processes are appointed;
 - Procedures and techniques related to it are documented;
 - Necessary resources are identified and the processes are coordinated;
 - Their interrelationships are determined;
 - Their compatibility is ensured.
- Functioning of the system ensures transparency, manageability, development, competitiveness of production activities, and must also comply with the Plan-Do-Check-Act cycle and include the following areas:
 - Planning of the OS management system;
 - Functioning of the OS management system;
 - Monitoring and analysis of the OS management system;
 - Subsequent improvement of the OS management system.
- Relevant approaches are being established to achieve the main tasks of the Fund in the field of OS management:
 - Promote best practices in the field of OS and show commitment to the Zero Traumatism concept;
 - Act in strict accordance with the national legislation of the Republic of Kazakhstan, develop and improve the internal/local requirements of the Fund companies based on the best international practices;
 - Maintain an effective OS management system in PCs and contribute to the growth of employee engagement and improvement of safety culture;
 - Develop and finance measures aimed at improving the safety of specific production processes and creating healthy and safe working conditions in the Fund PCs;
 - Maintain effective monitoring and control systems for the state of working conditions and occupational safety in the workplace, prevention and localization of emergency situations;
 - Improve the OS management system and promote the use by PCs, contractors and related organizations of the same principles defined in this corporate standard;
 - Apply proactive tools to increase the OS level, such as registration and

investigation of hazardous conditions, hazardous actions and potentially hazardous incidents Near Miss, conducting Behavioral Audits/Observations/Safety Dialogues, using safety monitoring/event registration cards, exercising the right to stop unsafe work conditions, and more;

- Ensure the necessary safety measures for workers and the public in the area of production facilities in accordance with current legislation;
 - Develop and improve the technical equipment, structure and level of training of operational personnel of organizations, formations serving high-risk facilities, warning and emergency response systems to reduce and control the level of the risk of accidents and emergencies at production facilities;
 - Establish a unified procedure for recording and investigating industrial accidents, including cases of occupational diseases, as well as events affecting the safety of facilities;
 - Ensure the application and operation of digital, automated, information OS systems;
 - Improve the qualification of specialists - develop the professional skills of personnel in the field of OS;
 - Ensure the safety and hygiene of workplaces;
 - Motivate employees by involving them in solving OS issues together with management;
 - Develop and implement programs to achieve goals and take concrete steps;
 - Ensure the protection of the health of employees by prioritizing the life and health of employees in relation to the company's activities;
 - Increase transparency and develop a culture of free expression of employees about incidents, hazardous conditions, hazardous actions and potentially hazardous incidents Near Miss in the field of OS.
- The application of above-mentioned approaches is minimal and can be expanded by a decision of the PC management. These approaches are necessary to increase the efficiency of the OS management system, which will allow achieving a qualitative improvement in the safety culture, reducing injuries and accidents.

Section 5. Business processes

- Processes of occupational safety management are based on the following:
 - **Occupational safety.**

Description: recognize and ensure the priority of preserving the life and health of employees in relation to the results of production activities. The principle provides for implementation by the management of a OS policy, stimulating the creation of healthy and safe working conditions, introduction of safe technologies, use of personal and collective protection equipment, and participation in priority financing of OS measures.

Value: application of this principle will make it possible to increase the priority of OS issues and form an approach in which economic benefit will not be of primary interest when it comes to OS.

- **Unification and establishment of uniform OS requirements for all production companies of the Fund.**

Description: Manage OS activities, including supervision and compliance control, including the use of advanced automated/digitalized technologies for a unified management system. The principle is based on the standardization of approaches to OS, optimization of all management procedures and reporting, guarantees of transparency and comparability of information received from all companies of the Fund.

Value: the use of a unified, automated/ digitalized approach will allow to take decisions quickly, save money on the coordination and control over all OS activities.

- **Risk-based approach to the organizing and planning of activities.**

Description: it strives to achieve OS through managing and controlling the amount of acceptable risk. The principle is based on the acceptance of the minimum amount of risk that is achievable through technical, economic and technological capabilities. The amount of acceptable risk depends on the type of industry, profession, and the type of negative factor that determines it.

Value: the use of a risk-based approach, subject to economic opportunities, will improve the safety of technical systems, reduce acceptable risk and ensure the continuity of production activities. The level of acceptable risk is achieved as a result of optimizing the cost of investments in the technical, technological and social sphere of production.

- **Awareness of employees about the state of working conditions and labor protection.**

Description: it is necessary to achieve a positive effect, influence on the discipline

and mood of employees by involving employees through providing timely feedback, as well as increasing their awareness, forming a safety culture. The principle is based on the dissemination of advanced domestic and foreign experience in improving working conditions, working out information about accidents, including industrial accidents.

Value: increase employee loyalty, increase efficiency and quality of work, increase safety culture. The involvement of each employee in the implementation of OS measures and the system of continuous identification and elimination of hazards and risks.

- **Regular planning and monitoring of planned OS indicators.**

Description: achieving corporate and social responsibility and goals, increasing production efficiency through the assessment and control over OS indicators at all levels in the Fund companies.

The principle is based on preventive planning and reduction of the number of violations and hazardous OS behavior by employees, commitment to the OS policy, as well as ensuring continuous improvement through compliance with legislation, proactive management methods and high speed of decision-making and control over decisions execution.

Value: increasing the efficiency of the used complex of organizational and technical measures in planning by maximizing the return and payback of invested funds.

- **Compliance with applicable requirements.**

Description: reducing the risks of non-compliance with standards, technical and regulatory acts in force on the territory of the Republic of Kazakhstan.

The principle is based on achieving compliance and adaptation of business processes when legislation changes.

Value: increasing the degree of compliance, reducing the occurrence of risks and penalties, reducing the risk of accidents.

- **Ensuring the completeness, transparency and reliability of information.**

Description: transparency of the information provided, including through digitalized technologies with the appointment of a responsible person for the completeness and reliability of the information.

The principle is based on increasing the level of awareness of management and employees through promptly providing information in a convenient format for taking operational decisions.

Value: increasing the efficiency of process management.

Section 6. Process description

- Methodologically, the OS management system is based on principles of international standards such as ISO 45001, ISO 31010, etc., recommended for use in the Republic of Kazakhstan and permits to conduct activities in the field of OS using state, industry and local requirements.
- OS processes include management system planning, management system functioning, management system monitoring, management system efficiency analysis, including regulatory requirements tracking, production control, inspections and other processes that ensure compliance of activities with applicable requirements.

- **Planning of the OS management system**

- Planning of OS activities shall be carried out by:
- Formation of an OS policy and development of OS goals;
- Identification and risk assessment;
- Identification of legal and other applicable OS requirements;
- Development of OS measures.

Management's responsibility

- Management undertakes the following obligations to confirm its leadership and ensure the effectiveness and efficiency of the OS management system:
- Leadership – assuming overall responsibility for the prevention of injury and deterioration of health, as well as providing safe and healthy workplaces and activities;
- Development of the mission, vision, values and strategic goals of the company;
- Development of policies and OS goals as well as their periodic monitoring, discussion and adjustments;
- Communicating the Policy and OS goals to each employee, achieving universal understanding and support for the set goals and tasks;
- Bringing the importance of meeting the OS requirements, as a personal responsibility of each employee to the attention of the staff;
- Provision of the organizational structure and resources necessary to maintain the OS management system in working order;
- Timely financing of work on the creation, implementation and development of the OS management system;
- Conducting an analysis of the OS management system by the management and taking measures to improve it;
- Creating an environment contributing to employee engagement in the management of OS processes and procedures;
- Continuous staff training at all levels of management of the organization, improving their skills and business qualities;

- Increasing staff motivation;
- Ensuring the efficient and effective functioning of the OS management system and its continuous improvement.
- Managers at all levels, within their competence, are responsible for managing and involving employees in the process of achieving goals and fulfilling OS tasks. This is achieved in the following ways:
 - Managers are an example of behavior, demonstrate commitment to OS issues by their personal example, form and encourage a positive attitude of employees towards OS issues;
 - A manager maintains open and effective interaction with employees;
 - Each manager improves their skills and knowledge in the field of OS in the process of training and practical work;
 - Managers ensure the exchange of information on OS issues with employees, contractors and other persons, including through meetings, regular monitoring of compliance with the requirements of the OS management system in the workplace, and open discussion of OS issues with employees;
 - Managers formulate clear goals and OS tasks, assign responsibilities and areas of responsibility, define performance criteria, allocate the necessary resources;
 - The OS activities of managers are assessed on the basis of their fulfillment of annual target indicators in this area;
 - Managers promote the dissemination of OS experience, demonstrate support for OS processes;
 - Managers are responsible for organizing the risk management process in the field of OS in their subdivisions;
 - Managers create working conditions that allow any employee to demand that work be stopped if its continuation poses a hazard to employees and people around them;
 - Managers ensure continuous improvement of existing OS practices and procedures.

Policy formation and goals development

- The OS management system in the company ensures the development and implementation of the company OS Policy, followed by the development of goals based on legitimate and socially responsible business and commercial activities.
- The OS Policy is an equal and consistent part of strategic goals of the company.
- The Policy management procedure includes: development, coordination, approval of the Policy, communication to staff, updating, analysis and, if necessary, making changes.
- Supreme management ensures that Policies are understood, implemented and supported at all levels.
- The Policy is implemented using the OS management system, which sets goals, tasks and procedures for the performance of work, distribution of responsibilities and authorities, allocation of resources, including providing of qualified personnel, constant monitoring of the organization's processes and

analysis of the system functioning as a whole.

- Policy analysis for relevance, continued suitability and compliance with goals is carried out annually, as well as when strategic goals change.

OS Goals

- The main requirements for building the structure of the OS management system, ensuring effective goal setting:
 - Apply a systematic approach to OS management aimed at identifying risks and their effective control;
 - Promote best OS practices;
 - Apply proactive injury reduction tools;
 - Ensure the preservation of the life and health of employees, as well as to promote a healthy lifestyle;
 - Ensure compliance with OS as a factor of sustainable development of the company;
 - Implement advanced digitalized OS management software technologies;
 - Delineate functions at all levels;
 - Carry out direct and feedback communications of all management units;
 - Improve qualifications – develop professional skills.
 - Goals, tasks and measures for their implementation are formed on the basis of requirements of the OS Policy, identified and assessed hazards and risks, as well as proposals from heads of subdivisions, subject to allocated resources, including the opinions of stakeholders (employees, contractors, customers and companies engaged in similar activities).
 - In accordance with the OS Policy and based on initial or subsequent analyses of the OS system functioning, measurable OS goals should be established, which should be:
 - 1) specific to the organization, as well as acceptable and appropriate to its size and nature of activity;
 - 2) consistent with requirements of relevant and applicable national laws and regulations, as well as with the technical and commercial obligations of the organization related to OS;
 - 3) aimed at the continuous improvement of protective measures and the Zero Traumatism achievement;
 - 4) realistic and achievable;
 - 5) documented and brought to all relevant functional structures and PC levels;
 - 6) periodically evaluated and updated if necessary.
- The OS Action Plan is developed annually, which specifies the tasks set to improve the safety culture and perform safe work.
 - The Report on completing tasks is sent within the time limits set by the Action Plan.
 - The achievement of goals and the fulfillment of OS tasks is regularly, but at least once a quarter; it is monitored and analyzed by management.
 - When analyzing, the management should put emphasis on:
 - Deadline for completion;
 - quality of execution;
 - progress of execution;
 - sufficient funding, if necessary.

Identification and Assessment of OS Risks

- Identification of OS risks is an ongoing process that determines the past, present and potential impact of PC activities on occupational safety. When planning, all types of PC activities are considered, as well as operations performed by contracting organizations and other contractors, persons, in accordance with concluded contracts, based on the OS requirements when performing certain types of work/services.
- Identification of hazard sources during systematic inspection of production operations makes it possible to identify risks to the life and health of workers, production facilities and equipment.
- Prioritization of OS risks is carried out subject to results of their assessment, as well as the impact on human health, equipment condition, reputation and activities of the company.
- It is necessary to plan a systematic review of results of the hazard sources identification, assessment and prioritization of risks.
- Risk management permits to achieve the following OS goals:
- Creating a more complete, accurate and correct basis for decision-making and planning;
- Ensuring more reliable identification of hazards and potential threats;
- Estimating the uncertainty and variability of OS-affecting processes;
- Preventive elimination of sources of hazardous events;
- More efficient allocation and use of resources;
- Improving the management of potentially hazardous incidents;
- Ensuring compliance with legal and other applicable requirements;
- Improving the OS management system;
- Increasing the OS level.
- Stages of risk management are divided into:
- Identification of hazards;
- Risk assessment;
- Development of risk management measures;
- Implementation of the developed measures;
- Control over the measures.

Identification of hazards

- The source of information (the basis) for identification of hazards are:
- regulatory and technical acts, standards in force on the territory of the Republic of Kazakhstan, as well as internal regulatory documents of the PCs;
- results of inspections of supervisory and controlling state bodies of the Republic of Kazakhstan;
- results of production control over OS;
- results of the production facilities certification according to working conditions;
- results of monitoring the technological process, production environment, workplace, work of contractors, external factors;
- results of the analysis of questionnaires, inquiry schedules;
- results of occupational safety state audits;
- risk assessment registries;
- proactive tools (behavioral safety audits, identification and accounting of potentially hazardous incidents, microtraumas, etc.);
- statistical data and analysis of injuries and accidents;

- circumstances of incidents and accidents that occurred in the PC or similar industries.
- Sources of OS hazard in accordance with the hierarchy of control measures are subject to (in order of decreasing their effectiveness):
- deleting;
- replacing;
- managing;
- control;
- providing personal and collective protective equipment.

Risk assessment

- Risk assessment refers to determining the magnitude and significance of emerging risks based on early identified hazards. Risk assessment includes the establishment of probabilistic (frequency) characteristics and severity indicators. Risk assessment is the most effective preventive measure. When assessing risks, not only adverse events and accidents that occurred earlier are taken into account, but also hazards that have not yet caused adverse consequences.
- Risk assessment is a continuous and systematic process and permits to identify hazards before they cause an accident or cause other harm.
- Informed decisions can be taken to improve the level of safety based on the risk assessment. In order for the risk assessment to really result in improvements, it is necessary to determine priority measures based on the data obtained. The most effective measures include measures to completely eliminate the most apparent hazards. The proposed measures should be specific and feasible.
- Risk assessment is carried out according to the risk matrix under the set process in companies.
- Results of the risk assessment and the risk management measures developed are used as input data when compiling OS work plans.
- The main goal of the risk assessment process is a detailed study of what can harm personnel, facility, environment or PC reputation, conducted in such a way that it is possible to weigh whether enough management measures have been implemented and what exactly should be done to prevent possible undesirable consequences.

Development of Risk Management Measures

- When developing measures, it is necessary to be guided by requirements of the legislation of the Republic of Kazakhstan, internal documents that are applicable to a specific risk and hazard.
- Risk management measures being developed should be feasible subject to time, financial, labor, technical, legal and organizational constraints.
- The list of activities includes subordinate activities, for each of which the following is given:
 - Risk name;
 - Facility (material, unit of equipment, technical location, etc.);
 - Legal and regulatory requirements;
 - Management tools (measures to reduce risks);
 - Resources;

- Responsible;
- Deadline for completion;
- Mark on completion.

Implementation of the developed measures

- Implementation of the developed measures is necessary to reduce risks.
- Control over implementation of the measures is carried out by the designated person responsible for measure implementation.
- When performing, it is necessary to understand the problem as a whole, assessing the effectiveness of the implemented risk reducing measures.
- Implementation of measures is not limited to the available resources to reduce risk.

Control over the measures

- The goal of the control is to evaluate the completed activities and changes in the situation.
- Through regular monitoring, it is necessary to monitor changes in risk levels, the emergence of new risks, as well as the degree of effectiveness of measures taken.
- The need for control depends on:
 - the magnitude of a risk level;
 - resources at disposal;
 - changes, completed activities.

Identification of legal and other applicable requirements

- In their OS activities, the Fund PCs are guided by legislative requirements, regulatory documents, standards in force on the territory of the Republic of Kazakhstan, as well as internal regulatory documents (hereinafter – IRDs) (technological regulations, instructions, plans of organizational and technical measures, orders, instructions, etc.).
- Compliance monitoring of the company's activities with legislative and other applicable requirements includes:
 - identification and registration of legislative and other OS requirements, which apply to the PC activities;
 - monitoring changes in existing requirements of legislation and regulatory OS documents, as well as the emergence of new requirements;
 - access of PC personnel to legislative and other OS requirements;
 - OS performance evaluation of the company for compliance with legislative and other requirements.
- Main sources of information for monitoring the compliance of PC activities with the requirements of legislative and other documents include:
 - regulatory, legal and technical acts, standards in force on the territory of the Republic of Kazakhstan and other applicable OS requirements;
 - technological regulations (operation charts);
 - requirements of state supervision and control bodies;
 - results of inspections and implementation of OS measures;
 - registers of hazards and risks of the company;
 - results of certification of production facilities, etc.
- Based on the PC's OS performance evaluation in accordance with requirements

of regulatory and legal documents, in case of non-compliance, measures (corrective, preventive actions) are developed.

OS Measures

- Measures are records of planned actions that need to be performed in connection with the risk assessment carried out, implementation of best practices, need to comply with legislative requirements, IRDs, as well as due to received acts and regulations.
- Planning of OS measures includes:
 - development, coordination and approval of programs as part of the OS management system;
 - development and implementation of annual OS action plans, including occupational safety and health, industrial and fire safety.
- Planning is based on:
 - requirements of the legislation of the Republic of Kazakhstan and international OS requirements ratified in the Republic of Kazakhstan;
 - PC strategies and internal OS requirements;
 - legal requirements of public authorities;
 - results of the risk assessments carried out;
 - results of the examination of technical devices, certification of production facilities;
 - environmental monitoring results;
 - analysis of the root causes of accidents, violations of rules and regulations, accidents and occupational diseases, emergencies;
 - analysis of the state of labor protection and health conditions of employees;
 - analysis of results of the implementation of previous programs to improve the OS Management System;
 - analysis of results of the implementation of annual OS action plans.
- Measures are divided into operational and planned ones.
- Operational measures include tasks that are developed as part of an accident or when critical risks are identified.
- Planned activities are tasks included in OS programs or annual action plans to improve working conditions, etc.
- Measures classification as part of control measures is divided into:
 - organizational measures that include:
 - distribution of responsibilities and authorities of employees who directly perform operations related to OS risks or manage the execution of such operations;
 - training of employees in OS risk management measures, etc.;
 - development of procedures (including documented ones) with established criteria for performing operations related to OS risks;
 - development and implementation of emergency response procedures;
 - OS audits;
 - and others.
- technical measures that include:
 - replacing hazardous technologies or hazardous substances with safe ones;
 - design and implementation of safe technologies;

- inhibition and other ways to protect pipelines, production facilities and equipment;
 - use of modern transport;
 - use of collective protection equipment and equipment that ensure OS and safe working conditions for employees;
 - technical and technological measures aimed at ensuring the integrity and occupational safety of equipment and technical devices, reducing emissions, discharges, reducing waste generation and disposal;
 - preventive and scheduled inspections and repairs of equipment;
 - and others;
 - The following factors are taken into account when planning measures to reduce OS risks:
 - technical feasibility of risk reduction measures;
 - the expected degree of risk reduction;
 - costs related to activities implementation.
 - When planning OS activities, target indicators for use of proactive tools should be set.
 - The main attributes of measure planning include:
 - Name;
 - Facility (material, unit of equipment, technical location, document, etc.);
 - Resources;
 - Responsible;
 - Desired result;
 - Deadline for completion;
 - Mark on completion.
 - The PC annually develops OS action plans. These annual action plans are developed before the start of the planned year and in accordance with the existing financial planning system. All subdivisions related to the OS management process should participate in the development of targeted OS action plans.
 - The estimated amount of costs to ensure implementation of the OS action plan is included in the PC draft budget for the coming and subsequent years.
- Functioning of the OS management system

Training on OS issues. Motivation and Staff Encouragement

- The OS management system provides for ensuring the proper competence of PC staff based on appropriate education, training, skills and experience.
- In order to manage the training process and develop staff competencies, it is necessary to identify the need for the necessary competencies and subsequent training related to OS risk management, legislative requirements and best international practices for staff training and subsequent evaluation of the training effectiveness.
- Activities related to the training and maintenance of staff competence include:
- Setting requirements for the staff competence;

- Selection and staff placement in accordance with the approved organizational structure and staffing table;
- Determination of the need to improve the staff competence based on requests from heads of subdivisions subject to the following factors:
 - Mandatory legal requirements;
 - End of the certification period for professions and positions controlled/supervised by public authorities;
 - Change of functions as part of the OS processes, introduction of new rules and other requirements;
 - Introduction of new equipment and technology, results of external and internal audits, etc.;
- Risk assessment and analysis of information on identified inconsistencies, violations, hazardous actions, hazardous conditions;
- Competence improvement planning;
- Staff awareness of the role and importance of their activities, ways to achieve OS goals;
- Analysis and evaluation of the effectiveness of measures taken to achieve the required competence;
- Organization of work on the certification of employees performing certain types of OS activities;
- Keeping records of education, training, skills and experience.
- The process of learning, developing competencies and skills in the field of OS should be a continuous process and aimed at all levels of the PC.
- Training and OS knowledge testing of employees is carried out in accordance with the current legislation of the Republic of Kazakhstan and best practices.
- Persons who are hired, as well as employees who are transferred to another position, are trained, followed by a OS knowledge test, within the time limits set by the employer, but no later than one month after conclusion of an employment contract or transfer to another job.
- Employees who have not been trained and tested on OS issues are not permitted to work.
- OS training (classes, lectures, seminars) is conducted by the employer with the involvement of highly qualified specialists from relevant industries, engineering and technical workers with at least three years of work experience, technical inspectors on labor protection, OS services of the PC itself, as well as specialized organizations.
- The training programs on OS issues provide theoretical and industrial training, considering the specifics of this organization.
- Industrial training on OS issues, safe working methods and techniques is carried out in classrooms, workshops, sites, workshops under the guidance of responsible employees of the organization for occupational safety.
- OS training of employees ends with a knowledge test (exam, test).
- Results of examining the knowledge of employees are compiled in accordance with the current legislation of the Republic of Kazakhstan.
- If an employee receives an unsatisfactory assessment, a re-examination of knowledge is appointed within the time limits established by the legislation of the Republic of Kazakhstan or IRDs. The employee undergoes repeated training and is suspended from work in accordance with the procedure provided for by the current legislation of the Republic of Kazakhstan.

- Motivation and staff encouragement to maintain an appropriate OS culture is an integral element of the personnel training system.
- The goals of motivating and staff encouraging as part of a particular program include:
 - Improving the quality of production tasks;
 - Strengthening responsibility for violation of the OS requirements;
 - Remuneration of employees for the achieved results of OS activities (material / non-material type of bonus);
- Increasing the interest of employees in the proper performance of their work duties, compliance with OS requirements and improvement of the OS system.

Incident management

- All incidents that fall under requirements of legislative and regulatory acts in the field of OS in the Republic of Kazakhstan are investigated in strict accordance with these requirements. In addition, it is recommended to analyze the root causes of hazardous conditions, hazardous actions, potentially hazardous incidents, microtraumas, gross violations of OS requirements.
- As each incident is a sign of a failure of the PC control system, and not only physical failures or human errors, it is recommended to conduct internal investigations in order to determine the root causes of the incidents (please see an example of the applicable methodology in Annex 1).
- The main task of the root cause identification system is to prevent the recurrence of incidents.
- The process of determining the root causes through logical analysis should track all cause-and-effect relationships in order to identify key factors related to management systems (system errors). This will permit to focus on improving management systems (procedures, job functions and responsibilities, controls and staff training, work processes).
- In general, the root cause identification process contributes to the continuous improvement of the safety management system by:
 - Determining conditions that may cause accidents in the future;
 - Developing and implementing measures to prevent the recurrence of accidents;
 - Developing and improving policies, procedures, guidelines and standards.

Accident and Emergency Preparedness

- The OS management system should include the process of identifying and analyzing potential emergencies, as well as planning for mitigation and incident control. Operational response plans should be kept up-to-date in order to carry out operational actions, if necessary.
- Accident and emergency management consists in analyzing potentially serious incidents that can have a significant negative impact on the PC operation in normal mode, and developing measures to prevent and/or mitigate their consequences.
- It is necessary to identify any possible unplanned events and, as part of the risk management plan, companies should define procedures for responding to accidents and emergencies.
- PCs should provide for the procedure of actions of the staff/employees of contractors in responding to accidents and emergencies.
- Preparedness for and response to accidents and emergencies is ensured by:

- Planning of measures to identify, prevent, limit and eliminate the consequences of accidents and emergencies;
- Training of employees/staff, including contractors, in the event of accidents and emergencies (scheduling of training alarms and training sessions, creation of a committee (teams) for crisis management, creation of emergency response headquarters at different levels, emergency training and development of actions in case of a conditional occurrence of an accident, etc.);
- Providing appropriate means for the localization and elimination of accidents and emergencies;
- Availability and operability of communication systems, etc.
- Accident and emergency action plans should cover (but not be limited to):
 - Organization, responsibilities, authorities and procedures for emergency response, including support for internal and external communications;
 - Systems and procedures for providing personnel with shelter, evacuation, rescue and treatment;
 - systems and procedures for preventing, mitigating and monitoring the consequences of emergency actions;
 - Procedure for communication with the authorities, relatives and other stakeholders;
 - Systems and procedures for the mobilization of equipment, company premises and staff;
 - Measures and procedures for mobilizing third-party resources for emergency support;
 - Procedure for notifying the local population falling into the zone of impact of accidents and emergencies;
 - Measures and procedures for training response teams and testing emergency systems.
- The main goal of emergency response is to minimize any negative risks, prevent the escalation of accidents and emergencies at a time of crisis, and prepare staff for actions during accidents and emergencies.
- To assess the effectiveness of response plans, the company must maintain procedures for verifying action plans in case of accidents and emergencies by working out scenarios, conducting training alarms and emergency training in accordance with the current legislation of the Republic of Kazakhstan. At the same time, not limited to requirements of the legislation.

Contracting Organizations Management

- This process applies to all contractors who perform work and render services for PCs.
- When classifying the risk degree related to performance of works/services under a certain agreement (contract), the following factors should be taken into account:
 - Possible consequences or impact of their activities on the PC activities;
 - Type/ nature of the work performed;
 - Place of work;
 - Type/nature of the risk factor;
 - Duration of work performed/services rendering;
 - Contractor's experience and competence to perform work/render services;

- Probability of an accident risk for contractor staff that performs work/renders services or PC workers;
- Probability of an accident and/or emergency as a result of the contractor's activities on the territory/facility of the company.
- It is necessary to be guided, but not limited to, the following approaches when interacting with contractors:
- OS requirements imposed on the contractor must comply with requirements imposed on the PC itself;
- Appointment of an administrator of the agreement (contract), who is responsible for the completeness of providing information in order to comply with OS requirements when performing works/rendering services under the contract by the contractor;
- After conclusion of the contract, before the start of rendering services and performing work by employees of the contractor, preparatory measures are carried out for admission to the PC territory / facility with verification of permits, standards, internal regulatory documents in the field of OS;
- Inspections of work of a contractor performing work/rendering services should be carried out at least once a quarter or more often, in the presence of serious incidents;
- In all contracts for works performing/ services rendering by contractors on the PC territory / facility or in the PC interests to provide liability for violation of the OS requirements;
- Develop and apply the interaction procedure and requirements for contractors on the PC territory / facility;
- Conduct training and familiarize employees of contractors with risks and hazards of the company, in those places/areas where employees will perform work/render services on the PC territory/ facility;
- Familiarize employees of contractors with their actions in the event of accidents and emergencies in accordance with accident response plans.
- OS information for familiarization of employees of contractors should be publicly available on the company's website.
- The main goal of the process is to define clear responsibilities, ensure active interaction with contractors, and also propose a consistent program for managing OS issues, which permits to prevent incidents in contractors related to OS violations.

Operational Activities

- The goal of establishing requirements for the operational activities is to ensure manageable conditions when performing production processes, including production and technological operations and activities.
- The production processes (operations and activities) management provides for the development and implementation of the necessary documentation as the basis of the production process and the OS management system.
- The production process is carried out under controlled conditions, which include:
- Availability of information describing the features of the production process (GOSTs, standards, technical specifications);
- Ensuring compliance of equipment, premises and workplaces with the OS requirements;

- Creation of infrastructure and production environment;
- Staff training;
- Submitting necessary documentation, including procedural documents;
- Operational and calendar planning;
- Strict compliance with parameters of the production process and OS;
- Availability and application of control and measuring devices;
- Monitoring and measurements;
- Correction of processes and procedures in case of deviations from the established OS requirements.
- All processes that have a significant impact on OS must be evaluated through consistent monitoring and measurements.

Proactive OS management tools

- Proactive tools are needed to identify and respond to hazards, risks, register safety proposals, engage and inform employees.
- Examples of proactive tools include:
 - Identification, registration, investigation of hazardous conditions, hazardous actions, potentially hazardous incidents;
 - Application of behavioral dialogues/audits/safety observations;
 - Introduction of the stopping unsafe types of work practice;
 - Use of Safety Observation Card/ Hazard Observation Card for safety monitoring (submission of proposals for improvement and reports on hazards at work).
 - and others.
- It is necessary to involve both PC workers, visitors, and employees of contractors in the process of using proactive tools.
- All PC workers and contractors should have access to the use of proactive tools.
- In order to involve PC employees, use available economic and social means to encourage and motivate, guarantee anonymity, if necessary, and not put pressure on the employee.
- To maintain the performance of proactive tools, it is necessary to apply (but not limited to) the following minimum solutions:
 - Realization of the right to use a proactive tool, including through digital technologies;
 - Realization of the right to stop unsafe work and implementation of risk prevention measures;
 - Feedback on the specific fact of using a proactive tool;
 - Analysis and monitoring of the use of proactive tools by PC managers and employees.

Processes Digitization

- In order to implement effective solutions, the use of digital OS solutions is recommended.
- Digitalization is the main factor in increasing the efficiency and productivity of the process, as well as reducing the cost of the OS management function.
- Digitalization of OS management processes permits:
 - Effectively manage the process on the ground by quickly analyzing and raising staff awareness;

- Increase the speed of decision-making and reduce operating costs;
- Prevent and reduce the number of incidents and inconsistencies;
- Ensure transparency and control over processes;
- Guarantee a systematic approach and contribute to the continuous improvement of indicators;
- Provide information in a way that is convenient for decision-making;
- Promptly monitor and manage changes;
- Proactively manage risks;
- Enter data once and receive notifications;
- Generate reports promptly;
- Effectively analyze existing trends of detected violations, inconsistencies, hazardous actions, hazardous conditions.

Communication with Stakeholders

- The existence of effective communication processes in the field of OS implies informing employees in the form of internal and external communication, participation in the stakeholders' OS management, and consulting on OS issues.
- This process defines approaches in the field of information exchange by:
 - Reporting the management's position and expectations on OS issues;
 - Warning about existing hazards and risks;
 - Sharing the best OS practices;
 - Clarification of the OS requirements to employees;
 - Involvement of employees in the work on OS improvements.
- Existing methods of propaganda influence can be divided into two groups:
 - Single-channel communications, when there is an impact channel, but there is no direct feedback channel to control the perception of this impact. The means of single-channel exposure include:
 - printed publications (brochures, information sheets, etc.);
 - safety posters, wall newspapers;
 - safety alerts;
 - information stands and corners on OS;
 - exhibitions, lectures and reports;
 - audiovisual media (TV, cinema, filmstrips, radio broadcasts, etc.).
 - two-channel communication, in which it is possible to control its perception in the process of exposure. Two-channel impact is realized through the organization of:
 - the system of safety committees and subcommittees at various levels of companies;
 - collective discussion with workers of accidents, ways of injury prevention, etc.
 - Work in this direction should be aimed at the following results:
 - development and improvement of the current communication system to achieve a higher level of positive motivation for safe work;
 - creation of a communication plan and tools for bringing information to employees and back from employees to the management of enterprises;
 - establishment of vertical and horizontal corporate communications aimed at openly informing employees on OS issues.
 - Vertical information exchange permits to bring goals and tasks to the attention of employees. Also, this exchange provides an opportunity for employees to make suggestions on OS improving, to bring an opinion on working conditions

to the attention of management.

- The horizontal exchange of information is aimed at coordinating the interaction of employees of the PS structural subdivisions and subsidiaries in order to achieve the common OS tasks.
- Employees of organizations give suggestions:
 - on safe working methods and necessary measures to improve working conditions;
 - on defining the OS needs and expectations;
 - on defining mechanisms for fulfilling the OS requirements;
 - on setting OS goals and on planning measures to achieve them;
 - on defining indicators for OS monitoring and evaluation;
 - on establishing audit objects;
 - on determining directions for improving OS activities.
- The head or his/her OS representative brings the necessary information about possibilities of their participation in the OS management system improving to the employees.
- Communication with stakeholders is carried out in order to comply with principles of openness and accessibility of OS indicators, declared in the Policy being formed.
- Consulting and participation of employees in the development, maintenance and improvement of the OS management system is ensured by their involvement in the following types of OS work:
 - Determining mechanisms for consultation, training and participation;
 - Identifying hazards and OS risk assessment, determination of applicable management measures to eliminate hazards and reduce OS risks;
 - Developing proposals to improve the OS effectiveness;
 - Defining competence requirements, training needs;
 - Defining OS communication needs and communication methods;
 - Defining OS management measures and their effective application;
 - Investigating OS incidents and identifying causes of inconsistencies, participation in the development of Accident Prevention Action Plans and Corrective Action Plans.
- OS Monitoring and Effectiveness Analysis

Monitoring

- The basic requirements for the OS management system are based on regular and unscheduled monitoring of activities to ensure the implementation of OS measures, improvement of working conditions of employees, including contractors/subcontractors, including periodic monitoring of parameters of harmful and dangerous factors of the production environment that can cause significant harm to staff health.
- The goals of the monitoring process include:
 - Control over implementation of OS programs and plans;
 - Improving working conditions;
 - Reducing the adverse effects of harmful and hazardous production factors on the staff health;
 - Prevention and minimization of accidents;
 - Monitoring the timely conduct of emergency and fire prevention training;

- Safety of production processes at hazardous production facilities;
- Timely identification of hazards and associated risks;
- Analysis and evaluation of OS indicators, effectiveness of production and other management tools and methods.
- It is necessary to implement (but not limited to) the following activities as part of the monitoring:
 - Comprehensive and target OS inspections;
 - Periodic monitoring of parameters of harmful and hazardous factors of the production environment;
 - Verification of compliance with requirements for the safe performance of work by PC workers and contractors;
 - Verification of the correctness of organizing and conducting on-the-job briefings to employees, including contractors;
 - Control over training, checking the quality of assimilation of OS knowledge;
 - Control over implementation of measures to eliminate inconsistencies recorded in the regulations of the supervisory authorities;
 - Control over the technical condition of equipment, technical devices, buildings and structures;
 - Workplace safety control;
 - Control over the availability and condition of primary fire extinguishing equipment;
 - Control over the condition and correct use of personal protective equipment (PPE) and collective protection by employees of the company, as well as employees of contractors;
 - Control over the sanitary condition of household and auxiliary premises;
 - Control over compliance with OS regulations at night, on weekends and holidays;
 - Control over facilities under construction and reconstruction;
 - Organization and participation in the certification of production facilities as part of legislative and regulatory requirements;
 - Organization and participation in the identification of hazards and risks in order to minimize them;
 - Control over implementation of corrective measures as part of the root cause analysis.
- OS monitoring is used for the current assessment of the effectiveness and efficiency of OS activities, improvement of working conditions of employees, prevention of failures/incidents, accidents, injuries and occupational diseases. All of these activities are based on the hazards and risks identified in the subdivisions. A program for achieving goals and solving OS tasks is being formed on the basis of hazards and risks registers.
- To implement the procedure for monitoring operations and activities affecting OS, a program is being compiled to achieve OS goals and tasks.
- The program for achieving goals and OS tasks includes the fulfillment of requirements and OS measures.
- The following are recognized as nonconformities:
 - failure to comply with requirements of legislation, regulatory and technical documentation, as well as IRDs;
 - failure to comply with requirements of instructions, regulations;
 - failure to comply with orders, instructions, and information letters brought to

- the attention of;
- failure to implement planned measures to eliminate inconsistencies recorded in the regulations of the supervisory services and inspection organizations;
- Monitoring results are used in the analysis of the OS management system by management.

Inspections and Audits

- Basic requirements for internal inspections and audits:
- ethical behavior - following certain moral norms and avoiding unethical actions and decisions;
- honesty, trust - a quality that includes truthfulness, integrity, fidelity to commitments, sincerity to others and to oneself;
- confidentiality and courtesy;
- impartiality - an obligation to provide true and accurate reports;
- professional prudence – diligence and common sense in conducting an inspection;
- independence - the basis for impartiality and objectivity of audit conclusions and the prevention of conflicts of interest;
- a certificate-based approach to achieve reliable and reproducible inspection conclusions.
- Scheduled internal inspections and audits are conducted in accordance with approved schedules at least once a quarter in each structural subdivision.
- Unscheduled inspections/audits are carried out in the case of:
- internal and external claims;
- incident registration;
- need to improve technology;
- need to improve OS procedures and documents, caused either by “internal” (change in OS goals, management structure) or “external” (change in legal requirements, certification rules) reasons;
- preparation for certification;
- need to evaluate effectiveness of the entire OS management system.
- Preparation of an internal audit (audit) includes:
- preparation of organizational and administrative documentation on internal audit and audit plan, as well as development of audit working documents;
- coordination of the composition of the group of auditors with the audit participants;
- appointment of the head and the composition of the audit group;
- setting specific audit deadlines;
- development of working documents (control questions/checklists, etc.).
- During the work, the inspector collects sufficient and necessary information that permits to make reasonable conclusions. Information is obtained by inspecting workplaces, equipment, interviewing, checking documents, analyzing primary media and observing actions and conditions at the sites being checked. All information indicating the possibility of non-compliance is recorded regardless of whether it is included in the list of control questions or not.
- Depending on the result and significance of the detected inconsistencies, the deadline of the necessary measures or re-inspection (if necessary) is determined.

- The head of the subdivision under inspection, within which the inconsistency was detected, develops measures on eliminating inconsistencies.
- Organization and conduct of internal audits is carried out by the authorized OS subdivision, with the possibility of involving employees of other structural subdivisions of the company.

OS Effectiveness Analysis

- Companies use a systematic approach to analyzing their OS activities on a regular basis.
- As part of the management analysis, the PC considers the following at least once a quarter:
 - the level of safety culture;
 - information on results of the implementation of commitments reflected in policies, programs and plans to achieve goals and solve problems in order to improve;
 - levels of exposure to harmful factors to determine whether the relevant legal requirements, as well as other requirements, have been violated;
 - incidents that have occurred;
 - information on the implementation of key performance indicators (KPIs) of the organization in the field of OS;
 - analysis of the resources sufficiency (financial, labor, material and technical resources, etc.) to fulfill the stated obligations;
 - analysis of the use of proactive incident tools;
 - the value of the Fatality Accident Rate - the number of injured persons in fatal accidents related to work $\times 100\,000\,000$ man-hours / number of hours worked during the reporting period;
 - the value of the severe injury coefficient - the number of seriously injured persons in work-related accidents $\times 1\,000\,000$ man-hours / number of hours worked during the reporting period;
 - the value of the Lost Time Injury Frequency - the number of injured persons in accidents with disability related to work (including those who died) $\times 1\,000\,000$ man-hours / number of hours worked during the reporting period;
 - the OS state report in contractors, including the values of the Fatality Accident Rate, the Lost Time Injury Frequency rate, the severe injury rate, information on violations, accidents, inspections by public authorities, etc.);
 - results of the work of branches/subsidiaries of the organization;
 - results of consideration of OS-related complaints and appeals from public organizations, the public and other stakeholders.
- Results of the analysis should be used by the top management of the Fund companies to assess the possibilities for improving the OS management system and the need for changes, including changes in OS policies, goals and programs.
- In order to motivate PCs to improve occupational safety management systems, the “Procedure for Remuneration of Portfolio Companies with an Annual Nomination of the Chief Executive Officer of Samruk-Kazyna JSC for Achieving Results in the Field of Occupational Safety” has been defined, in accordance with Annex No. 2.

Key performance indicators for management processes

- KPI is the basis for managing the efficiency of OS processes. KPIs should be a driver of efficiency and correspond to the strategic goals of the company. The OS management process should be evaluated based on the KPIs recommended below:

Key performance indicators used in companies:

CEO and his/her Deputies in the following areas	The LTIF coefficient (Lost Time Injury Frequency) in relation to the indicator of the previous year
	Introduction and analysis of the effectiveness of corporate standards according to the annual plan
	Timeliness of financing of OS risk management activities Introduction of proactive management processes/tools
Heads and Deputies of structural subdivisions	Development of organizational and technical measures based on results of the root causes of accidents identification reports
	Timely and complete annual planning of financial costs for OS activities
	Conducting a certain number of behavioral security audits in a subordinate subdivision and the actions taken
Line managers (head of installation, site)	Identification and registration of potentially hazardous incidents Proposals for improving the OS management system Implementation of measures to improve the OS management system

- The listed KPIs are minimum requirements and are not exhaustive, but only set directions for the development of specific KPIs that reflect the business characteristics of each PC individually.

Section 7. Roles and Authorities

- The organizational structure of the company's OS function is based on the scale of the PC itself and its structure.
- The recommended pattern of role allocation for building the organizational structure of a OS subdivision is given below.

Standard Roles and Sample of the Organizational Structure, Interaction Procedure

Board of Directors

Board of Directors

The relevant OS Committee, Audit Committee, etc.

The relevant OS Committee, Audit Committee, etc.

Management Board

Management Board

Committee whose functions include occupational safety issues

Committee whose functions include occupational safety issues

Head (CEO-1)

the functions of which include OS issues

Head (CEO-1)

the functions of which include OS issues

Occupational safety

Occupational safety

Industrial safety

Industrial safety

Fire safety

Fire safety

Labor protection

Labor protection

Specific direction

Specific direction
Health protection
Health protection

Annex No.1

to the Corporate Standard
on Occupational Safety
Management
for the
Samruk-Kazyna JSC Group

Recommended Methods for Determining the Root Causes

Root Causes Determining Theory.

Accidents and incidents can be interpreted as unplanned events leading to injuries, loss of life, loss of products, damage to property. Without understanding the causes of accidents and incidents, it is extremely difficult to prevent them.

There are 3 types of reasons:

- the physical reason;
- human factor or behavioral reason;
- root causes of the system level.

Root Causes Determining Stages:

- data collection;
- formation of a group to identify the root causes;
- making a sequence of events;
- identifying protection systems;
- determining root causes (using various techniques);
- checking for possible causes;
- developing recommendations;
- preparing the report;
- considering and submitting the report.

Making a sequence of events.

The incident-related events are arranged in a time sequence so that when looking at such a scheme, it is possible to quickly determine which events occurred and when. The sequence of events is an excellent tool for organizing and arranging the collected data on an incident, which keeps the investigation team from making unreasonable conclusions.

At this stage, it is necessary to properly organize the data obtained during the information collection stage. The advantage of using a chronological order of presentation is that it is unbiased and helps to focus on facts rather than conclusions.

Examples of security systems.

Before proceeding to identify the root causes of the incident, it is necessary to evaluate all possible protection systems that could be involved in the course of this incident. A protection system means any control system or technical means that reduce the probability of the incident itself or the severity of its consequences:

<u>Technical means</u>	<u>Control systems and procedures</u>
<ul style="list-style-type: none"> Emergency stop/alarm systems 	<ul style="list-style-type: none"> Production instructions
<ul style="list-style-type: none"> Fire protection systems 	<ul style="list-style-type: none"> Methods of safe work (work permits)

An example of two of many techniques for determining the root causes of accidents and applying these techniques is given below:

- the Fault Tree method;
- the Five Whys method.

	Fault Tree	Five Whys
Data collection	Structurally organized process. Mandatory requirement.	It depends on the scale of the incident. A lesser degree of structural organization. Data is collected as needed.
Formation of a group to identify the root causes	The group is formed compulsorily.	It depends on the scale of the incident. The analysis can be carried out by one person.
Compiling a sequence of events	Compulsorily	Non-compulsorily. It is compiled as required.
Identifying protection systems	Compulsorily	Non-compulsorily. It is compiled as required.
Checking for possible causes	Compulsorily	Non-compulsorily. It is carried out as required.
Development of recommendations	Compulsorily	Compulsorily
Compiling of the Report	Compulsorily	Compulsorily. Summary report.

Consideration of the and submission of the Report	Compulsorily	Non-compulsorily
Categorization of root causes	Compulsorily	Compulsorily

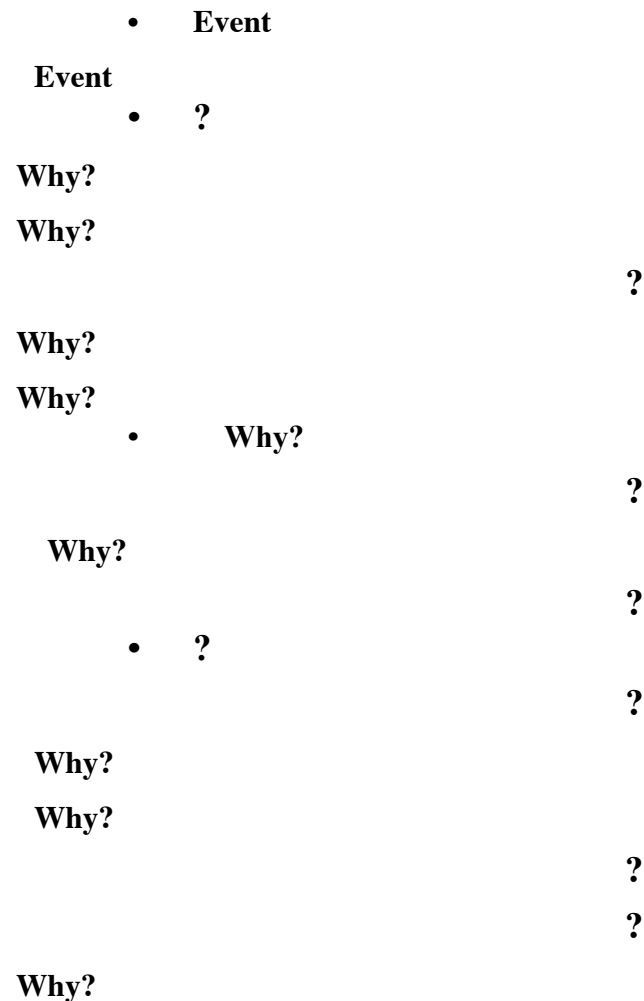
The “Fault Tree” method can be used in the investigation of any incidents, but is used for more complex cases.

When building a “Fault Tree”, use the following questions:

- Why? Why did what is indicated in the block happen?
- How? How did what is indicated in the block happen?
- What logically determines what is indicated in the block?
- What conditions must exist for what is indicated in the block to happen?
- What else could contribute to what is indicated in the block? (Do not use conclusions of the investigation of the previous incident)
- How can I group or classify the problems that have arisen?

The “Five Whys” method is used only for simple cases. This method is a simplified version of the “Fault Tree”. It was specially designed for use by one person or a small group in the analysis of simple incidents and involves focusing attention and efforts on identifying one or two root causes, eliminating which could prevent this incident.

The ANALYSIS using the Five Whys method can be divided into the following stages:



Why?

- Identify one or two root causes that could have prevented the incident;
- If during the analysis you find out that several “branches” and several root causes are emerging, this means that the analysis should be continued using the “Fault Tree” method.

The ANALYSIS using the Fault Tree method can be divided into the following stages:

- Specify the initial event at the top of the diagram;
- Identify two or more actions or conditions that were the direct cause of the initial event;
- Then, working through each “branch” of the logical tree to the end, brainstorm all the physical and behavioral reasons that could actually lead to the initial actions or conditions. At this stage, the question “Why?” arises. The question that needs to be answered is formulated as follows: “Why could this happen?”;
- Continue building this tree until you find the systemic factors of the incident;
- After determining the first level of causes, move further down the scheme, branch by branch until the end of each branch;
- Usually, one or more physical causes occur first, followed by one or more human causes, followed by one root cause at the systemic level;
- When adding each next step, ask the question: “Is this the direct cause of the event or the reason indicated in the rectangle directly at the top?”
- Each branch can end in three cases:
 - the root cause has been discovered;
 - a normal condition has been identified;
 - a proposed cause is not a factor in the incident.

Categorization of root causes.

One of the main advantages of conducting root cause analysis is the ability to identify recurring causes of accidents or common production problems. If we consider each incident separately, then the root causes are seen as separate problems of a one-time nature. Maintaining an incident database permits to identify trends. Categorization of causes can be carried out based on various criteria: by type of equipment, by the element of ensuring production safety, by the element of the production optimization process, by the amount of material damage, etc.:

- risk assessment;
- instructions and safe working methods;
- Inspections and quality control;
- design;
- preventive maintenance and repeated equipment failure;
- the human factor;
- training;
- industrial safety in contractors;

- sharing information;
- guidance, control and support;
- investigation of accidents and potentially hazardous situations;
- actions in emergency situations;
- natural phenomena;
- high-risk jobs.

The following is an explanation for each category and examples.

Category of root causes	Explanation	Example of the formulation of root causes
Risk assessment	Is the degree of risk understood correctly? Are the risk control methods used correctly? Were there any problems related to analyzing production hazards?	The methodology for determining the degree of risk is not applicable or not required.
Production instructions and safe working methods	Are there general and/or local guidelines available? Are they being used correctly? Are safe work practices used - fire work, posting locks and tags, working in confined spaces?	There is no procedure for work on hanging locks and labels. Instructions do not meet the requirements.
Design	Has the project documentation been verified? Does everything comply with norms and standards?	Project verification is not required.
	Was the “human factor” taken into account when designing?	The project does not take into account the “human factor”.
Inspections and quality control	Are the necessary inspections required and carried out? Are the right materials being used? Are they being used correctly? Is there an inspection schedule and is it being implemented?	Unsuitable materials are used – there is no system of defining compliance of materials.

Preventive maintenance and repeated equipment failures	Has the recommended maintenance work been performed or based on the compiled programs, or based on experience of previous malfunctions?	There is no program of preventive maintenance work.
Human factor	This includes confusion, fatigue, abuse and all other causes of human misconduct not related to poor performance of other systems, such as inadequate training and work planning, as well as, improper handling of equipment.	There is no distinction between types of alarm systems because the “human factor” was not considered in the design (this can also be categorized as a “Design” or “Training”).
Training	Is there a lack of training that has in any way affected this incident?	The employee has not completed the training course, there is no a system of timely completion of mandatory training courses.
Industrial safety in contractors	Is there a process in place to ensure that the contractors involved comply with the company’s requirements?	The company does not control the maintenance of HSE documentation from the contractor.
Transfer of information	Have all requirements of the instructions been brought to the attention of employees and understood by them? Have the recommendations been brought to the attention of employees? Are there any facts to support this? Are turnaround records used as a way to convey important information? Are there systems in place to ensure that information is translated correctly?	There is no requirement for compilation of turnaround records. Requirements of the instruction are incomprehensible. There is no a process of controlling knowledge of instructions.
Guidance, control and support	Is management able to provide a far-reaching vision of the situation? Does management hold staff accountable for their actions? Are there any management checks? Does management support teamwork?	Insufficient work planning. The head was not aware of what was happening

Investigation of incidents and potentially-hazardous situations	Could recommendations made as a result of an investigation of a previous accident or potential hazardous situation have prevented another accident? Did the failure to investigate the previous accident exacerbate the consequences of the next accident?	There are no requirements for investigation of potentially hazardous situations.
Staff actions in emergency situations	Did the emergency response have any effect on the scale of the incident? Could the accident have been brought under control or eliminated more quickly with more effective emergency response?	There is no system that provides training of fire service personnel to extinguish hydrocarbon fires.
Natural phenomena	This category includes natural force majeure circumstances: floods, earthquakes, hurricanes, tornadoes, and etc.	
High-risk work (earthworks, fire works, WAH, gas hazardous work, etc.)?	Has a permit document been received? Has the briefing been completed in full before starting work? Have all the preparatory measures been completed? Are the means of individual and collective protection provided for the performance of work?	Lack of control and clear requirements. Lack of personal and collective protective equipment.

Development of measures to eliminate the root causes.

The investigation team should develop recommendations or an action plan to eliminate all root causes and hazardous conditions identified during the investigation. When making recommendations, follow the proposed procedure:

Make a list of all root causes identified during the process and categorize them;

Identify the most important reasons that had a big impact on this incident. If these causes are eliminated, the probability of a repeat of such incidents in the future will be significantly reduced or completely eliminated. Availability of 5-10 root causes is normal for complex cases. 2 or 3 of these causes could have the strongest impact on the probability of an accident.

Develop an action plan to prevent a recurrence of the incident in the future. For example, if the cause of the incident was structural defects that may be present on other parts of similar equipment, then the action plan will include a stage for identifying similar problems and implementing appropriate precautions.

Make recommendations according to the list of root causes. Some measures can eliminate several causes at once. Therefore, it is always recommended to consider the root causes in a complex.

The recommendation should be clear and understandable. In English, this concept can be expressed by the word “**SMART**”, which in our case can be represented as an abbreviation, each letter of which means a word that carries a certain meaning:

- **Specific** – specificity - does the recommendation specifically say what needs to be done? If you were personally given such a recommendation, would you understand what they want from you?
- **Measurable** – the ability to track the implementation – are there any quantitative indicators to find out if the recommendation will be implemented?
- **Accountable** – personal responsibility – does the recommendation specify the person responsible for its implementation within the prescribed period?
- **Relevant** – quality – will a corrective measure be able to prevent or significantly reduce the probability of a repeat incident? How realistic is implementation of this measure in general, what is its economic profitability in terms of costs, what are the technical and practical possibilities for its implementation? What problems will arise as a result of its implementation? Has the recommendation been independently reviewed by a third party (i.e., not part of the group) to identify unintended negative consequences that it may cause to the work of production and staff?
- **Time Limits** – deadline – is the deadline for implementation of the recommendation within reasonable limits?

AnnexNo.2
to the Corporate Standard
on Occupational Safety
Management for the
Samruk-Kazyna JSC Group

**Procedure for Remuneration of Portfolio Companies with an Annual
Nomination of the Chief Executive Officer of Samruk-Kazyna JSC
for Achieving Results in the Field of Occupational Safety**

General Provisions

- The main goals of the annual nomination of the Chief Executive Officer of Samruk-Kazyna JSC for achieving high OS results include:
 - improving the level of safety culture at the enterprises of the Fund group of companies;
 - reducing the level of occupational injuries;
 - non-material remuneration of the PC for the OS results;
 - increasing the interest of all employees in the high-quality and effective performance of OS tasks;
 - increasing the interest of employees of the OS services of portfolio companies in the final results of work in the field of OS.
- The assignment of the annual nomination of the Chief Executive Officer of Samruk-Kazyna JSC in the form of the first place for achieving OS results is carried out annually on the basis of data for the reporting calendar year.
- The procedure provides for incentives for achieving OS results for the reporting calendar year.
- The assignment of the nomination of the Chief Executive Officer of the Fund for achieving OS results is based on uniform established evaluation criteria on the following issues:
 - the safety, preservation of life and health of employees in the course of their work;
 - development and implementation of OS standards based on the best international practices;
 - use of various proactive OS tools, monitoring, leading indicators;
 - OS performance (lagging indicators).

Procedure

- The Occupational Health and Safety Sector of the Fund is responsible for organizing and conducting the nomination procedure.

Summing up and determining the nominated PCs is carried out by the Occupational Health and Safety Sector of the Fund on the basis of uniform established evaluation criteria in accordance with the data provided by the PCs for the reporting calendar year, which should be sent to the Occupational Health and Safety Sector of Samruk-Kazyna JSC no later than 15 days after the end of the reporting calendar year (Table No. 1). Employees of the Occupational Health and Safety Sector of Samruk-Kazyna JSC have the right to selectively request documents confirming the data.

- The nomination of the Chief Executive Officer of Samruk-Kazyna JSC for achieving OS results is presented during the final annual OS meeting of Samruk-Kazyna JSC or during the annual OS Forum.

Awarding and Encouragement of Winners

- The following type of award is established for a portfolio company that has achieved the best OS results:
- The first place is a Certificate of Honor from the Chief Executive Officer of Samruk-Kazyna JSC, a plaque for the first place.

Table No. 1

Evaluation criteria

Evaluation criteria	Grades
<i>Availability of IRDs, digital solutions based on the best world practice:</i>	
<i>Occupational Safety Policy</i>	<i>+1</i>
<i>Life-Saving Rules</i>	<i>+1</i>
<i>Incidents Notification and Investigation Procedure</i>	<i>+1</i>
<i>Transport Safety Management Standard</i>	<i>+1</i>
<i>Risk Management and Assessment Standard</i>	<i>+1</i>
<i>Contractors Management Standard</i>	<i>+1</i>
<i>Fire Safety Standard</i>	<i>+1</i>
<i>Occupational Safety Management System Guidance</i>	<i>+1</i>
<i>The procedure for recording behavioral safety observations, potentially hazardous incidents, hazardous conditions, hazardous actions</i>	<i>+1</i>
<i>Document regulating the right to stop work (stop cards) in case of unsafe conditions or work</i>	<i>+1</i>
<i>Regulated program of motivation (encouragement/stimulation) of safe behavior of employees</i>	<i>+1</i>
<i>Goals, tasks and target indicators for achieving the set goals for occupational safety (KPI)</i>	<i>+1</i>
<i>Availability of digital platforms/mobile applications</i>	<i>+1/+1</i>
<i>Availability of a valid Vision Zero concept certificate</i>	<i>+1</i>

<i>*In the case of other operating IRDs in the portfolio company, the list is subject to addition</i>	
<i>Availability of a valid ISO 45001 certificate in the PC corporate center</i>	
<i>available</i>	<i>+1</i>
<i>not available</i>	<i>+0</i>
<i>% coverage of subsidiaries by internal field audits/inspections by employees of corporate centers of portfolio companies</i>	
<i>10 - 20%</i>	<i>+0</i>
<i>21 - 45%</i>	<i>+1</i>
<i>46 - 70%</i>	<i>+2</i>
<i>≥ 71%</i>	<i>+3</i>
<i>Ratio of the number of eliminated inconsistencies to the number identified as part of inspections of the corporate center of the portfolio company (the deadline for eliminating which came to December 31 of the calendar year)</i>	
<i>0-30%</i>	<i>+0</i>
<i>31%-60%</i>	<i>+1</i>
<i>61%-80%</i>	<i>+2</i>
<i>81%-90%</i>	<i>+3</i>
<i>91%-100%</i>	<i>+4</i>
<i>Number of PC employees</i>	
<i>0 - 500</i>	<i>+1</i>
<i>500 - 5000</i>	<i>+2</i>
<i>5001 - 17000</i>	<i>+3</i>
<i>17001 - 22000</i>	<i>+4</i>
<i>> 22001</i>	<i>+5</i>
<i>Number of SBA/SBS/SBD conducted to the total number of employees</i>	
<i>0</i>	
<i>0.01 - 0.1</i>	
<i>0.11 - 1.0</i>	<i>+0</i>
<i>1.1 - 1.5</i>	
<i>>1.5</i>	
	<i>+1</i>

	+3
	+4
	+5
<i>Number of identified potentially hazardous incidents to the total number of employees</i>	
0	
0.01 - 0.1	
0.11 - 1.0	+0
1.1 - 1.5	
>1.5	
	+1
	+3
	+4
	+5
<i>Number of identified hazardous actions to the total number of employees</i>	
0	
0.01 - 0.1	
0.11 - 1.0	+0
1.1 - 1.5	
>1.5	
	+1
	+3
	+4
	+5
<i>Number of identified hazardous conditions to the total number of employees</i>	
0	
0.01 - 0.1	
0.11 - 1.0	+0
1.1 - 1.5	
>1.5	
	+1
	+3
	+4
	+5
<i>Number of work stops to the total number of employees</i>	

0	
0.01 - 0.1	
0.11 - 1.0	+0
1.1 - 1.5	
>1.5	
	+1
	+3
	+4
	+5
<i>% of CEOs-1 level managers and employees of occupational safety and labor protection services who have completed the IOSH course</i>	
0-10%	+1
11-30%	+2
31-60%	+3
61-90%	+4
>90%	+5
<i>% of CEOs-1 level managers and employees of occupational safety and labor protection services who have completed the NEBOSH course</i>	
0-10%	+1
11-30%	+2
31-60%	+3
61-90%	+4
>90%	+5
<i>% of drivers who completed the defensive driving course to the total number of PC drivers</i>	
0-10%	+1
11-30%	+2
31-60%	+3
61-90%	+4
>90%	+5
<i>Number of OS meetings held by employees of PC corporate centers, executed in the form of Minutes</i>	
1-5	+0
6-10	+1
11-15	+2

>15	+3
<i>% of the OS Plan Execution</i>	
<60%	+0
60-70%	+1
71-95%	+2
96-100%	+3
<i>Fatality Accident Rate - FAR compared to last year's indicator</i>	<i>Exclusion from the list of PC nominees with the presence of work-related fatalities</i>
<i>Lost Time Injury Frequency - LTIF as compared to last year's indicator</i>	
<i>coefficient = 0</i>	+10
<i>decrease by more than 30%</i>	+7
<i>decrease by more than 20%</i>	+5
<i>decrease by 11-19%</i>	+2
<i>decrease by 6-10%</i>	+1
<i>decrease by 1-5%</i>	+0
<i>increase in the coefficient compared to last year</i>	-10
<i>Motor Vehicle Crash Rate - MVCR (Traffic Accident Rate) compared to last year's indicator</i>	
<i>coefficient = 0</i>	+10
<i>decrease by more than 30%</i>	+7
<i>decrease by more than 20%</i>	+5
<i>decrease by 11-19%</i>	+2
<i>decrease by 6-10%</i>	+1
<i>decrease by 1-5%</i>	+0
<i>increase in the coefficient compared to last year</i>	-10
<i>Decrease in the number of injured persons in severe accidents</i>	
<i>decrease by more than 30%</i>	+4
<i>decrease by more than 20%</i>	+3
<i>decrease by 10-20%</i>	+2
<i>decrease by 5-10%</i>	+1
<i>increase by 0-5%</i>	+0
<i>increase by more than 5%</i>	-10