



(iv) HSSE Management System Elements and Expectations

1. Leadership and Accountability

Effective health, safety, security and environment (HSSE) management relies on the commitment of all TAQA personnel to achieve excellent performance. Leaders within TAQA operating groups are expected to champion the HSSE management system. These people are held accountable for personally leading the effort by demonstrating behaviors that are supportive of our HSSE objectives, by clearly defining HSSE roles and responsibilities, by providing needed resources, and by measuring, reviewing and continuously improving our HSSE performance.

Expectations

- Business is conducted throughout all TAQA operations in accordance with the TAQA HSSE Policy.
- TAQA leaders regularly engage the workforce in clear, two-way communications, and model positive HSSE behaviors by personal example both on and off the job.
- Opportunities are sought to reinforce and reward group and individual positive HSSE behaviors.
- HSSE considerations are taken into account during strategy development, planning and decision-making processes.
- Roles and responsibilities are defined and clearly communicated for management of HSSE issues and leaders stress the need for active involvement of all personnel.
- Adequate resources are allocated to meet HSSE management system requirements.
- Specific, measurable and realistic HSSE performance goals and objectives are established. HSSE performance is assessed against those objectives, based on feedback from line management, peers and others in the Business Unit.
- The HSSE management system is implemented and supported throughout the organization.
- Sharing of best practices learned inside and outside the company is promoted.

2. Regulatory Compliance and Corporate Standards

Achieving compliance with regulations, standards, guidelines and internal policies is vital to our business success. Effective processes exist to help identify, understand and communicate throughout the organization all applicable requirements. All facilities are operated and maintained to ensure safe, secure, and environmentally sound performance while adhering to all regulatory requirements. TAQA corporate standards are developed and implemented as needed to establish common HSSE practices across all business units.

Expectations

- All applicable regulatory requirements are met or surpassed and operational integrity is maintained through documented operational, maintenance, inspection and integrity management systems.
- Where local regulatory requirements are absent or inadequate, standards are set that protect people and the environment. Voluntary program participation is supported where it enhances HSSE performance or community relations.
- Critical Standards and procedures are provided as interpretation for some of the most common risks, implementing lessons learned and translation of key corporate expectations into common practice.
- In joint ventures and partnerships where TAQA is not the operator and has a major ownership interest, we will encourage the implementation of similar HSSE management systems.
- Systems are in place and responsibilities are assigned to identify, interpret, communicate and operate within applicable regulatory requirements, including permit approval, monitoring and reporting requirements, recordkeeping and other legally binding HSSE requirements.
- Key operating parameters are established and regularly monitored. The workforce understands their roles and responsibilities to maintain operations within these parameters.
- Clearly defined start-up, operating, maintenance and shutdown procedures are in place with designated authorities identified (e.g., safe work permits, hand-over, equipment and process isolation, etc.)
- Reliability and availability of protective systems are maintained by appropriate testing and maintenance programs, including management of temporary disarming or deactivation.
- Energy efficiency and resource conservation opportunities are identified and acted upon throughout the operational life of facilities.
- HSSE impacts associated with operations, including storage and use of hazardous chemicals, generation of waste, emissions, noise, releases to surface and groundwater, and energy uses are minimized to the extent practicable.
- Comprehensive waste management programs are in place to ensure that wastes are minimized, re-used, recycled or properly disposed of.
- Abandonment, remediation, reclamation and restoration programs are used as needed to minimize land-based impacts associated with our businesses.

3. Competence and Training

High skill and knowledge levels are essential to supporting strong HSSE performance; therefore, our workforce is carefully selected and trained, and skills and competencies regularly assessed.

Expectations

- Recruitment, selection and placement processes ensure that personnel are qualified, competent and physically and mentally fit for their assigned tasks. Neither employees nor contractors will be required or requested to perform a task unless they have received sufficient training. A system will be implemented to ensure necessary care and attention to inexperienced employees or contractors at the work site.
- TAQA personnel practice, encourage and reinforce healthy, safe and environmentally sound behaviors.
- All regulatory required and position-specific HSSE training is identified for TAQA personnel.
- TAQA business units are required to provide and document a minimum of general orientation, contractor site specific orientation and emergency evacuation training to contractors and sub-contractors.
- New, transferred or visiting employees must undergo appropriate site orientation and induction training that covers HSSE rules and emergency procedures.
- TAQA business units will maintain a written training plan for each employee and full time contractor that is compatible with the level of training required for that employee's position. A training record is maintained to ensure that all applicable TAQA employees and full time contractors receive appropriate training at the correct frequency.
- TAQA personnel have the required skills and training to competently perform tasks in a healthy, safe, secure and environmentally sound manner. Training is evaluated to determine its effectiveness.
- Standards are in place to ensure that neither drugs nor alcohol impairs the performance of our personnel and others on our work sites.

4. Contractor and Supplier Management

A cooperative effort between TAQA and its suppliers and contractors promotes safe working and environmentally sound conditions, attitudes and behaviors. TAQA uses only competent suppliers and contractors who are properly trained, appropriately equipped, effectively supervised and comply with all applicable industry regulations, standards and policies. We work together with these groups to ensure that our HSSE Expectations are aligned, and we monitor their performance to ensure that our HSSE Expectations are met.

Expectations

- Pre-qualification and retention criteria are established for work performed by contractors, suppliers and others.
- Contractors are expected to have approved and audited basic safety programs that meet or exceed industry standards and protocols. TAQA companies will communicate the HSSE requirements to contractors and suppliers in any solicitation for bid or request for proposal.
- TAQA business units must require that contractors and suppliers follow all regulatory and TAQA HSSE requirements as a part of the written contract or purchase order, including documentation.
- Hazards and risks associated with contractor and procurement activities in our businesses are identified, managed and communicated.
- All independent contractors coming to work for TAQA complete a basic orientation which meets business unit and minimum industry standards.
- TAQA business units will require documentation that the contractor's employees have the proper qualifications and training, in advance of the work being performed.
- TAQA business units require that all contractors develop HSSE reporting procedures to address incidents, statistics, emissions, releases and inventory data required by TAQA.

5. Risk Management

Management of risk is inherent in all aspects of our activities. By regularly identifying HSSE hazards and assessing risks associated with our activities, we take appropriate actions to account for acceptable risks and prevent or reduce unacceptable risks to people, the environment and the integrity of materials and equipment.

Expectations

- Leaders establish and promote the use of processes to identify hazards associated with TAQA activities, assess risks, control the hazards and manage the risks to acceptable levels.
- TAQA companies will consider three categories of risk: Workplace Risk, Process Risk and Business Risk. Risk management decisions must consider both frequency and consequence.
- With workforce involvement, the physical, chemical, biological, ergonomic, health, security and environmental hazards in the workplace are identified and the risks managed.
- Potential HSSE hazards and risks are identified and assessed for existing operations, business development, acquisitions, new projects, construction, modifications, closures, divestments and de-commissioning.
- Pre-job HSSE assessments are performed before starting any job to ensure equipment, work conditions and procedures are in place to adequately control the hazards associated with the job.
- Assessed risks are addressed by levels of management appropriate to the nature and magnitude of the risk. Decisions are clearly documented and resulting actions implemented through local procedures.
- Planned safety and environment inspections focused on work practices and physical conditions of TAQA operations are conducted on a regular basis and no less than annually.
- Risk assessments are updated at specified intervals and as changes are planned. Systems are in place to manage risks associated with changes to organization, personnel, systems, processes, procedures, equipment, products, materials, substances, laws and regulations.

6. Emergency and Crisis Management

Effective emergency management planning is key to minimizing the impact of accidental loss or consequences of natural or man made disasters. Emergency preparedness and response plans are maintained to cover all of our facilities. These plans identify equipment, training and personnel necessary to protect the workforce, customers, public, environment, and TAQA assets and reputation in the event of an incident.

Expectations

- Written emergency preparedness and response plans are developed and maintained for site-specific, business unit and corporate purposes, based on the risks that potentially impact the business. These plans are documented, accessible, clearly communicated and aligned from the local to the business unit to the corporate level.
- Appropriate personnel are knowledgeable about relevant emergency preparedness and response plans and trained in crisis management.
- Equipment, facilities and personnel needed for emergencies are identified, tested and available. Each worksite has access to an appropriate level of medical support and to resources / facilities that promote health and wellness.
- Emergency preparedness and response plans are tested regularly through drills and exercises, including liaison, involvement and sharing with external organizations.
- Periodic updates of plans and training are used to incorporate lessons learned from previous incidents and exercises.
- Mutual aid initiatives within the communities in which we operate are supported.

7. Incident Analysis and Prevention

HSSE incidents are reported, investigated and analyzed to prevent recurrence and improve our performance. Our investigations focus on root causes and/or system failures. Corrective actions and preventative measures are utilized to reduce future injuries and losses. The value of the investigation data is enhanced by sharing the results with a wide audience.

Expectations

- All health, safety, technical integrity and environmental incidents are openly reported, investigated, analyzed and documented. Security incidents are managed on a “need-to-know” basis.
- Near miss reporting is encouraged and positively recognized as a means of preventing incidents and improving HSSE performance.
- All incidents undergo root cause analysis so that systems, procedures and behaviors can be corrected to eliminate or minimize the likelihood of recurrence. Incident investigations are documented and corrective actions closed-out.
- Information gathered from incident investigations is analyzed to identify broad trends and develop preventive actions.
- Key lessons learned from investigations are shared across the organization and, when appropriate, with industry contacts.

8. System Measurement and Improvement

Measurement of performance is important in determining the success of HSSE management efforts. We periodically assess regulatory compliance and the implementation of and compliance with our HSSE Expectations to assure ourselves and outside stakeholders that risks are being appropriately addressed and that management processes are in place and working effectively. This involves both internal self-assessments and appropriate internal and external audits. We use this information for continuous improvement of our performance and processes.

Expectations

- HSSE performance standards and indicators are established, communicated and followed by individuals at all levels of the organization. Each TAQA Company will report the same Key Performance Indicators (KPI's) for both employees and contractors.
- Performance is measured against objectives, targets and milestones established annually. HSSE strategies are updated based on measured results and identified improvement opportunities.
- A documented audit program exists to independently evaluate progress towards HSSE targets, regulatory compliance and the effectiveness of the HSSE management system.
- External audits are carried out within each business unit a minimum of once every three years, and the results reported to TAQA Corporate HSSE.
- Self-assessments of the HSSE management system are conducted on an annual basis within each business unit, and the results reported to TAQA Corporate HSSE.
- Processes are in place for documenting and tracking results from assessments and audits, including follow-up actions to close out all findings. Audit results are reviewed by the business unit leadership team.
- Findings from learning processes (e.g., audits, incident investigations, near misses, etc.) are prioritized, tracked and used to systematically improve the HSSE management system.
- Sharing of best practices is enhanced through communication of findings and wide participation in audits and system reviews.

9. Communications and Stakeholder Awareness

Effective internal and external communication performed appropriately and consistently over time promotes a solid understanding of our HSSE expectations and performance. We value the importance of community awareness and actively engage in dialogue with various stakeholders to maintain public confidence in the integrity of our operations our commitment to HSSE excellence.

Expectations

- Open and meaningful communications are established and maintained with personnel, regulatory agencies, public organizations and communities regarding the health, safety and environmental aspects of our business.
- Assessments of new project developments include a review of HSSE impacts on local communities, and issues raised are communicated and integrated into the business case.
- Communication systems are in place to ensure we take responsibility for our operations and act in a timely fashion in responding to community concerns and issues.
- HSSE impacts of any divestment or decommissioning on the local community are reviewed and communicated as necessary.
- Periodic review of our global HSSE performance is externally communicated.

10. Documentation and Records

Good recordkeeping systems and effective and timely availability of relevant, current information assures consistent performance across business units and through time, enhances the transfer of knowledge through personnel changes and accelerates the learning curve for new personnel. Accurate documentation is essential for due diligence purposes associated with regulatory compliance.

Expectations

- A system of document controls is in place to securely manage critical and time-sensitive HSSE documentation.
- Filing and document handling systems are in place for maintaining HSSE records and reports. Obsolete documentation is identified and removed from circulation.
- Operating requirements for applicable regulations, permits, codes, standards and practices are documented and communicated to personnel, and records are maintained according to regulatory requirements.
- Personnel health, medical and occupational exposure records are maintained with appropriate confidentiality and retained as necessary.
- Up-to-date information on HSSE hazards and risks relating to the use, storage, handling, transport and disposal of materials is available to personnel, customers and others. Material Safety Data Sheets, labels and other information are issued to handlers and users in accordance with legislative and customer requirements, and updated as information changes.

11. Engineering Controls

New facilities and modifications to existing facilities are designed, constructed and commissioned using recognized standards, procedures and management systems to ensure HSSE performance expectations are achievable throughout their operational life. Acquisitions are reviewed for potential HSSE issues and impacts.

Expectations

- Baseline technical, environmental and safety data are collected before the development of any significantly sized new operation, facility, or major modification.
- Facilities are designed and constructed using technology which balances costs and benefits to manage technical risk and minimize or eliminate emissions, discharges, releases and other environmental impacts.
- Project management systems and procedures addressing technical integrity and HSSE accountabilities are documented and well understood. Design, procurement and construction standards are formally approved by the designated technical / engineering authority.
- Operational, maintenance and HSSE expertise are integrated early in the project / design stage and collectively complete and approve a Management of Change review. Experience from previous projects and current operations is applied.
- Deviations from design standards are identified and managed within the business unit, with the reasons documented and retained.
- Quality assurance and inspection systems are in place to ensure that facilities meet design and procurement specifications, that construction is in accordance with approved standards, and that equipment replacement or modification maintains operations integrity.
- Documented pre- and post-startup reviews are carried out for all newly installed or modified equipment to confirm that construction is in accordance with design, all required verification testing is complete and acceptable, and all recommendations / deviations are closed and approved by the designated technical authority.