



# HSE Management Manual

## 1. Promulgation Order

To fully implement the HSE management requirements of COMPANY (CNPC) and COMPANY, establish and improve the Health, Safety and Environment (HSE) management system, standardize HSE management behaviors throughout the business processes including material procurement, supply, warehousing and transportation, protect employees' physical and mental health as well as life safety, safeguard the ecological environment, and improve the company's HSE management performance, this is hereby formulated.

This Manual is compiled in accordance with laws and regulations such as the , , and , as well as the Q/SY08002 series of HSE management system standards, combined with the business characteristics of the company as a professional materials and equipment procurement and supply enterprise. It is a programmatic document for the company's HSE management, clarifying the HSE responsibilities and management requirements of various departments and positions.

All employees must strictly abide by the provisions of this Manual, effectively integrate HSE management requirements into daily work, and ensure the company achieves the HSE goal of "Zero Accidents, Zero Pollution, Zero Injuries". This Manual shall come into force on the date of issuance.

General Manager: [Name]

Issuance Date: [Year-Month-Day]

## 2. Introduction

### 2.1 Manual Overview

This HSE Management Manual aims to establish the basic policies, principles, procedures and requirements for health, safety and environment management of Pipeline Materials and Equipment Co., Ltd. (hereinafter referred to as "the Company"). As a professional materials and equipment procurement and supply company under the COMPANY of CNPC, we are committed to ensuring employee health and safety, protecting the ecological environment, and achieving sustainable

enterprise development through systematic and standardized HSE management. This Manual is compiled in accordance with the requirements of laws and regulations such as the , , , (AQ2037-2012), and Q/SY08002 series of HSE management system standards, combined with the characteristics of the company's materials and equipment management. It is a programmatic document of the company's HSE management system.

## **2.2 Scope of Application**

This Manual applies to all departments and business activities of the Company, including but not limited to material procurement, warehousing management, transportation and distribution, equipment inspection, supplier management and office support and other production and operation activities. All employees of the Company, including regular employees, contractor employees and temporary workers, must strictly abide by the relevant provisions of this Manual. The Company implements unified HSE standards for all contractors and suppliers to ensure their HSE performance meets the Company's requirements.

## **3. Company Profile**

### **3.1 Company Overview**

As a professional materials and equipment procurement and supply company under the Pipeline Bureau of CNPC, Pipeline Materials and Equipment Co., Ltd. mainly undertakes the procurement, storage, distribution and technical services of materials and equipment required for pipeline engineering construction and operation. Its business scope covers the whole-chain management of various materials such as general materials, special equipment and hazardous chemicals, serving many important domestic oil and gas pipeline projects and related overseas businesses, and playing a key supporting role in ensuring the smooth progress of pipeline projects. The Company currently has [X] employees, with multiple functional departments including Purchasing Department, Warehousing Department, Transportation Department, HSE Management Department and Quality Department, and owns [X] warehousing bases and supporting transportation fleets.

### **3.2 HSE Commitment**

The top management of the Company solemnly commits to: always taking health, safety and environment management as the prerequisite and foundation for business development, and strictly abiding by national and local HSE laws and regulations, industry standards and relevant regulations of CNPC; adhering to the concepts of "Safety First, Prevention First, Comprehensive Control" and "Environmental Protection Priority, Green Development", continuously improving the HSE management system, increasing HSE investment, and enhancing risk prevention and control capabilities; ensuring employees receive necessary HSE training and

protective equipment, and creating a safe and healthy working environment; strengthening HSE communication and cooperation with suppliers, contractors, customers and other stakeholders to jointly improve HSE management level; proactively accepting social supervision, continuously improving HSE performance, and committing to achieving sustainable development.

## 4. HSE Management Principles, Policies and Objectives

### 4.1 HSE Management Principles

The Company adheres to the HSE management principles of China National Petroleum Corporation, which specifically include the following contents:

Principle No.	Principle Content
Principle 1	Health, safety and environment must be given priority in any decision-making
Principle 2	Safety is a necessary condition for employment
Principle 3	Enterprises must provide health, safety and environment training for employees
Principle 4	Managers at all levels are responsible for health, safety and environment work within their business scope
Principle 5	Managers at all levels must personally participate in health, safety and environment audits
Principle 6	Employees must participate in post hazard identification and risk control

Principle 7	Accident hazards must be rectified in a timely manner
Principle 8	All accidents and incidents must be reported, analyzed and handled in a timely manner
Principle 9	Unified health, safety and environment standards shall be implemented in contractor management

The Company adheres to the HSE philosophy of "Environmental Protection Priority, Safety First, Quality First, People-Oriented", and takes HSE management as the primary consideration in all work. In production and operation activities, the Company always puts employees' health and life safety first, and regards environmental protection as the social responsibility that enterprises should undertake.

## 4.2 HSE Policy

The Company's HSE policy is: "People-Oriented, Prevention First, Full Participation, Continuous Improvement".

- **People-Oriented:** Ensuring employees' health and safety is the most important responsibility of the enterprise. The Company is committed to creating a safe and healthy working environment and caring for employees' physical and mental health.
- **Prevention First:** Adopt proactive strategies to eliminate accident hazards and prevent accidents through hazard identification, risk assessment and effective control.
- **Full Participation:** HSE management is not only the responsibility of the management, but also the responsibility of every employee. The Company encourages and promotes all employees to participate in HSE management activities.
- **Continuous Improvement:** Continuously improve the HSE management system and performance through setting objectives, indicators, audits and reviews, and enhance the HSE management level.

## 4.3 HSE Strategic Objectives

The Company's HSE strategic objective is: pursuing zero injuries, zero pollution and zero accidents, and reaching the advanced level in the domestic industry in terms of health, safety and environment management. To achieve this objective, the Company commits to:

- Comply with applicable HSE laws, regulations and other requirements
- Reduce the adverse impact of production and operation activities on the

environment and health

- Provide necessary resources to ensure the effective implementation and continuous improvement of the HSE management system
- Establish and implement a strict HSE performance appraisal system
- Conduct regular management reviews to ensure the suitability, adequacy and effectiveness of the HSE management system

The specific objectives are decomposed as follows:

1. Safety Objectives: The occurrence rate of work safety accidents is 0, among which the rectification rate of safety hazards in the procurement link is 100%, the occurrence rate of warehousing and transportation accidents is 0, the coverage rate of employee work safety training is 100%, and the certification rate of special operation personnel is 100%.

2. Health Objectives: The incidence of occupational diseases is 0, the coverage rate of annual occupational health examinations for employees is 100%, the qualification rate of occupational hazard factor testing in the workplace is 100%, and the awareness rate of employee health knowledge is  $\geq 95\%$ .

3. Environmental Objectives: The occurrence rate of environmental pollution accidents is 0, the concentration and total amount of pollutant emissions comply with national and local standards, the standardized disposal rate of hazardous waste is 100%, the energy conservation and consumption reduction indicators meet the requirements of the Group Company, and the proportion of green procurement increases year by year.

## **5. Organizational Structure and Responsibilities**

### **5.1 HSE Organizational Structure**

The Company has established a level-by-level responsible HSE management organization, clarifying the HSE responsibilities and authorities at all levels from company leaders to front-line employees. The Company's HSE Management Committee is the highest HSE decision-making body, with the General Manager as the chairman and heads of various departments as members. The HSE Management Committee has an HSE Office (affiliated to the HSE Management Department), which is responsible for daily HSE management work. The HSE Management Department is a full-time functional department for HSE management, responsible for the establishment, operation, supervision and improvement of the HSE system; each business department has full-time or part-time HSE management personnel, who are specifically responsible for the daily HSE management work of the department; all employees perform their post HSE responsibilities, forming an HSE management network of "full participation and level-by-level responsibility".

Department/Position	Main HSE Responsibilities
Company Leaders	Formulate HSE policies and objectives, provide resources, preside over management reviews, and implement visible leadership
HSE Management Department	System construction, supervision and inspection, training and education, accident investigation, audit and improvement
Materials and Equipment Center/Business Departments	System formulation, supplier HSE management, emergency rescue material management, hazardous chemical management, and integrating safety management into business operations
Other Functional Departments	Integrate safety management into business operations, and implement line responsibilities
Front-line Employees	Abide by procedures, participate in hazard identification, report accident hazards, and participate in training and drills

## 5.2 HSE Responsibilities of Key Positions

### 5.2.1 Senior Management Responsibilities

The General Manager of the Company is the first person responsible for HSE and is fully responsible for the Company's HSE work. Its main responsibilities include:

- Determine the Company's HSE policy and strategic objectives, and ensure they

are consistent with the Company's strategic direction

- Ensure the acquisition of resources required for the HSE management system
- Preside over meetings of the Company's HSE Management Committee to solve major HSE management issues; preside over the Company's HSE management review to ensure the continuous suitability, adequacy and effectiveness of the system
- Clarify the HSE responsibilities and authorities of various organizations and personnel at all levels of the Company
- Cultivate a good HSE corporate culture and implement visible leadership by example

2. Deputy General Manager in Charge: Assist the General Manager in carrying out HSE management work, be responsible for supervising the operation of the HSE system, approving HSE management plans, organizing HSE inspections and emergency drills, and coordinating to solve key HSE management issues.

## **5.2.2 Responsibilities of HSE Management Department**

3. HSE Management Department: As a full-time HSE management organization, it is mainly responsible for:

- Organize the formulation, implementation and maintenance of the HSE management system
- Organize HSE supervision and inspection, supervise the rectification of hazards; organize accident investigation, analysis and reporting
- Organize HSE training, publicity and education activities; provide HSE technical consulting and support
- Organize HSE management reviews and internal audits, track the implementation of rectification measures, and form audit reports

## **5.2.3 Responsibilities of Materials and Equipment Related Departments**

4. Purchasing Department: Responsible for the review and management of suppliers' HSE qualifications, establishing a list of qualified suppliers, and clarifying HSE clauses in procurement contracts; organizing risk identification in the procurement link, giving priority to purchasing environmentally friendly products, energy-saving equipment and low-pollution materials; responsible for the procurement management of precursor chemicals, toxic chemicals and radioactive sources, and obtaining the "One Document (MSDS) and One Label" for hazardous chemicals; cooperating in the HSE acceptance of purchased materials and timely transmitting HSE information during the procurement process.

5. Warehousing Department: Responsible for HSE management of warehousing sites, standardizing the classification of material storage, and implementing safety measures such as fire prevention, explosion prevention, moisture prevention, and

lightning protection and static prevention for storage tanks; carrying out risk identification and hazard investigation in the warehousing link to ensure the integrity of warehousing equipment and facilities; responsible for the special management of hazardous material warehousing, implementing the system of double-person receiving and dispatching and double-person storage; establishing accounts for material in-out and emergency rescue material reserves, and conducting regular inspection and maintenance; responsible for the identification and evaluation of major hazard sources and environmental factors in the department.

6. Transportation Department: Responsible for the HSE management of transportation fleets and transportation processes, reviewing the HSE qualifications of transporters, and signing transportation HSE agreements; supervising the maintenance of transportation vehicles and the safe operation of drivers, and preventing environmental risks such as exhaust emissions and noise pollution; formulating special plans for hazardous material transportation, equipping escorts and emergency supplies; tracking the transportation process in real time to ensure the safe delivery of materials.

7. Quality Department: Responsible for the quality and HSE performance inspection of purchased materials and issuing inspection reports; supervising the handling of unqualified materials to prevent unqualified materials from entering the production link; participating in the HSE acceptance of purchased materials.

## **5.2.4 Employees' HSE Responsibilities**

8. Employees: Strictly abide by HSE rules and regulations and post operating procedures, and correctly use personal protective equipment; participate in post hazard identification and risk control activities, and take part in HSE training and emergency drills; timely report accidents, incidents and hazards, and put forward suggestions for improving HSE management.

2. Deputy General Manager in Charge: Assist the General Manager in carrying out HSE management work, be responsible for supervising the operation of the HSE system, approving HSE management plans, and organizing HSE inspections and emergency drills.

3. HSE Management Department: Responsible for formulating HSE management systems and emergency plans, organizing risk identification and assessment, HSE training, hazard investigation and control, accident investigation and handling; supervising the implementation of HSE responsibilities of various departments and regularly reporting HSE performance to the management.

4. Purchasing Department: Responsible for the review and management of suppliers' HSE qualifications, clarifying HSE clauses in procurement contracts to ensure purchased materials meet HSE standards; organizing risk identification in the procurement link, cooperating in the HSE acceptance of purchased materials, and timely transmitting HSE information during the procurement process.

5. Warehousing Department: Responsible for HSE management of warehousing sites, standardizing the classification of material storage, and implementing safety

measures such as fire prevention, explosion prevention and moisture prevention; carrying out risk identification and hazard investigation in the warehousing link to ensure the normal operation of warehousing equipment and facilities; responsible for the special management of hazardous material warehousing and establishing sound warehousing accounts.

6. Transportation Department: Responsible for the HSE management of transportation fleets and transportation processes, reviewing the HSE qualifications of transporters and formulating transportation safety plans; supervising the safe operation of transportation personnel, carrying out daily maintenance and inspection of transportation vehicles, and preventing safety and environmental risks during transportation.

7. Quality Department: Responsible for the quality and HSE performance inspection of purchased materials and issuing inspection reports; supervising the handling of unqualified materials to prevent unqualified materials from entering the production link.

8. Employees: Strictly abide by HSE rules and regulations and post operating procedures, participate in HSE training and hazard investigation, correctly use labor protection supplies, and timely report hazards and accidents and participate in disposal.

## **6. HSE Risk Management and Control Measures**

### **6.1 Hazard Identification, Risk Assessment and Risk Control**

The Company establishes and maintains procedures for continuous hazard identification, risk assessment and implementation of necessary control measures. These procedures include:

- Routine and non-routine activities: all material procurement, warehousing, transportation and related operation activities
- Activities of all personnel entering the workplace, including employees, contractors and visitors
- Facilities in the workplace, whether provided by the Company or external parties
- Accidents and potential emergencies: identify possible accidents and emergencies and formulate emergency plans

In accordance with the requirements of work safety standardization in the petroleum industry, the Company adopts methods such as Job Safety Analysis (JSA), Safety Checklist, Preliminary Hazard Analysis (PHA) and Hazard and Operability Study (HAZOP) for hazard identification and risk assessment. For high-risk activities (such as hazardous chemical procurement and transportation, large-scale equipment hoisting, etc.), pre-job safety analysis must be conducted to ensure risks are

controlled within an acceptable range. The HSE Management Department organizes the assessment of identified risks, determines risk levels, formulates risk control measures, forms the , and regularly checks the implementation of measures.

## **6.2 Identification and Evaluation of Environmental Factors**

The Company establishes and maintains procedures for identifying environmental factors that can be controlled or may have an impact in various activities, and determining factors that have significant environmental impacts. The identification and evaluation of environmental factors shall consider:

- Material procurement link: give priority to purchasing environmentally friendly products, energy-saving equipment and low-pollution materials
- Warehousing management link: hazardous chemical storage, waste management, energy and resource consumption
- Transportation and distribution link: vehicle exhaust emissions, transportation risks, noise pollution
- Equipment use link: equipment energy consumption, operation efficiency, pollution prevention and control

The Company is committed to reducing pollution at the source, improving resource utilization efficiency, and reducing or avoiding the generation and discharge of pollutants during production, service and product use through measures such as design improvement, use of clean energy and raw materials, adoption of advanced process technologies and equipment, management improvement and comprehensive utilization.

## **6.3 Work Permit Management**

The Company implements a work permit system for non-routine operations not covered by work procedures or operating procedures in production or construction operation areas. The scope of work permits includes but is not limited to:

- Hot work: welding, cutting, heating and other operations in flammable and explosive places
- Confined space work: operations in closed or narrow spaces such as towers, tanks, troughs, pipelines, etc.
- High-altitude work: work at a height of 2 meters or more above the falling height datum plane where falling may occur
- Temporary electrical work: work of temporarily connecting and disconnecting electrical circuits
- Excavation work: work such as earth digging, piling, underground equipment installation that affects underground facilities

- Hoisting work: installation and disassembly work using various hoisting machinery and equipment

The work permit process includes: work application, hazard identification, safety measure confirmation, work approval, work implementation and supervision, and work closure. All hazardous work must be supervised by a dedicated person to ensure safety measures are implemented in place.

## **6.4 Operation Control**

### **6.4.1 Contractor and Supplier Management**

1. Supplier Management: The Purchasing Department establishes a supplier HSE access mechanism, strictly controls the "five checkpoints" (qualification checkpoint, HSE performance checkpoint, team quality checkpoint, supervision and management checkpoint, on-site management checkpoint), reviews the HSE qualifications of potential suppliers (such as work safety license, environmental management system certification, occupational health and safety management system certification, etc.), and conducts on-site inspections; incorporates HSE performance into the supplier evaluation system, conducts regular assessments, and implements restricted supply, suspended supply or elimination for unqualified suppliers; signs HSE agreements with qualified suppliers, clarifies the HSE responsibilities of both parties and the HSE quality requirements of materials, and establishes a list of qualified suppliers.

2. Contractor Management: For contractors participating in warehousing loading and unloading, equipment maintenance and other operations, the HSE Management Department reviews their HSE qualifications and operators' qualifications, and signs HSE contracts; conducts on-site HSE training to clarify HSE requirements for operations; arranges dedicated personnel for on-site supervision during operations, and promptly stops and requires rectification for violations; regularly evaluates contractors' HSE performance.

### **6.4.2 Facility Integrity Management**

The Company establishes and maintains procedures to ensure facility integrity, covering all links such as facility design, construction, procurement, operation, maintenance and inspection. Key focuses include:

- Warehousing facilities: structural safety of warehouses, shelves, storage tanks, etc., and fire and explosion prevention facilities
- Transportation equipment: safety status of vehicles, loading and unloading machinery, etc.
- Safety facilities: reliability of fire protection systems, lightning protection and static prevention facilities, alarm systems, etc.
- Special equipment: regular inspection and maintenance of hoisting machinery, pressure vessels, etc.

All facilities must be inspected, tested and maintained in accordance with specified cycles and standards to ensure they are in good condition.

### **6.4.3 Change Management**

The Company establishes and maintains procedures to control changes affecting HSE, including:

- Process and equipment changes: changes in equipment and process technologies
- Personnel changes: changes in key position personnel
- Organizational structure changes: adjustments to organizational structure and responsibilities
- Regulatory and standard changes: changes in applicable laws, regulations and standards
- Supplier changes: replacement of key suppliers

Evaluate all changes, determine potential HSE impacts, and take corresponding control measures.

## **6.5 Emergency Management**

### **6.5.1 Emergency Management Organization and Responsibilities**

The Company has established an Emergency Command Center as the highest command organization for emergency management of unexpected events, with the General Manager as the commander-in-chief. The Emergency Command Center has an Emergency Office (affiliated to the HSE Management Department), which is responsible for daily emergency management work. Each department has established an emergency team responsible for the emergency management work of the department. Relevant departments of materials and equipment are responsible for the purchase, reserve and distribution of emergency rescue materials.

### **6.5.2 Emergency Plan Formulation**

Combined with risk assessment results, the HSE Management Department formulates an emergency plan system for potential accidents and emergencies, including:

- Comprehensive Emergency Plan: Generally expounds emergency policies, organizational structure, responsibilities, action measures and guarantees, etc.
- Special Emergency Plan: Formulated for specific accident types such as hazardous chemical leakage, fire and explosion, transportation accidents, etc.
- On-site Disposal Plan: Emergency disposal measures formulated for specific

places, facilities or positions

The emergency plan is effectively connected with the local government's emergency plan, and is regularly reviewed and updated to ensure its suitability and effectiveness.

### **6.5.3 Emergency Preparedness and Response**

The Company is equipped with emergency rescue teams and emergency materials (fire extinguishers, first aid kits, chemical protective clothing, etc.), establishes emergency material reserve accounts, and conducts regular inspection, maintenance and update. At least 2 comprehensive emergency drills are organized every year, and each department conducts special emergency drills every quarter. The drill types include tabletop drills, functional drills and comprehensive drills. After the drill, a summary and evaluation are conducted to optimize the emergency plan. When an unexpected event occurs, the corresponding level of emergency response is activated immediately to control the development of the situation and protect the life and property safety of personnel.

### **6.5.4 Accident Reporting, Investigation and Handling**

After an HSE accident occurs, the parties involved and on-site personnel shall immediately report to the department head and the HSE Management Department, and activate the emergency plan; the HSE Management Department organizes the establishment of an accident investigation team, and conducts investigations in accordance with the "Four Not Let Go" principle (the cause of the accident is not found out, the responsible person is not dealt with, the rectification measures are not implemented, and the relevant personnel are not educated); analyzes the cause, clarifies responsibilities, and formulates preventive measures; the accident investigation report is promptly communicated to relevant employees for system improvement; protect the accident reporter, and encourage active reporting of accidents, incidents and hazards; the accident handling results are incorporated into employee performance appraisal.

## **6.6 Training and Education**

The Company establishes and maintains procedures to clarify the training content, mastery level and frequency for each position based on the HSE training matrix, so as to improve employees' safety awareness and capabilities.

The HSE Management Department formulates an annual HSE training plan and conducts differentiated training: new employees receive three-level HSE training (company-level, department-level and post-level) before entering the factory, and can only take up their posts after passing the assessment; employees in key positions such as procurement, warehousing and transportation receive special HSE training of no less than 8 hours every year; special operation personnel receive professional training and work with certificates; management personnel receive HSE management ability and leadership training; contractor employees receive on-site HSE training.

Regular HSE knowledge publicity and education activities (safety month, environmental protection day, etc.) are carried out to evaluate the training effect and ensure the effectiveness of training.

## **6.1 Risk Identification and Control**

All departments regularly carry out HSE risk identification for procurement, warehousing, transportation, operation and other links, and use methods such as checklist method and brainstorming to identify potential health, safety and environmental risks. The HSE Management Department organizes the assessment of identified risks, determines risk levels, formulates risk control measures, and forms the . Special risk control plans are formulated for high-risk links (such as hazardous chemical procurement and transportation, large-scale equipment hoisting, etc.), clarifying responsible persons and control requirements, and regularly checking the implementation of measures.

## **6.2 Supplier and Contractor Management**

1. Supplier Management: The Purchasing Department establishes a supplier HSE access mechanism, reviews the HSE qualifications of potential suppliers (such as work safety license, environmental management system certification, occupational health and safety management system certification, etc.), and conducts on-site inspections; incorporates HSE performance into the supplier evaluation system, regularly conducts HSE assessments on suppliers, and implements restricted supply, suspended supply or elimination for unqualified suppliers; signs HSE agreements with qualified suppliers, clarifies the HSE responsibilities of both parties and the HSE quality requirements of materials.
2. Contractor Management: For contractors participating in warehousing loading and unloading, equipment maintenance and other operations, the HSE Management Department reviews their HSE qualifications and operators' qualifications, and signs HSE contracts; conducts on-site HSE training to clarify HSE requirements for operations; arranges dedicated personnel for on-site supervision during operations, and promptly stops and requires rectification for violations.

## **6.3 Operation Control**

1. Procurement Link: The procurement plan shall clarify the HSE performance requirements of materials, and give priority to selecting green, environmentally friendly and safe and reliable materials; for special materials such as hazardous chemicals, strictly implement the "One Document and One Label" (Safety Data Sheet, Safety Label) system to ensure purchased materials meet national HSE standards; after materials arrive, jointly carry out HSE acceptance with the Quality Department and the user department, and unqualified materials are strictly prohibited from being stored in the warehouse.
2. Warehousing Link: Materials are stored by category according to their properties,

and general materials and hazardous materials are stored in separate areas with obvious safety signs; fire-fighting equipment, emergency protection facilities, etc. are equipped in the warehousing site, and regular fire inspections and facility maintenance are carried out; establish material in-out warehouse accounts, implement the system of double-person receiving and dispatching and double-person storage for hazardous materials; regularly carry out hazard investigation in the warehousing site, and promptly clean up expired and deteriorated materials.

3. Transportation Link: Select transporters with corresponding HSE qualifications and sign transportation HSE agreements; review transportation vehicles and drivers to ensure the vehicles have good safety performance and the drivers hold valid certificates; formulate special transportation plans for hazardous materials, equip escorts and emergency protective supplies, and clarify transportation routes and parking requirements; track the transportation process in real time to ensure the safe delivery of materials.

## **6.4 Emergency Management**

Combined with the company's business characteristics, the HSE Management Department formulates the , including emergency plans for fire and explosion accidents, hazardous chemical leakage, transportation accidents, occupational health emergency disposal plans, etc.; equips emergency rescue teams and emergency materials (such as fire extinguishers, first aid kits, chemical protective clothing, etc.), and regularly conducts inspection and maintenance of emergency materials; organizes at least 2 comprehensive emergency drills every year, and each department conducts special emergency drills every quarter. After the drill, a summary and evaluation are conducted to optimize the emergency plan.

## **6.5 Training and Education**

The HSE Management Department formulates an annual HSE training plan and conducts differentiated training for different positions: new employees must receive three-level HSE training (company-level, department-level and post-level) before entering the factory, and can only take up their posts after passing the assessment; employees in key positions such as procurement, warehousing and transportation receive special HSE training of no less than 8 hours every year; special operation personnel receive professional training and work with certificates after obtaining qualification certificates; regular HSE knowledge publicity and education activities (such as safety month, environmental protection day) are carried out to enhance the HSE awareness of all employees.

## **7. HSE Document Management and Communication**

## 7.1 HSE Document System Structure

The Company's HSE management system documents are divided into four levels:

- Level 1: HSE Management Manual: Expounds HSE policies, objectives and principles, a programmatic document
- Level 2: HSE Procedure Documents: Describe the activities and processes of various functional departments
- Level 3: HSE Operation Documents: Operation instructions, operating procedures, management systems, etc.
- Level 4: HSE Records: Objective evidence of activities or results

The Company controls HSE documents and materials to ensure they are easy to find, regularly reviewed and revised, and their suitability is confirmed by authorized personnel.

## 7.2 Communication, Participation and Consultation

The Company establishes and maintains procedures to carry out HSE communication:

- Internal Communication: Transmission and exchange of HSE information between levels and departments
- External Communication: Exchange of HSE information with contractors, suppliers, customers, government agencies and the public
- Employee Participation: Encourage employees to participate in HSE affairs such as hazard identification, risk assessment and procedure formulation
- Consultation: Consult with employees on changes affecting workplace HSE

Use safety experience sharing tools to share typical health, safety and environmental experiences, accidents and incidents, unsafe behaviors and practical knowledge before meetings, training courses and other group activities, and promote lessons and experiences.

## 7.3 Inspection and Performance Measurement

The Company establishes and maintains procedures to conduct regular inspections and performance measurements on key HSE characteristics:

- Regular HSE Inspections: Comprehensive inspections, professional inspections, seasonal inspections, daily inspections, etc.
- Equipment and Facility Testing: Testing and inspection of special equipment, safety facilities, occupational disease protection facilities, etc.
- Workplace Monitoring: Monitoring of occupational hazard factors in the workplace, noise monitoring, etc.

- HSE Performance Monitoring: Tracking and monitoring of the completion of HSE objectives and indicators

Apply safety observation and communication methods to standardize the discussion and communication between managers at all levels and operators on safety matters such as operation behaviors, environment, procedures and tools.

## **7.4 Hazard Investigation and Control**

Establish a hazard investigation mechanism combining "daily inspection, special inspection and comprehensive inspection": each department conducts daily inspections, the HSE Management Department conducts special inspections every month, and the Company conducts comprehensive inspections every quarter; the identified hazards are recorded in the , with clear rectification responsible persons, measures and time limits, and "closed-loop management" is implemented; for major hazards, production and business operations are immediately stopped for rectification, and reported to the Pipeline Bureau and the Group Company for filing.

## **7.5 Record Control**

All departments establish and improve the HSE record management system, and classify and file HSE training records, risk assessment reports, hazard investigation accounts, accident investigation reports, emergency drill records, supplier audit records, etc.; HSE records must be true, complete and clear, and be kept by dedicated personnel. Paper records are kept for no less than 3 years, and electronic records are kept for no less than 5 years to ensure traceability. The Company establishes and maintains procedures to standardize the identification, storage and disposal of HSE records.

## **7.6 Internal Audit**

The Company establishes and maintains procedures to conduct regular HSE internal audits to determine whether the HSE management system:

- Complies with the requirements of the arranged HSE management work
- Complies with the requirements of this Manual
- Is correctly implemented and maintained
- Effectively meets the Company's HSE policies and objectives

The HSE Management Department organizes a company-wide HSE system internal audit once a year. For non-conformities found in the audit, a rectification plan is formulated, the implementation of rectification is tracked, and an audit report is formed and submitted to the management.

## **7.7 Management Review**

The General Manager of the Company regularly organizes management reviews to

ensure the continuous suitability, adequacy and effectiveness of the HSE management system.

Input to management review includes:

- Audit results
- Stakeholder communication and feedback
- HSE performance
- Accident investigation and handling results
- Emergency drill evaluation
- Legal and regulatory compliance
- Status of corrective and preventive measures
- Follow-up of previous management reviews
- Changes that may affect the HSE management system
- Improvement suggestions

Output of management review includes any decisions and measures related to the following aspects:

- Improvement of the effectiveness of the HSE management system and its processes
- Improvement of HSE performance related to stakeholder requirements
- Resource requirements

A report is formed after the management review, clarifying improvement measures and implementing them.

## **7.1 Hazard Investigation and Control**

Establish a hazard investigation mechanism combining "daily inspection, special inspection and comprehensive inspection": each department conducts daily inspections, the HSE Management Department conducts special inspections every month, and the Company conducts comprehensive inspections every quarter; the identified hazards are recorded in the , with clear rectification responsible persons, rectification measures and rectification time limits, and "closed-loop management" is implemented; for major hazards, production and business operations are immediately stopped for rectification, and reported to the Pipeline Bureau and the Group Company for filing.

1. Internal Audit: The HSE Management Department organizes a company-wide HSE system internal audit once a year. For non-conformities found in the audit, a rectification plan is formulated, the implementation of rectification is tracked, and an audit report is formed.

2. Management Review: The General Manager organizes an annual HSE management review meeting, and reviews the suitability, adequacy and effectiveness

of the HSE policy, objectives and management system based on internal audit results, accident conditions, performance data, stakeholder feedback, etc., and puts forward improvement measures for implementation.

## 8. Supplementary Provisions

### 8.1 Manual Management and Revision

This Manual is compiled, revised, interpreted and managed by the Company's HSE Management Department, and is regularly reviewed and updated to ensure its suitability and effectiveness. It shall be revised in a timely manner when the following situations occur:

- Major changes in the Company's organizational structure or business operations
- Major changes in applicable laws, regulations and standards
- Revision requirements put forward by HSE management system audit or management review
- Other situations requiring revision

### 8.2 Effectiveness and Implementation

This Manual shall come into force on the date of issuance, and all employees of the Company must strictly abide by the provisions of this Manual. This Manual is the basic requirement for the Company's HSE management. All departments may formulate specific HSE management procedures and operation documents in accordance with this Manual, but they shall not be lower than the requirements of this Manual.

### 8.3 Appendix: Definition of Key HSE Terms

- **Hazard:** A source or state that may cause injury, illness, property damage, work environment damage or a combination of these situations.
- **Risk:** A combination of the likelihood and consequences of a specific hazardous event occurring.
- **Hazardous Condition:** Unsafe states of workplaces, equipment and facilities, unsafe behaviors of people, and defects in management.
- **Incident:** A situation that causes or may cause an accident.
- **Accident:** An unexpected situation that causes death, illness, injury, damage or other losses.
- **Contractor:** An individual or organization that performs work in the Company's workplace in accordance with an agreement.

- **Supplier:** An individual or organization that provides products (equipment, materials, etc.) to the Company.

| (注：文档部分内容可能由 AI 生成)