



# HSE Performance Measurement and Monitoring Management Procedure

## Document No.: CLADDING-HSE-EE-21

### 1 Purpose

To standardize the Company's HSE performance measurement and monitoring work, objectively evaluate the effectiveness of the HSE management system operation, identify improvement opportunities, ensure the achievement of HSE objectives, provide data support for management decisions, prevent the occurrence of HSE accidents/incidents, and comply with the *Law of the People's Republic of China on Work Safety*, *PIPING SYSTEM PTE LTD HSE Management System Requirements*, and the HSE control requirements of the COMPANY. This procedure is hereby formulated to promote the continuous improvement of HSE performance and ensure the safety of employees' lives, property, and the environment.

### 2 Scope of Application

This procedure applies to all departments of the Company (Quality, Safety and Environmental Protection Department, Logistics and Transportation Department, Warehousing Center, Equipment Management Department, Administration Department, Human Resources Department) and all units (branch companies, project departments) (Newly Added), covering all personnel working within the Company's controlled areas (regular employees, dispatched workers, interns, outsourced personnel, contractors). The specific scope is as follows:

#### 2.1 Business Scenarios

- Internal Scenarios: Storage/loading and unloading of warehoused materials, procurement and acceptance of equipment, maintenance and overhaul of equipment, storage/use of hazardous chemicals (rust inhibitors, cleaning agents), operation of office areas/canteens;
- External Scenarios: Logistics and transportation (owned/leased vehicles), supplier delivery sites, contractor equipment maintenance/installation operations;
- Newly Added Scenarios: Production operations of branch companies, on-site construction of project departments (e.g., equipment installation, field material distribution) (Newly Added).

## 2.2 Monitoring Content

- HSE Compliance: Compliance with laws and regulations, standards and specifications, and company systems (e.g., compliance of hazardous chemical storage, compliance of vehicle annual inspection, compliance of branch company construction);
- HSE Risk Control: Implementation effects of risk identification, assessment, and control measures (e.g., stability of warehousing shelves, safety status of transportation vehicles, safety of temporary electricity use at project departments);
- HSE Performance Indicators: Completion of proactive performance indicators (preventive type) and reactive performance indicators (result type) (Newly Classified);
- HSE Management System Operation: Effectiveness of system elements such as audits, training, and emergency preparedness (e.g., emergency drill compliance rate, training coverage rate, work permit implementation compliance rate);
- Newly Added Monitoring Content: Workplace environmental quality (noise, dust), occupational health monitoring, environmental pollutant discharge, and operating status of monitoring equipment (Newly Added).

## 3 Terms and Definitions

### 3.1 HSE Performance

Refers to the measurable results achieved by the Company in HSE management, including the degree of achievement of HSE objectives, risk control effects, and compliance levels. It is divided into "process performance" (effectiveness of management activities) and "result performance" (effectiveness of accident/incident control).

### 3.2 HSE Performance Indicators (Adjusted Classification)

Refers to parameters used to quantitatively measure HSE performance, divided into two categories:

- Proactive Performance Indicators (Preventive Type): Indicators used to predict HSE performance trends and prevent accidents (e.g., HSE training completion rate and qualification rate, hidden hazard investigation and treatment rate, work permit implementation compliance rate, monitoring equipment calibration rate) (Newly Detailed);
- Reactive Performance Indicators (Result Type): Indicators used to reflect occurred HSE results (e.g., accident occurrence rate, number of environmental pollution incidents, number and amount of government penalties, number of stakeholder complaints) (Newly Detailed).

### 3.3 HSE Performance Measurement

Refers to the process of collecting and calculating data to obtain the actual values of performance indicators (e.g., calculating "monthly hazardous chemical storage compliance rate = compliant storage batches / total storage batches × 100%").

### **3.4 HSE Performance Monitoring**

Refers to systematic activities of continuously tracking HSE performance indicators, compliance status, risk control effects, and monitoring equipment status to identify deviations and improvement opportunities (e.g., weekly monitoring of warehousing shelf inspection qualification rate, monthly monitoring of transportation vehicle accident rate, quarterly calibration of noise detectors) (Newly Added Equipment Monitoring).

### **3.5 Performance Deviation**

Refers to the gap between the actual value and the target value of HSE performance (e.g., "actual training coverage rate is 90%, target is 98%, deviation is -8%"), divided into positive deviation (exceeding the target) and negative deviation (failing to meet the target).

### **3.6 HSE Monitoring Equipment (Newly Added)**

Refers to instruments and meters used for HSE performance monitoring (e.g., noise measuring instruments, gas detectors, dust samplers, illuminometers), which need to be calibrated regularly to ensure data accuracy.

## **4 Responsibility Assignment (Supplemented and Optimized)**

### **4.1 Company Top Management / Management Representative (Integrated New Content)**

- Approve the Company's annual HSE performance monitoring plan, HSE performance objectives, and indicator system;
- Ensure investment in resources (funds, personnel, monitoring equipment) required for HSE performance measurement and monitoring;
- Preside over HSE performance review meetings and make decisions on major HSE performance issues;
- Approve the annual HSE performance report and promote the continuous optimization of performance objectives.

### **4.2 Quality, Safety and Environmental Protection Department (Responsible Management Department, Supplemented with New Responsibilities)**

- Take the lead in formulating and revising this procedure, and establish HSE performance measurement and monitoring management archives (indicator list, data records, analysis reports, equipment calibration records);

- Design the Company's HSE performance indicator system: divide company-level, department-level, and branch company/project department-level indicators, and clarify indicator definitions, calculation methods, data sources, and monitoring cycles;
- Formulate the annual HSE performance monitoring plan (Newly Added): clarify monitoring items (on-site inspection, equipment testing, environmental monitoring, etc.), methods, frequencies, and responsible units;
- Organize the collection and verification of HSE performance data: summarize data from all departments/units, verify the authenticity and completeness of data, and resolve data anomalies;
- Be responsible for the management and calibration of HSE monitoring equipment (Newly Added): establish equipment ledgers, formulate calibration plans, supervise the implementation of calibration, and deactivate unqualified equipment;
- Conduct HSE performance analysis: regularly (monthly/quarterly/annually) analyze performance trends, identify deviations, and form performance analysis reports;
- Organize HSE performance reviews: cooperate with the Management Representative to conduct quarterly performance reviews, and organize company-level HSE performance reviews at least once a year;
- Supervise the implementation of improvement measures: track the implementation of improvement plans by responsible departments/units for negative deviations and verify improvement effects.

### **4.3 All Business and Functional Departments (Supplemented with New Responsibilities)**

- Formulate department-level HSE performance indicators: decompose company-level indicators to formulate department-level indicators (e.g., "hazardous chemical storage compliance rate" for the Warehousing Center, "special equipment inspection rate" for the Equipment Management Department);
- Implement HSE performance monitoring for the department: collect data according to the monitoring cycle, fill in the *HSE Performance Data Record Form*, and keep the department's performance records (Newly Added);
- Implement daily maintenance of the department's HSE monitoring equipment (Newly Added): e.g., daily inspection and charging of gas detectors to ensure normal equipment operation;
- Conduct self-analysis of departmental performance: analyze the completion of the department's indicators monthly, identify the causes of deviations, and formulate improvement measures;
- Submit performance data and reports: submit data to the Quality, Safety and Environmental Protection Department as required (monthly/quarterly), and submit the department's HSE performance analysis report.

#### **4.4 All Units (Branch Companies, Project Departments) (Newly Added Independent Responsibilities)**

- Be responsible for daily monitoring of HSE performance in the unit: e.g., hidden hazard investigation at branch company production sites, safety inspection at project department construction sites;
- Report HSE performance data of the unit as required: submit the unit's performance data and abnormal situations to the Quality, Safety and Environmental Protection Department monthly;
- Implement HSE performance improvement measures in the unit: formulate and implement improvement plans for negative deviations;
- Maintain HSE monitoring equipment in the unit (Newly Added): e.g., noise meters and dust samplers at project departments, conduct daily maintenance as required and cooperate with calibration;
- Keep HSE performance records of the unit: e.g., on-site inspection records, equipment testing reports, performance data ledgers.

#### **4.5 Human Resources Department / Administration Department / Equipment Management Department (Omitted, supplemented with "cooperate in monitoring equipment calibration" and "provide occupational health monitoring data")**

#### **4.6 All Personnel (Including Contractors) (Supplemented with "cooperate in equipment monitoring")**

- Participate in post HSE performance monitoring: record post-related performance data and cooperate with the use of HSE monitoring equipment (e.g., noise monitoring in workplaces);
- Report performance anomalies: promptly report post HSE performance anomalies or monitoring equipment failures to the department head/unit head;
- Implement improvement measures: participate in post performance improvement activities to improve post HSE performance.

### **5 Work Procedures (Supplemented and Optimized)**

#### **5.1 Establishment of HSE Performance Indicators (Integrated New Content, Detailed Classification)**

##### **5.1.1 Indicator Selection Principles (Supplemented with New Principles)**

- **Relevance:** Relevant to the Company's HSE risks and impacts (e.g., "material stacking qualification rate" corresponding to warehousing risks, "vehicle accident rate" corresponding to transportation risks);
- **Measurability:** Capable of quantitative or qualitative measurement (e.g., "training qualification rate" can be quantified, "work permit implementation compliance rate" can be determined through inspection records);
- **Achievability:** In line with the Company's actual situation (e.g., "hidden hazard rectification rate target of 98%" needs to consider rectification difficulty and resources);
- **Directionality:** Capable of guiding HSE performance improvement (e.g., "behavioral safety observation frequency" guides the strengthening of on-site safety management);
- **Comprehensiveness:** Covering the three dimensions of safety, health, and environment, and balancing proactive and reactive indicators (Newly Added).

### 5.1.2 Composition of the Indicator System (Adjusted Classification, Supplemented with New Indicators)

Indicator Type	Dimension	Core Indicator Examples (Covering Businesses/Units)	Data Source	Monitoring Cycle	Responsible Unit
Proactive Performance Indicators	Safety Management	1. HSE training completion rate and qualification rate (all personnel) 2. Hidden hazard investigation and treatment rate (all departments/units) 3. Work permit implementation compliance rate (Warehousing Center/Project Departments) 4. Monitoring	Training records, inspection records, permit documents, calibration records	Monthly	All Departments/Units

		equipment calibration rate (Quality, Safety and Environmental Protection Department) 5. Emergency drill plan completion rate (all departments/units)			
	Health Management	1. Occupational health examination rate (Human Resources Department) 2. Labor protection equipment wearing compliance rate (all departments/units) 3. Workplace environment monitoring completion rate (Quality, Safety and Environmental Protection Department)	Medical examination reports, on-site inspection records, monitoring reports	Quarterly	Human Resources Department / All Departments/Units
	Environmental Management	1. Hazardous chemical storage compliance rate (Warehousing	Storage records, disposal contracts, energy consumption	Monthly/Annual	Warehousing Center / Branch Companies / Project Departments

		Center/Branch Companies) 2. Solid waste compliance disposal rate (Warehousing Center/Project Departments) 3. Energy consumption per unit output value (Administration Department)	on statistics		
Reactive Performance Indicators	Safety Management	1. Accident occurrence rate (injury frequency, severity rate) (Quality, Safety and Environmental Protection Department) 2. Number of HSE incidents caused by equipment failures (Equipment Management Department) 3. Number and amount of government penalties (Quality, Safety and Environmental Protection Department)	Accident reports, equipment logs, penalty documents	Monthly	Quality, Safety and Environmental Protection Department / Equipment Management Department
	Health Management	1. Abnormal rate of	Medical examination	Quarterly/Annual	Human Resources

	nt	occupational health examinations (Human Resources Department) 2. Number of occupational disease cases (Human Resources Department)	on reports, health archives		Department
	Environmental Management	1. Number of environmental pollution incidents (Quality, Safety and Environmental Protection Department) 2. Number of stakeholder complaints (Administration Department)	Incident reports, complaint records	Monthly	Quality, Safety and Environmental Protection Department / Administration Department

### 5.1.3 Indicator Approval and Release (Supplemented with Unit-Level Indicator Approval)

- The Quality, Safety and Environmental Protection Department organizes all departments/units to review the indicator system (once a year), and submits the revised system to the Management Representative for review;
- Company-level indicators are submitted to the Top Management for approval; department-level, branch company/project department-level indicators are filed with the Quality, Safety and Environmental Protection Department;
- After approval, the *Company HSE Performance Indicator List* (including unit-level indicators) is released, with electronic versions uploaded to the Company's intranet and paper versions distributed to all departments/units.

### 5.2 Performance Measurement and Monitoring Plan (Newly Added Independent Chapter)

## 5.2.1 Plan Formulation

- At the end of December each year, the Quality, Safety and Environmental Protection Department takes the lead in formulating the next year's *HSE Performance Monitoring Plan* (see Appendix B for example), including:
  - a. Monitoring Items: On-site HSE inspection, equipment and facility safety testing, workplace environment monitoring, occupational health monitoring, environmental impact monitoring, management system audit;
  - b. Monitoring Content: e.g., on-site inspection covers "material stacking compliance" and "operation standardization"; equipment testing covers "special equipment inspection" and "fire-fighting facility integrity";
  - c. Monitoring Methods: On-site patrol, instrument testing, record review, third-party testing (e.g., environmental pollutant discharge);
  - d. Monitoring Frequency: e.g., daily on-site patrol once a day, workplace environment monitoring once a quarter, special equipment inspection once a year;
  - e. Responsible Units: Clarify the implementing departments/units for each monitoring item (e.g., "workplace environment monitoring" is coordinated by the Quality, Safety and Environmental Protection Department + branch companies);
  - f. Record Requirements: Clarify the types of records to be retained (e.g., inspection record forms, monitoring reports, calibration certificates).

## 5.2.2 Plan Approval and Implementation

- The *HSE Performance Monitoring Plan* is submitted to the Management Representative for review and the Top Management for approval, and then released for implementation in January of the next year;
- All departments/units conduct monitoring activities in accordance with the plan; the Quality, Safety and Environmental Protection Department supervises the implementation of the plan monthly, and those failing to implement the plan as required shall explain the reasons and rectify within a time limit.

## 5.3 HSE Monitoring Equipment Management (Newly Added Independent Chapter)

### 5.3.1 Equipment Configuration

- The Quality, Safety and Environmental Protection Department formulates the *HSE Monitoring Equipment Configuration Standard* (Appendix E) based on monitoring needs, clarifying configuration requirements:
  - a. Noise Measuring Instruments: At least 1 unit for each production unit (Warehousing Center, Branch Companies); configured by project departments based on construction scale;

b. Gas Detectors: Configured as needed for locations involving hazardous chemical storage/use (warehousing hazardous chemical warehouses, project department painting operation areas);

c. Dust Samplers: Configured for dust-generating locations such as warehousing loading/unloading and project department civil engineering operations;

d. Illuminometers: At least 1 unit for each office area and production workshop;

- Equipment procurement shall meet accuracy requirements, and can be put into storage for use only after passing acceptance.

### **5.3.2 Equipment Ledger and Identification**

- The Quality, Safety and Environmental Protection Department establishes the *HSE Monitoring Equipment Ledger*, recording equipment name, model, serial number, purchase date, calibration cycle, user unit, and maintenance records;

- Equipment shall be labeled to indicate "Qualified" (calibrated and qualified) or "Deactivated" (faulty/overdue for calibration) to avoid misuse.

### **5.3.3 Calibration and Maintenance**

- The Quality, Safety and Environmental Protection Department formulates the *Annual Calibration Plan for HSE Monitoring Equipment*, clarifying calibrated equipment, cycles, and calibration institutions (e.g., sound level meters once a year, gas detectors once every six months);

- User units are responsible for daily equipment maintenance: e.g., daily inspection of battery power, weekly equipment cleaning, monthly function testing; report faults for repair in a timely manner;

- After calibration, the Quality, Safety and Environmental Protection Department updates the ledger and retains calibration certificates; equipment that is overdue for calibration or fails calibration shall be deactivated immediately and arranged for repair/scraping.

## **5.4 HSE Performance Data Collection and Methods (Supplemented with New Methods)**

### **5.4.1 Data Collection Channels (Supplemented with New Channels)**

- Daily Inspection: e.g., daily hazardous chemical storage inspection by the Warehousing Center, on-site patrol at branch company production sites, safety inspection at project department construction sites;

- Record Forms: Equipment operation logs, training attendance sheets, accident reports, medical examination reports, solid waste disposal records, work permit documents;

- Monitoring Equipment: Monitoring data from instruments such as noise measuring instruments, gas detectors, and dust samplers (Newly Added);

- External Feedback: Government supervision department inspection results, supplier/contractor feedback, stakeholder complaint records, third-party testing reports (Newly Added);
- Behavioral Observation: On-site behavioral safety observation records (e.g., "number of non-standard operations"), training effect evaluation records (Newly Added).

### 5.4.2 Data Collection Requirements (Supplemented with New Requirements)

- Timeliness: Submit data according to the monitoring cycle; daily data shall be submitted the next day, monthly data by the 5th of the next month, and quarterly data by the 10th of the next quarter;
- Accuracy: Data shall be recorded truthfully, reviewed and signed by the responsible unit head; false reporting or underreporting is strictly prohibited (e.g., "hidden hazard rectification rate" shall be consistent with rectification records);
- Completeness: All indicator data shall be covered without omission (e.g., "work permit implementation compliance rate" shall include all permit documents);
- Standardization: Use the unified *HSE Performance Data Record Form* (Appendix A), fill in clearly, and mark the data source (e.g., "noise data from monitoring on X month X day, 2026");
- Traceability: Original records shall be retained for subsequent verification (e.g., monitoring reports, calibration certificates) (Newly Added).

### 5.4.3 Data Collection Methods (Supplemented with New Methods)

Data Type	Collection Method	Example
On-Site Management Data	Daily patrol, special inspection, behavioral safety observation	The Warehousing Center inspects material stacking daily and records the number of non-compliance cases
Equipment-Related Data	Equipment logs, testing reports, calibration records	The Equipment Management Department collects annual inspection reports of special equipment
Environmental Monitoring Data	Instrument monitoring, third-party testing	The Quality, Safety and Environmental Protection

		Department tests workplace noise quarterly
Personnel-Related Data	Training records, medical examination reports, qualification certificates	The Human Resources Department collects employees' occupational health examination reports
Result-Type Data	Accident reports, complaint records, penalty documents	The Quality, Safety and Environmental Protection Department counts the number of monthly accidents

## 5.5 HSE Performance Analysis (Supplemented with New Methods)

### 5.5.1 Analysis Cycle and Methods (Supplemented with New Methods)

Analysis Cycle	Analysis Content	Core Methods (Newly Added)	Responsible Unit
Monthly	Indicator completion status, trend changes	Trend analysis (line chart), target comparison method	Quality, Safety and Environmental Protection Department
Quarterly	Quarterly performance summary, in-depth deviation analysis	Comparative analysis (with previous quarter/same period last year), root cause analysis, Pareto analysis (identifying major issues)	Quality, Safety and Environmental Protection Department
Annual	Annual performance target completion rate, system	SWOT analysis, benchmarking (comparison with group/industry), statistical process	Quality, Safety and Environmental Protection Department

	effectiveness evaluation	control (SPC, monitoring stability)	
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### 5.5.2 Deviation Analysis Requirements (Retained Original, Supplemented with "Stakeholder Complaint Analysis")

- For negative deviations, in-depth analysis of direct causes, indirect causes, and root causes shall be conducted, e.g., "increase in stakeholder complaints":
  - a. Direct Cause: Excessive noise from warehousing loading/unloading;
  - b. Indirect Cause: Insufficient noise monitoring frequency, failure to detect excessive noise in a timely manner;
  - c. Root Cause: The *Work Time Management System* does not restrict high-noise operation periods;
- For positive deviations, summarize experiences (e.g., "high hidden hazard rectification rate" due to "establishment of a closed-loop management mechanism") and promote them to relevant departments/units.

## 5.6 HSE Performance Reporting and Communication (Newly Detailed)

### 5.6.1 Report Types and Content (Supplemented with New Types)

Report Type	Cycle	Core Content (Newly Added)	Recipients
Regular Reports	Monthly	1. Monthly indicator completion status table; 2. Accident/incident statistics; 3. Major hidden hazards and rectification status; 4. Key plans for the next month	Management Representative, heads of all departments/units
	Quarterly	1. Quarterly performance trend analysis; 2. Laws and regulations compliance evaluation; 3.	Top Management, Management Representative, COMPANY HSE Department

		Management system operation effectiveness; 4. Improvement suggestions	
	Annual	1. Annual target completion status; 2. Performance comparison with previous years; 3. Comprehensive system evaluation; 4. Next year's plan	Top Management, Pipeline Bureau HSE Department, government supervision departments (if required)
Special Reports	On-Demand	1. Analysis of major performance anomalies (e.g., "sudden increase in accident rate"); 2. Special improvement measures and effects	Management Representative, Top Management
Immediate Reports	Emergency Situations	1. Express report on major accidents/incidents; 2. Severe performance data anomalies (e.g., "environmental pollution incidents")	Management Representative, Top Management, Pipeline Bureau HSE Department

### 5.6.2 Report Format (Supplemented with Unified Format)

Reports shall include the following modules (Appendix D):

1. Cover: Report name, cycle, compiling unit, date;
2. Table of Contents: Titles and page numbers of each chapter;
3. Performance Overview: Indicator completion rate, core highlights, major issues;
4. Detailed Analysis: Indicator analysis by dimension, deviation causes, improvement suggestions;
5. Appendices: Data record forms, monitoring reports, calibration certificates (if needed).

### 5.6.3 Communication Mechanism (Newly Added)

- Internal Communication:

- a. Monthly Performance Meeting: The Quality, Safety and Environmental Protection Department reports monthly performance, and all departments/units exchange improvement experiences;
  - b. Public Notification: Publish quarterly/annual performance reports on the Company's intranet and bulletin boards to inform all employees of performance status;
  - c. Employee Feedback: Set up an HSE performance suggestion box to collect employees' suggestions for performance improvement;
- External Communication:
    - a. Submit quarterly/annual performance reports to the Pipeline Bureau HSE Department;
    - b. Submit environmental monitoring reports and occupational health monitoring reports to government supervision departments (if required);
    - c. Feedback complaint handling results and performance improvement measures to stakeholders (e.g., nearby residents, suppliers).

## **5.7 HSE Performance Review and Improvement (Retained Original, Supplemented with "Unit-Level Review")**

### **5.7.1 Review Cycle and Organization**

- Quarterly Review: Organized by the Management Representative, with participation of the Quality, Safety and Environmental Protection Department and heads of all departments/units, to review quarterly performance deviations and improvement effects;
- Annual Review: Presided over by the Top Management, at least once a year, to review the completion of annual performance targets, the appropriateness of the indicator system, and the effectiveness of the management system;
- Unit-Level Review: Branch companies/project departments conduct self-reviews quarterly, with the Quality, Safety and Environmental Protection Department sending personnel to attend and provide guidance (Newly Added).

### **5.7.2 Improvement Measures and Tracking (Supplemented with "Unit-Level Improvement")**

- Responsible departments/units formulate the *HSE Performance Improvement Plan* (Appendix E) for negative deviations, clarifying improvement targets, measures, responsible persons, and completion time limits;
- The Quality, Safety and Environmental Protection Department establishes the *HSE Performance Improvement Tracking Form*, tracks improvement progress weekly, and conducts special supervision on the improvement plans of branch companies/project departments (Newly Added);
- After the completion of improvement, the responsible department/unit submits the *Improvement Effect Verification Report* with relevant evidence (e.g., training records, monitoring data);

- The Quality, Safety and Environmental Protection Department conducts on-site verification; if qualified, the issue is closed; if unqualified, re-improvement is required to ensure continuous performance improvement.

## 6 Related Documents (Supplemented with New Documents)

- *Law of the People's Republic of China on Work Safety*
- *HSE Management System Requirements*
- *HSE Objectives, Indicators and Management Plan Control Procedure (Newly Added)*
- *HSE Management System Audit Procedure*
- *HSE Accident and Incident Reporting, Investigation and Handling Management Procedure*
- *HSE Corrective and Preventive Actions (CAPA) Management Procedure*
- *HSE Document and Record Control Procedure*
- *HSE Monitoring Equipment Calibration Management Regulations (Newly Added)*

## 7 Records (Supplemented with New Records)

- *Company HSE Performance Indicator List (Appendix A)*
- *HSE Performance Monitoring Plan (Appendix B)*
- *HSE Performance Data Record Form (Appendix C)*
- *HSE Monitoring Equipment Ledger (Appendix E)*
- *HSE Monitoring Equipment Calibration Record (Appendix E)*
- *HSE Performance Analysis Report (Monthly/Quarterly/Annual) (Appendix D)*
- *HSE Performance Review Report (Appendix F)*
- *HSE Performance Improvement Plan (Appendix G)*
- *HSE Performance Improvement Tracking Form (Appendix H)*

## 8 Appendices (Supplemented with New Appendices)

### Appendix A: Company HSE Performance Indicator List (Template, Adjusted Classification)

Indicator No.	Indicator Name	Indicator Type	Calculation Method	Target	Data Source	Monitoring Cycle	Responsible Unit
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				Value			
HSE-A-01	HSE training completion rate and qualification rate	Proactive	Completion rate = number of trained personnel / number of personnel to be trained × 100%; Qualification rate = number of qualified personnel / number of trained personnel × 100%	≥98 %; ≥95 %	Training records	Monthly	Human Resources Department
HSE-A-02	Hidden hazard investigation and treatment rate	Proactive	Treated hazards / total investigated hazards × 100%	≥98 %	Inspection records	Monthly	All Departments/ Units
HSE-A-03	Work permit implementation compliance rate	Proactive	Compliant permits / total permits × 100%	≥99 %	Work permit documents	Monthly	Warehousing Center / Project Departments
HSE-A-04	Monitoring equipment calibration rate	Proactive	Calibrated qualified equipment / total	100 %	Calibration records	Quarterly	Quality, Safety and Environmental Protection Department

			equipment × 100%				
HSE-P-01	Accident occurrence rate (injury frequency)	Reactive	Number of accidents × 10 <sup>6</sup> / total working hours	≤0.3 cases	Accident reports, working hour statistics	Monthly	Quality, Safety and Environmental Protection Department
HSE-P-02	Number of environmental pollution incidents	Reactive	Total number of annual environmental pollution incidents	≤0 cases	Environmental incident reports	Annual	Quality, Safety and Environmental Protection Department
HSE-P-03	Number and amount of government penalties	Reactive	Annual number of penalties / total amount	≤0 cases / 0 yuan	Penalty documents	Annual	Quality, Safety and Environmental Protection Department
HSE-P-04	Number of stakeholder complaints	Reactive	Total number of annual stakeholder complaints	≤2 cases	Complaint records	Annual	Administration Department

## Appendix B: Example of HSE Performance Monitoring Plan Form (Newly Added)

Plan No.	JP-2026001	Plan Cycle	January-December 2025	Compiling Department	Quality, Safety and Environmental Protection Department
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Monitoring Item	Monitoring Content	Monitoring Method	Monitoring Frequency	Responsible Unit	Record Requirements
On-Site HSE Inspection	1. Material stacking compliance (Warehousing Center/Project Departments) 2. Operation standardization (all departments) 3. Emergency passage unobstructedness (all personnel)	Daily patrol, special inspection	Daily patrol once a day, special inspection once a month	All Departments/Units	<i>HSE On-Site Inspection Record Form</i>
Equipment and Facility Testing	1. Special equipment inspection (cranes/forklifts) 2. Fire-fighting facility integrity 3. Electrical equipment insulation testing	Professional testing, on-site inspection	Special equipment once a year, fire-fighting facilities once a month, electrical equipment once a quarter	Equipment Management Department / All Departments	<i>Equipment Testing Report / Fire-Fighting Facility Inspection Record</i>
Workplace Environment Monitoring	1. Noise (Warehousing loading/unloading / Branch Company workshops) 2. Dust (Project Department civil engineering / Warehousing Center) 3. Toxic and harmful	Instrument monitoring, third-party testing	Once a quarter, enhanced monitoring in case of anomalies	Quality, Safety and Environmental Protection Department + All Units	<i>Workplace Environment Monitoring Report</i>

	gases (hazardous chemical warehouses)				
Occupational Health Monitoring	1. Occupational health examination (employees exposed to dust/noise) 2. Pre-employment/on-the-job/off-job examinations	Medical institution examination	Annual examination once a year, off-job examination as needed	Human Resources Department	<i>Occupational Health Examination Report</i>
Environmental Impact Monitoring	1. Solid waste compliance disposal 2. Wastewater/exhaust gas discharge (Branch Companies)	Disposal contract review, third-party testing	Solid waste once a month, discharge once every six months	Quality, Safety and Environmental Protection Department / Branch Companies	<i>Solid Waste Disposal Record / Discharge Monitoring Report</i>

### Appendix C: HSE Performance Data Record Form (Template, Supplemented with Equipment Data)

Record No.	JL-HSE-2025001	Unit/Department	Warehousing Center	Record Cycle	X month X day - X month X day, 2025
Proactive Indicators	Indicator Name	Target Value	Actual Value	Deviation	Data Details
	Hidden hazard investigation and treatment rate	≥98%	96%	-2%	50 hazards investigated, 48 treated (2 not due)

	Work permit implementation compliance rate	≥99%	99.5%	+0.5%	200 permits handled, 199 compliant
	Monitoring equipment calibration rate	100%	100%	0%	5 pieces of equipment to be calibrated this month, all completed
Reactive Indicators	Indicator Name	Target Value	Actual Value	Deviation	Data Details
	Number of stakeholder complaints	≤0 cases/month	0 cases	0%	No stakeholder complaints
	Number of HSE incidents caused by equipment failures	≤0 cases/month	0 cases	0%	No equipment failure incidents
Environmental Monitoring Data	Indicator Name	Standard Value	Actual Value	Deviation	Monitoring Time/Equipment
	Toxic gas concentration in hazardous chemical warehouse	≤10ppm	8ppm	-2ppm	X month X day, gas detector (No. G-202501)
Data Review	Department Head Signature: Zhang San	Review Date	X month X day, 2025	Reporter	Li Si

## Appendix D: HSE Performance Report Format (Newly Added)

## D1 Monthly Report Format

Cover

Title: Pipeline Materials and Equipment Co., Ltd. HSE Performance Report for X Month 2025

Compiling Unit: Quality, Safety and Environmental Protection Department

Date: X month X day, 2025

Table of Contents

1. Performance Overview
2. Indicator Completion Status
3. Major Issues and Deviation Analysis
4. Improvement Measures and Next Month's Plan
5. Appendices (Data Record Forms, Abnormal Situation Explanations)

Text Example

1. Performance Overview: This month, 14 out of 15 company-level indicators were completed, with a completion rate of 93.3%. The uncompleted indicator was "Warehousing Center Material Stacking Qualification Rate (95%, target 98%)";
2. Indicator Completion Status: List the target value, actual value, and deviation of each indicator;
3. Major Issue Analysis: The cause of the deviation in material stacking qualification rate (new employees' unskilled operations);
4. Improvement Measures: The Warehousing Center shall complete special training for new employees by X month X day.

## D2 Annual Report Format (Omitted, Supplemented with "System Effectiveness Evaluation" and "Next Year's Resource Plan")

### Appendix E: HSE Monitoring Equipment Management Requirements (Newly Added)

#### E1 Equipment Configuration Standard

Equipment Name	Configuration Unit/Location	Accuracy Requirement	Purpose
Noise Measuring Instrument	Warehousing Center, Branch Company workshops, Project	Measurement range 30-130dB, accuracy $\pm 1$ dB	Monitor noise concentration in workplaces

	Department construction areas		
Gas Detector	Hazardous chemical warehouses, Project Department painting areas, Branch Company laboratories	Detectable gases including CO, H <sub>2</sub> S, O <sub>2</sub> , accuracy ±5%	Monitor concentration of toxic and harmful gases
Dust Sampler	Warehousing loading/unloading areas, Project Department civil engineering operation areas	Flow error ≤2%	Collect dust samples and analyze concentration
Illuminometer	All office areas, production workshops, warehouses	Measurement range 0-10000lux, accuracy ±5%	Monitor whether lighting intensity meets standards
Infrared Thermometer	Equipment Management Department, Branch Company equipment workshops	Measurement range -50-500°C, accuracy ±1°C	Detect surface temperature of equipment to prevent overheating

## E2 Calibration Cycle and Institution

Equipment Name	Calibration Cycle	Calibration Institution	Calibration Requirements
Noise Measuring Instrument	Once a year	National recognized metrology and testing institution	Provide calibration certificate; only usable if calibrated and qualified
Gas Detector	Once every six months	Equipment manufacturer or authorized service institution	Conduct zero calibration and range calibration; record calibration data

Dust Sampler	Once a year	Metrology and testing institution	Calibrate flow rate and time control accuracy
Illuminometer	Once a year	Metrology and testing institution	Calibrate illuminance value to meet standards

### E3 Equipment Maintenance Record Template

Equipment No.	Equipment Name	User Unit	Maintenance Date	Maintenance Content	Maintenance Personnel	Equipment Status	Remarks
G-202501	Gas Detector	Warehousing Center	X month X day, 2025	Clean sensor, charge battery, function test	Zhang San	Normal	None
N-202502	Noise Measuring Instrument	Branch Company	X month X day, 2025	Clean body, inspect display screen, replace battery	Li Si	Normal	None

### Appendix F: HSE Performance Review Report (Annual Template, Supplemented with Unit Performance)

Report No.	REV-HSE-2025	Review Cycle	January-December 2025	Organizing Department	Quality, Safety and Environmental Protection Department
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<p>I. Review Overview</p>	<p>Review Time: December 20, 2025; Review Participants: Top Management, Management Representative, heads of all departments/units ; Review Content: 2025 performance target completion status, indicator system effectiveness, improvement measure implementation.</p>				
<p>II. Annual Performance Summary</p>	<p>1. Company-Level Indicators: 17 out of 18 completed, with a completion rate of 94.4%; 1 uncompleted ("Branch Company Energy Consumption per Unit Output Value" due to new equipment commissioning); 2. Unit-Level Indicators: Branch Company completion rate 92%, Project Department completion rate 90%; 3. Performance Trend: Accident rate decreased</p>				

	<p>by 25% year-on-year, hidden hazard rectification rate increased by 10% year-on-year, zero stakeholder complaints; 4. Proactive Indicator Highlights: Monitoring equipment calibration rate 100%, work permit implementation compliance rate 99.8%.</p>				
<p>III. Indicator System Review</p>	<p>1. Appropriateness: Existing indicators cover core businesses, but "temporary electricity compliance rate" for Project Departments needs to be supplemented; 2. Effectiveness: Proactive indicators are effective in predicting reactive indicators (e.g., violation rate decreased by 30% after training coverage rate improvement); 3. Adjustment</p>				

	<p>Suggestions: Add "Project Department Temporary Electricity Compliance Rate" and "Branch Company Wastewater Discharge Compliance Rate".</p>				
<p>IV. Improvement Measure Implementation</p>	<p>A total of 32 improvement measures formulated in 2025, 30 completed, with a completion rate of 93.7%; 2 uncompleted ("Branch Company Equipment Energy-Saving Transformation" and "Project Department Safety Protection Facility Upgrade"), planned to be completed by June 2026.</p>				
<p>V. Next Year's Plan</p>	<p>1. Performance Targets: Company-level indicator completion rate <math>\geq 95\%</math>, branch company/project department</p>				

	<p>indicator completion rate <math>\geq 92\%</math>; 2. Monitoring Focus: Add temporary electricity monitoring and wastewater discharge monitoring; 3. Resource Allocation: Add 5 gas detectors for Project Departments, 2 noise measuring instruments for Branch Companies, and train 10 digital monitoring personnel.</p>				
Review Team Leader	Top Management: Zhao Liu	Review Recorder	Li Si	Date	December 20, 2025

### Appendix G: HSE Performance Improvement Plan (Template, Supplemented with Unit Improvement)

Plan No.	IMP-HSE-2025001	Associated Indicator	Branch Company Energy Consumption per Unit Output Value	Responsible Unit	Branch Company
Deviation Status	Actual value in X month 2025: 8.5kW·h/10,000 yuan,				

	target value: 8.0kW·h/10,000 yuan, deviation: +0.5kW·h/10,000 yuan, due to high energy consumption during new production line equipment commissioning				
Improvement Target	Energy consumption per unit output value $\leq 8.0\text{kW}\cdot\text{h}/10,000$ yuan by X+2 month 2025, and stable compliance after commissioning				
Improvement Measures	No.	Specific Measures	Responsible Person	Completion Time Limit	Resource Requirements
	1	Optimize new equipment operating parameters to reduce no-load energy consumption	Wang Wu	Before X month X day	Technical personnel support
	2	Install energy consumption	Zhao Liu	Before X month X day	Instrument procurement funds

		n monitoring instruments for real-time energy consumption monitoring			
	3	Train operators on energy- saving operation skills	Sun Ba	Before X month X day	Training courseware
Approval Opinion	Quality, Safety and Environmental Protection Department Review: Measures are feasible, approved for implementation. Signature: Liu Qi Date: X month X day				
Completion Status	Completed, energy consumption per unit output value in X+2 month: 7.8kW· h/10,000 yuan, meeting standards. Verifier: Liu Qi Date: X+2 month X day				

## 9 Supplementary Provisions

**9.1 This procedure shall be interpreted by the Company's Quality, Safety and Environmental Protection Department.**

**9.2 This procedure shall come into force on the date of issuance. In case of any inconsistency between the existing HSE performance-related regulations and this procedure, this procedure shall prevail.**

**9.3 This procedure shall be reviewed once a year, or revised in a timely manner according to updates to national laws and regulations, changes in the Company's business (e.g., new intelligent monitoring equipment, overseas project departments), and rectification requirements for major HSE incidents.**

**9.4 For matters not covered in this procedure, refer to the *HSE Management System Requirements* and relevant laws and regulations.**