QPEA GT MENEGAI LIMITED

FINAL HEALTH SAFETY AND ENVIRONMENT PROCEDURES MANUAL

REVIEWED BY: HSE&CSR MANAGER

APPROVED BY: BUSINESS MANAGER

SIGN    DATE

SIGN    DATE
## REVISION HISTORY

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<tr>
<th>Rev No.</th>
<th>Date</th>
<th>Details revised/reason for revision</th>
<th>Revised by</th>
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<td>Incident Investigation, Nonconformity, Corrective and Preventive Action</td>
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## ACRONYMS

<table>
<thead>
<tr>
<th>ACROSYMS</th>
<th>Description</th>
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<tr>
<td>MB</td>
<td>Business Manager</td>
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<tr>
<td>CSR</td>
<td>Corporate Social Responsibility</td>
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<tr>
<td>DOSHS</td>
<td>Directorate of Occupational Safety and Health Services</td>
</tr>
<tr>
<td>HAZOP</td>
<td>Hazard and Operability</td>
</tr>
<tr>
<td>HSE</td>
<td>Health Safety and Environment</td>
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<tr>
<td>IEHSMS</td>
<td>Integrated Environment, Health and Safety Management System</td>
</tr>
<tr>
<td>ISO</td>
<td>International Organization for Standardization</td>
</tr>
<tr>
<td>OHSAS</td>
<td>Occupational Health and Safety Assessment Series</td>
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<td>OHSMS</td>
<td>Occupational Health and Safety Management System</td>
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<tr>
<td>OSH</td>
<td>Occupational Safety and Health</td>
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<td>OSHPP</td>
<td>Occupational Safety and Health Project Plan</td>
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<td>PPE</td>
<td>Personal Protective Equipment</td>
</tr>
<tr>
<td>QPEA</td>
<td>Quantum Power East Africa GT Menengai Limited</td>
</tr>
<tr>
<td>SMART</td>
<td>Specific, Measurable, Achievable, Realistic and Time bound</td>
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Purpose

To ensure that environmental and safety hazards emanating from our activities, products and services are identified and the risk associated with these hazards are determined and controlled. The objective is to reduce risk against people, assets, environment and the company reputation to as low as reasonably possible/moderate level.

Scope

This procedure:

- Covers the systematic identification of all hazards and incidents associated with the company’s activities both within and outside, processes and products for which QPEA GT Menengai Limited has control or can have influence;
- Record the significant hazards and incidents;
- Sets out how and how often hazard identification and risk assessments are to be performed, reviewed and the personnel responsible;
- Implement suitable measure to reduce and control risks;
- Plan for recovery if the control of risk is lost;
- Includes how hazards are addressed with a view to continuous improvement of the company’s processes, e.g. through safety audits and risk assessments;
- Determines how change or proposed changes in the organization, its activities, or materials and equipment are handled to mitigate the potential hazards arising out of the changes; and
- Is complimentary with change management procedure in this procedure manual.

Responsibility

HSE&CSR manager
Functional managers
Shift HSE Representatives

Definitions

Hazard: A situation or condition which has potential to cause harm to the environment, a person or damage to asset and company’s reputation when exposed to it.

Risk: Is a measure of the probability of occurrence of a hazard and the severity of the consequences resulting from its impacts or potential.

References

1. ESIA study report for the Development of Geothermal Power Plant in Menengai
2. Health and Safety Management Plan
3. Emergency Preparedness and Response Plan
4. Fire Prevention and Management Plan
5. Air Quality Management Plan
6. Noise Management Plan
7. Hydrocarbons and Chemical Handling Plan
8. Security Management Plan
9. Biodiversity Management Plan
10. Stakeholders Engagement Plan
11. Waste Management plan
13. Cultural and Archaeological Management;
15. Traffic management plan

Records

1. Environmental aspects
2. Record of Risk Assessment including Job Safety Analysis (JSA) and Fire Risk Assessment Reports;
3. Occupational Safety and Health Project Plans (OSHPP) register
4. Work instructions manual

Forms

HSE 001/A: Hazard and risks register
HSE 001/B: Accident report form
HSE 001/C: Incident and Accident Register
HSE 001/D: PPE Inventory

Procedure

A. Coordinating hazard and risk study

1. Initially an environmental health and safety audit followed by risk assessment is conducted on all activities (routine and non-routine), products, services and processes and the hazards pertaining to each shall be noted.

2. As a minimum the following must be included in the risk assessment report:
   a. Storage areas including Chemical dosing systems (location, type, etc.);
   b. Plant and equipment (type, intended use, location, etc.);
   c. Processes (type, hazard potentials, locations, automatic or manual, etc.);
   d. Waste generation and its disposal (quantity, origin, types, hazard classes, pre-treatment activities, etc.);
   e. Electrical Equipment and rooms
   f. Worksites/ Workshop/Control Room/offices (nature of activities, locations, etc.).
   g. Fire water and H2S systems
   h. Interface with the GDC steam gathering system
   i. Interface with the KPLC/KETRACO substation
   j. Biodiversity of the Menengai Geothermal field
   k. Neighboring Community and stakeholders

3. During the study, the following are taken into consideration:
   a. All applicable legal & regulatory requirements;
   b. All potential risk areas and opportunities for improvement;
   c. Routine and non-routine activities;
   d. Human behavior, capabilities and other human factors;
   e. Company reputation
   f. Security
   g. Changes or proposed changes in the organization, its activities or materials.

4. The HSE & CSR manager shall assist the relevant Function managers by coordinating and being part of the study.

5. Once the baseline data has been established, it shall be reviewed:
a. Whenever changes in activities, products, services and processes are introduced;
b. When there are changes to applicable legal, regulatory and other requirements;
c. At least once a year.

B. Criteria/method for determining hazards

1. Site visits, tool box talks, job safety analysis, incidents, near misses, safety walk throughs. The hazards will be documented in respective forms
2. This covers the scope, nature and timing of the process for proactive approach.
3. The severity of each hazard shall be evaluated according to section C below.
4. Hazard identification process shall follow the five sense rule, i.e., feel, sight, smell, hearing and taste.

C. Calculating the Risk Rating

C1 Technique used

The assessment involves the use of a customized self-assessment questionnaire; walk through surveys, review of documentation, interviews and site visits. A simplified approach to Risk Assessment, with particular reference to Risk Ranking, using the Hazard/Incident/Consequence model is used.

C2 Hazard Identification

The first stage of any Risk Assessment is to identify the Hazards within the facility. Methodologies for doing this include a consideration of:

- The sources or activities within the organization with the potential to cause personal injury, ill health to people or harm to the environment;
- Identification of people or environmental component at risk and the consequences of incidents in which they might be involved;
- Incident history: This is done through literature review and checking of the records in the company.

Hazard identification is done through safety walkthrough, toolbox talks, reference to incident and near miss data bases, worker interviews and checking of accident records.

C3 Risk ranking model

Having identified the hazards the next stage is to determine the ‘Risk Ranking’. Two models can be used for doing this:

- The Probability/Severity [P.S.];
- Likelihood/Exposure/Severity [L.E.S.].

C3.1 The Probability/Severity model represents the simplest approach and involves taking account of the:

- Controls’ which are in place to minimize the probability of a ‘Hazard’ causing an ‘Incident’;
- Defenses, that are in place to minimize the severity of the ‘Consequences’ of an ‘Incident’, should the ‘Controls’ fail.

The system involves simply assigning a numerical value of 1, 2 or 3 based on a subjective judgment as to whether the probability of a ‘Hazard’ causing an
‘Incident’ is Low, Medium or High taking account of the ‘control’ measures which are in place, i.e.

<table>
<thead>
<tr>
<th>Probability</th>
<th>Low</th>
<th>1</th>
</tr>
</thead>
<tbody>
<tr>
<td>All reasonably foreseeable controls are in place</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Some controls in place though not all which are</td>
<td>Medium</td>
<td>2</td>
</tr>
<tr>
<td>reasonable foreseeable</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Very few, or even no, controls in place</td>
<td>High</td>
<td>3</td>
</tr>
</tbody>
</table>

The same is done based on the controls and defenses which are in place to minimize the severity of the ‘Consequences’ should an ‘Incident’ occur, i.e.,

<table>
<thead>
<tr>
<th>Severity</th>
<th>Low</th>
<th>1</th>
</tr>
</thead>
<tbody>
<tr>
<td>All reasonably foreseeable defenses are in place</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Some defenses in place though not all which are</td>
<td>Medium</td>
<td>2</td>
</tr>
<tr>
<td>reasonable foreseeable</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Very few, or even no, defenses in place</td>
<td>High</td>
<td>3</td>
</tr>
</tbody>
</table>

Then:

Risk Ranking = Probability x Severity

C3.2 The Likelihood/Exposure/Severity [LES] model is very similar though it splits probability into two factors i.e.

- The likelihood that an ‘Incident’ will occur as the result of a ‘Hazard’;
- The possible exposure time to that ‘Hazard’

An alternative method of evaluating severity is based upon the level of injury which might be caused.

<table>
<thead>
<tr>
<th>Likelihood</th>
<th>Low</th>
<th>1</th>
</tr>
</thead>
<tbody>
<tr>
<td>Imaginable but very unlikely</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Unusual but quite possible</td>
<td>Medium</td>
<td>2</td>
</tr>
<tr>
<td>To be expected or at least very possible</td>
<td>High</td>
<td>3</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Exposure</th>
<th>Low</th>
<th>1</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rarely, maybe once a year</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Occasionally, perhaps monthly or weekly</td>
<td>Medium</td>
<td>2</td>
</tr>
<tr>
<td>Continuous or at least daily</td>
<td>High</td>
<td>3</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Severity</th>
<th>Low</th>
<th>1</th>
</tr>
</thead>
<tbody>
<tr>
<td>First Aid Injury</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Medical Aid or Restricted Work injury</td>
<td>Medium</td>
<td>2</td>
</tr>
<tr>
<td>Fatality or Lost Time injury</td>
<td>High</td>
<td>3</td>
</tr>
</tbody>
</table>

Then:

Risk Ranking = Likelihood x Exposure x Severity

Whichever model is used the next stage is to classify the Risk Ranking as either Trivial, Tolerable, Moderate, Substantial or Intolerable as detailed in the table of results and to take the appropriate action depending on the classification.
C4. Risk rating interpretation

<table>
<thead>
<tr>
<th>Risk Rating</th>
<th>Action and Time-scale</th>
</tr>
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<tbody>
<tr>
<td>Trivial [1]</td>
<td>No action is required and no documentary records need to be kept</td>
</tr>
<tr>
<td>Tolerable [3]</td>
<td>No additional Controls/Defences required. Consideration may be given to a more cost effective solution or improvement that imposes no additional cost burden. Monitoring is required however to ensure that existing Controls/Defences are maintained</td>
</tr>
<tr>
<td>Moderate [6]</td>
<td>Where the moderate risk is associated with ‘High [Value 6]’ Consequences, further assessment may be necessary to establish more precisely the probability of an Incident as a basis for determining the need for improved controls</td>
</tr>
<tr>
<td>Moderate [12]</td>
<td>Efforts should be made to reduce the risk, but the cost, time and effort of so doing needs to be carefully considered and limited. Risk reduction measures should be implemented within a defined time period. In this case, 7 days is recommended.</td>
</tr>
<tr>
<td>Substantial [18]</td>
<td>The hazardous activity should not be started until the risk has been reduced. Considerable resources may have to be allocated to reduce the risk. Where the activity is already in progress, urgent action should be taken to avert accidents from the activity.</td>
</tr>
<tr>
<td>Intolerable [27]</td>
<td>The hazardous activity must not be started or continued until the risk has been reduced at least to ‘Moderate’ level.</td>
</tr>
</tbody>
</table>

For the purposes of the assessment, a ‘Significant Risk’ is one which is either ‘Substantial’ or ‘Intolerable’.

D. HSE Project Plans

1. The final stage of the Risk Assessment is to develop an ‘Improvement Plan’ or HSE Plan to reduce the Risk Ranking giving priority to reducing ‘Substantial’ and ‘Intolerable’ risks (i.e. ‘Significant’ risks) in the Hazard and Risks register to at least a ‘Moderate’ Level. This is raised by the HSE&CSR manager. However, this can also be done by any Line Manager should the need arise.

2. The following details must be recorded on the plan:
   a. Issue Number;
   b. Issue Name
   c. Priority of the Issue
   d. Status
   e. Risk Ranking/rating
   f. Project Number;
   g. Start date;
   h. Completion date;
   i. A short description of the project;
   j. Milestones and dates;
   k. Actions, responsibilities and due dates;
   l. Resource requirements, costs etc.

3. All HSE Plans raised must be approved by the Business manager

4. The HSE & CSR manager shall issue a plan number from the HSE Plan register.
5. He/she shall maintain a file for adequate record/document control. Project details for each plan shall be discussed in Management review meeting.

E. Hazard reviews

1. When the Hazard and risks register is reviewed, all new hazards resulting from changes in the company’s activities, products, services and processes are included.
2. Improvement opportunities noted shall be implemented by the respective functional manager.
3. The risk rating is then re-calculated in lieu of:
   a. Completed/outstanding HSE Plans
   b. Operational controls required/implemented;
   c. Additional/new/changed legal and regulatory requirements.

F. Training and communications

1. QPEA staff, on site- contractors and visitors whose work/activities could affect identified safety controls shall receive appropriate training in accordance to training work instructions in the work instructions manual.
2. Communications of hazards and their controls are done by the Safety Officer.

G. Reporting

1. The HSE & CSR manager shall compile reports on hazards identified, risks associated with the hazards, controls put in place to manage the hazards and the HSE Plans for presentation and discussion during management review meetings.

H. Hazards and Risks Register

1. The HSE & CSR manager shall maintain an HSE register detailing hazards identified, risks associated with the hazards, controls put in place to manage the hazards, actions required and status.
Purpose

1. To ensure that QPEA GT Menengai Limited identifies and has access to and reviews appropriate legal requirement related to Environmental Health and Safety management
2. To determine how these requirements apply to QPEA GT Menengai Limited identified hazards and risks

Scope

This procedure covers the mode of acquiring appropriate legal requirements on the environmental, health and safety hazards and ensuring that those requirements relevant to QPEA GT Menengai Limited are adopted and practiced to ensure environmental compliance, safety and health in the workplace, sustainable environmental management in addition to legal compliance.

Responsibility

The HSE & CSR manager is responsible for the maintenance of this procedure.

References

1. Legal register
2. DOSHS file
3. Health and Safety Plan
4. Emergency Preparedness and Response Plan
5. Fire Prevention and Management Plan
6. Air Quality Management Plan
7. Hydrocarbons and Chemical Handling Plan
8. Security Management Plan
9. MoU between KFS and GDC
10. GDC HSE policies
11. AFDB Environmental and Social Policies
12. IFC 2012 Performance Standards
13. NEMA License
14. ERC Generation licence
15. Nakuru County requirements

Records

- Appointment of Shift Safety Supervisors
- PPE Inventory
- List of DOSHS Approved OHS Experts (Annual);
- Incident and Accident Log and Records as per OSHA, 2007;
- Emission measuring equipment schedule and calibration certificates;
- Emission monitoring report;
- Records of safety inspections and audits;
- Work Place Registration Certificate;
- Community / Stakeholder Complaints log;
• Environmental incidents records;
• Records of pollution exposure results.

**Forms**

None

**Procedure**

**A. General**

1. The HSE & CSR manager shall keep the current copies of the relevant legislations governing environment, safety & health management system;
2. The HSE & CSR manager shall keep regular contacts with the NEMA and Directorate of Occupational Safety and Health Services (DOSHS) so as to ensure that he/she is kept informed on any updates or revisions regarding the legal requirements. This shall be done through personal visits, emails or even visiting the relevant sites: www.dosh.go.ke; http://www.nema.go.ke and downloading relevant important information;
3. Records of the above communication/information shall be maintained by the HSE & CSR manager in the NEMA and DOSHS files;
4. Requirements as raised by the legislation shall be considered if relevant to the activities and processes of QPEA;
5. Such relevant legislation shall be communicated to all key staff within the organization for awareness and implementation where need be, e.g. through internal communication, management review meetings, etc.

**B. Determination of how legal requirements apply to QPEA**

1. This is done through environmental and occupational safety & health audits, fire safety audits, risk assessments and feedback from the QPEA staff and the public;
2. For any new legislations or revisions to the existing legislation that may lead to the introduction or further observation of hazards in addition to those determined and described in the procedure number HSE001, the HSE & CSR manager shall review the procedure to include them and communicate the changes to all affected members of staff and the Management review team;
3. For general information to all staff, a memo notifying the new changes as per the new/revised legislation shall be done by the HSE & CSR manager to communicate this development; and
4. HSE objectives shall be revised on a yearly basis to ensure that new risks/hazards as may arise from time to time are considered for continual monitoring and improvement.
Purpose

1. To ensure that persons performing routine and non-routine tasks that have the potential to cause injury or harm or damage to the environment, assets or ill health are competent on the basis of appropriate education, training, skills and experience.
2. To identify training needs associated with identified hazards, provide training or take actions to meet the need(s).

Scope

This procedure covers training of staff and people working for or on behalf of QPEA in order to understand the importance of and ensure conformance to QPEA and GDC Health Safety and Environment policies and procedures

Responsibility

HSE & CSR manager
HR manager

Reference documents

1. Environmental policy;
2. Health Safety and Environment policy;
3. Work instructions manual;
4. Permit to work;
5. Training plans

Forms

HSE 003/A: Staff induction/training matrix
HSE 003/B: Staff training feedback

Procedure

1. QPEA will only employ staffs who are qualified in terms of education, training, skill and experience to perform tasks as per their respective job descriptions. HR and business managers shall ensure that Job Descriptions detailing the skills, educational/professional requirements and experience are developed for each job. These shall form the basis of requirements of each job and determine the training needs;

2. Upon recruitment, the new staffs are taken through an induction process where they are introduced to the various operations of each department. The induction is undertaken as per the induction work instructions in the work instructions manual. Induction records shall be maintained;

3. The resource person for each induction/training session shall ask the participants to evaluate the training (through form HSE 003/B) to determine the effectiveness
4. The HR manager has adopted continuous training, so as to fill performance gaps as identified during staff appraisals done on a yearly basis;

5. The HSE & CSR manager is responsible for induction to the integrated HSE management system to the new staff, casuals and contractors during the initial induction process. Training of target employees shall be planned and conducted:
   - On the job by a competent colleague or supervisor.
   - Formal in-house sessions by competent QPEA GT Menengai Limited personnel or
   - Outsourced external trainer, as necessary.

6. To ensure the maintenance of environmental, health and safety awareness, staffs are audited once every quarter, through the workplace environmental, safety & desk audit program. Areas of improvement are noted and the auditee informed accordingly on improvement areas;

7. Appropriate safety and health warning and information signages shall be posted strategically at the QPEA GT Menengai Limited facility to promote awareness;

8. All contractors are inducted on the job before they start work subject to an approved permit to work. The project engineer or worksite supervisor initiates this process and the respective technical/worksite manager approves the permit to work;

9. Where it is noted that contractor competence is lacking, the contractor shall be notified immediately and where possible additional training done, otherwise the contractor shall be disqualified and ordered out of site immediately;

10. Any staff member who requires the services of a contractor shall also initiate contractor induction, and with the help of the HSE & CSR manager, ensure adequate training and completion of the induction form.
### Purpose

1. To ensure adequate communication with regard to HSE management system among the various levels and functions of the company.
2. Seek employees’ participation in the review of environmental health and safety policies and objectives.
3. Involvement of employees in environmental health and safety hazard identification, risk assessments and determination of controls.
4. Appropriate involvement of workers in incident investigation
5. To facilitate communication with contractors and other visitors to the workplace.
6. To ensure presence of a mechanism for receiving, documenting and responding to relevant communication from external interested parties.

### Scope

This procedure covers:

1. Internal communication on HSE management system.
2. The mechanism to ensure relevant communication with regard to the environmental health and safety is received, documented and responded to especially from external interested parties, e.g. GDC, NEMA, DOSHS, community etc.

### Responsibility

1. Business Manager
2. HSE & CSR manager
3. Functional managers

### Reference documents

1. Stakeholders Engagement Plan;
2. Community Development Plan;
3. Environmental Management Plans; and

### Records

1. Staff feedback records;
2. SHE committee minutes;
3. Induction/training feedback records;
4. Stakeholder feedback records;
5. Permit to work;
6. Contractor file;
7. Environmental complaints record;
8. External communication file;
9. Incidents investigation records;
10. Hazards elimination card; and

Forms

HSE 004/A: Visitor Log Form
HSE 004/B: Incoming Mail Register form
HSE 004/C: Outgoing Mail Register form
HSE 004/D: Environmental Complaints Log
HSE 004/E: Visitors’ Non disclosure agreement

Procedure

Internal communication

1. Internal communication to staff on the environmental health and safety is the responsibility the HSE & CSR manager and the line managers. The medium for this is through memos, safety alert letters, organized trainings, HSE committee meetings and during management internal communication meetings;

2. All employees are required to be conversant with the requirements of hazard identification and risk assessment procedure for the purposes of identification of hazards and risks relating to their work. To complement the process, the line managers and supervisors have Hazard elimination cards to stimulate their awareness of what to look for. In addition:
   i. Inquiries and communication from employees to management on environmental health and safety aspects shall be forwarded to the HSE & CSR manager.
   ii. The HSE & CSR manager shall review such communication in conjunction with the HSE committee (where necessary) to determine an appropriate response.
   iii. The HSE & CSR manager shall respond to all concerned and maintain records of such communication.

3. Employees shall be organized into small teams who together with their supervisors conduct a Job Hazard Analysis of their process and propose mitigation and control measures;

4. Where an incident/accident has occurred, the employees involved report the same as required in the incident investigation procedure. Together with their supervisor they conduct a root cause analysis and determine safeguards to prevent recurrence of the same;

5. During the yearly planning for functional objectives, employees are called upon to give their input to ensure the company’s policies and objectives are ‘SMART’ (Specific, Measurable, Achievable, Realistic and Time bound);

6. In the event the company wants to make any changes to its HSE management system, the employees shall be consulted and their views taken into consideration in the proposed changes;

7. QPEA GT Menengai Limited has established a Health, Safety and Environment Committee in line with the requirements in the Occupational Safety and Health Act, 2007. This committee comprises of members drawn from all the functions in the company. The committee is mandated to discuss matters affecting the achievement of HSE objectives and targets. The employees are informed through appropriate medium about their representatives on safety matters;
8. Where the company has decided to change its environmental health and safety requirements, it shall ensure that as appropriate, contractors and relevant external interested parties are consulted.

9. All contractors and visitors must first register at the security gate. Here, their details are taken and they undergo security screening. They sign a visitor log in form (HSE 004/A) which outlines their requirement while within the premises. Any Contractor coming for any work on site must further be inducted by the HSE & CSR manager on the safety requirements and sign no-disclosure agreement (from HSE 004/E), the contractor induction form and permit to work authorizing him/her to commence work on site. Copies of the signed authorization documents shall be maintained by the HSE & CSR manager in the relevant contractor’s file

**External communication**

1. The Business Manager (BM) or HSE & CSR Manager is responsible for communications with external parties on environmental health and safety issues of the Company;

2. External communication shall be either by electronic mail or ordinary mail. Any telephone communication shall be followed up with a written communication, confirming the details of the communication for documentary evidence. Any complaint on the HSE system shall be recorded in HSE Complaint form, Form HSE004/D.

3. The HSE & CSR manager shall handle all communication with representatives of regulatory agencies such as DOSHS, NEMA, contractors, customers, neighboring communities etc., on matters of the environmental health and safety, maintain an outgoing mail register (HSE 004/C) and keep copies of such communication to external interested parties;

4. Where the BM’s office communicates to external interested parties on environmental health and safety concerns, a copy of the communication shall also be made available for filing in the external communication file held by the HSE & CSR manager. The Personal Assistant to the BM shall be responsible for availing the copies of the communication to the HSE & CSR manager;

5. In the event that an external communication demand for corrective action for certain aspects with regard to QPEA GT Menengai Limited HSE management system, the HSE & CSR manager shall review such communication in conjunction with relevant personnel (or where necessary with GDC and the other IPPs) to determine an appropriate response and put up corresponding action plans, with time limits on when to close such gaps. Feedback on the course of action shall be communicated to the affected party and records of this course of action maintained;

6. The company shall solicit the views of interested parties (including GDC, KFS and other IPPs) on HSE System’s performance and other related matters especially when addressing complaints, when significant changes are being considered, such as expansion or other activities that might affect the actual or potential environmental impacts of the Company’s activities or products.

7. The management review shall in its meetings evaluate the proactive efforts to communicate with external parties and where necessary, determine how such communication can be most effectively carried out.
Purpose

To evaluate QPEA operations that are associated with her identified environmental health and safety hazards to ensure that they are managed diligently to either control or reduce the HSE risks associated with them.

Scope

This procedure covers the following tasks:

1. Procurement of inputs and contractors’ services,
2. Storage and handling of materials;
3. Waste management;
4. Operations and maintenance management
5. Service provision;
6. Oil spills resulting from motor driven devices, including forklifts, cars etc;
7. Use of equipment;
8. Safety audits;
9. Controls related to contractors and other visitors to the workplace;
10. Controls related to procurement of goods, equipment and services.

Definitions

Contractor: An organization or individual that has been procured by QPEA GT Menengai Limited under a contract to conduct a certain activity or assignment.

Responsibility

Finance/Procurement manager

Shall be responsible for managing:

i) Green procurement of company inputs;
ii) Storage and handling of materials ensuring that best storage practice is observed;
iii) Waste management; and
iv) Non-conformity store - Ensuring preventive and corrective action(s) are taken, to handle any non-conforming products, either through rework, alternative use or disposal. Records of disposal shall be maintained, as evidence.

HSE & CSR Manager

Shall be responsible for:

i) All hazards identified in the Job Hazard Analysis;
ii) Inspecting maintenance workshop ensuring that minimum compliance to applicable safety and legislation requirements are adhered to;
iii) Ensuring that best storage practice is observed; and
iv) Training on environment, safety and health.
**Operations and Maintenance Manager (O&M) Manager**

Shall be responsible for:

1. Inspecting motor driven equipment, ensuring adequate and timely servicing, to rid of oil leaks and ensuring that re-fueling stations are oil spill free and if needed bunted;
2. Developing of operating procedures and instructions for machinery and equipment;
3. Development of a preventive maintenance plan;
4. Implementation of the preventive maintenance plan; and
5. Implement the emergency response plan during shifts
6. Advice on equipment requiring replacement.

**Reference documents**

1. OSHA, 2007;
2. NEMA license conditions and other requirements;
3. HSE Checklist
4. Operation Manuals
5. Technical manuals;
6. Relevant Work instructions.

**Records**

1. Third party evaluation report and copies of their policies, safety plans, work instructions etc.
2. HSE Files;
3. HSE Meeting records or HSE Committee Files where applicable;
4. Staff feedback records.

**Forms**

HSE 005/A: Third Party HSE System Assessment
HSE 005/B: Record of Third Party Internal and external audits

**Procedure**

1. The finance and procurement manager shall establish a visible materials segregation system that shall be easily understood by the users.
2. This system shall ensure that adequate controls are in-place to ensure storage of materials in a safe manner. For example, flammables cannot be stored next to oxidizing material; acids cannot be stored next to alkaline materials, oxidizing materials cannot be stored next to organic peroxides, acids and products containing cyanide cannot be stored or transported together.
3. The HSE & CSR manager shall:
   - Ensure that materials and products are stored and transported in a safe manner;
   - Storage racks are appropriately labelled;
   - Carry out regular checks to ascertain environmental health and safety measures are adhered to.
4. The HSE & CSR manager shall ensure that all solid wastes are segregated according to their classes, i.e., recyclable, non-recyclable, hazardous and non-hazardous. Disposal of the same shall be as per the stipulated NEMA requirements and the waste management plan. Proper PPE use shall be observed during the segregation process.
5. The O&M manager shall have a maintenance plan for all equipment and machinery to allow for management and maintenance for their proper running. In liaison with HSE & CSR manager, the technical manager shall quarantine any equipment that has any oil leak on a concreted surface until the leakage problem has been corrected. Oil leakages shall be collected/cleaned as soon as they happen in line with the hydrocarbons and chemicals management plan.

6. Before operating any equipment, the operator shall perform daily checklist test as per the checklist form for the respective equipment to identify any potential maintenance requirements. The filled checklist forms shall be filed by the O&M manager for future reference.

7. All machines/equipment shall have standard operation instructions detailing the Dos and Don'ts in addition to Lock Out Tag Out and Try Out (LOTOTO) system.

8. Due to the use of various machinery and equipment, to facilitate maintenance activities, good understanding on the required safety precautions is key in protecting staff against occupational accidents/incidents related to maintenance machinery & tools. To mitigate such aspects, the O&M manager shall ensure that shall only competent personnel or contractors undertake maintenance activities.

9. For maintenance jobs that require Personal Protective Equipment, the HSE & CSR manager shall ensure prompt issuance before commencement of the job.

10. The basic competence for maintenance staff shall be academic as well as experiential training and skills. This shall be captured during contractor induction process for contractors. For maintenance staff, this is captured under job descriptions.

11. For equipment that require statutory examinations, e.g., lifting equipment, chains, ropes, etc. they shall be examined by DOSHS approved persons at the prescribed times as per the Occupational Safety and Health Act (OSHA), 2007. The reports of examination shall be kept by the HSE & CSR manager.

12. Where there is need to create or modify an operational procedure, the HSE & CSR manager shall trigger procedure HSE001 and draft an operational control procedure, based on consultation with the employees who undertake that process. The procedures shall be incorporated into already existing procedures as may be required.

13. For contracted services, the technical manager shall define and record the scope of work to be undertaken by the contractor.

14. The HSE & CSR manager shall assess whether the contractor and his sub contractors are complying to company’s HSE management system requirements which are based on the following criteria:
   - Organization and leadership;
   - Environmental health and safety hazard and risk management;
   - Continual Improvement;
   - Sub contractor management structure;
   - Design, operation maintenance;
   - Management of change;
   - Emergency preparedness and response;
   - Incidence reporting and investigation;
   - Documents and data control;
   - Performance measurements and control;
   - Self Audit; and
   - Management review.

15. The HSE & CSR manager shall prepare a contractor’s evaluation report and recommended corrective actions where appropriate;

16. Follow corrective and preventive action procedures as per HSE 008 and HSE 009.
Purpose

To ensure that immediate action is taken in the event of an emergency to minimize injury and damage to property.

Scope

Fire
Traffic accidents
Medical emergency
Leaks and Spillage of Hazardous liquids and gases
Explosion
Bomb threats
Power loss, including surge & any other emergency situation(s)
H₂S incident

Definitions

First Responders: Service providers commissioned to provide emergency response and evacuation services including fire fighters, ambulance services etc.

Responsibility

1. Business Manager.
2. Functional Managers
3. HSE/CSR manager
4. Shift supervisor
5. Security manager

Reference Documents

1. Emergency Preparedness and Response Plan;
2. Health and Safety Management Plan;
3. Waste Management Plan;
4. Fire Prevention and Management Plan;
5. Hydrocarbons and Chemical Handling Plan;
6. Environmental Training and Awareness

Records

1. Evacuation Drill Reports
2. List of Appointed First Aiders, Fire Marshalls and any other staff tasked with emergency evacuation roles;
3. Contact List of commissioned First Responders.
Forms

None

Procedure

1. The HSE & CSR manager shall ensure that adequate fire marshals and first aiders have been trained on firefighting by institutions recognized by the Directorate of Occupational Safety and Health Services (DOSHS). Records of such training shall be maintained.

2. In the event of occurrence of a significant emergency situation e.g. fire, H₂S incident etc. the BM or the HSE & CSR manager, shift supervisor or the trained fires marshals shall initiate the emergency preparedness and response plan.

3. The HSE & CSR manager shall ensure that the emergency preparedness and response plan is followed until the emergency is brought to control or eliminated
Purpose

To ensure that QPEA GT Menengai Limited deals with actual and potential nonconformities and takes corrective and preventive action regarding the environmental, health and safety management.

Scope

All QPEA GT Menengai Limited employees, visitors and contractors within the jurisdiction of QPEA at the time of occurrence

Responsibility

1. HSE & CSR manager
2. Technical manager; and
3. O&M manager
4. Appointed Supervisor/Shift supervisor

Reference documents

1. Corrective Action requests / Instructions from Internal and External Audit Reports
2. Corrective Action Orders from Regulatory Agencies

Records

1. Feedback Forms
2. Corrective Action Plans
3. Environmental Restoration Reports
4. Close Down Audit Reports

Forms

HSE 007/A: Environmental Incident Report
HSE 007/B: Preventive Action Staff Feedback
HSE 007/C: Non Conformity Report form
HSE 007/D: Corrective Action Feedback

Procedure

1. On occurrence of an incident/accident, the O&M manager/shift supervisor shall fill the details of the incident/accident as accurately as possible in the accident/incident report form.

2. Together with the HSE & CSR manager, the O&M manager/shift supervisor shall evaluate the nature, severity and probability of recurrence and record it in the general register.

3. The HSE & CSR manager shall form an investigation team that shall carry out investigations to establish the root cause of the incident/accident and write a report to the HSE & CSR manager who shall take the necessary corrective and preventive measures in liaison with the O&M
4. The implemented corrective and preventive actions are further reviewed for suitability by the team.

5. In reporting accidents, the O&M manager/shift supervisor shall take into consideration requirements as outlined in the NEMA license conditions, relevant GDC policies and OSHA Act of 2007 and other relevant safety regulations.

6. The HSE & CSR manager shall communicate results of the incident investigation, proposed corrective and preventive action to all relevant parties using a suitable medium.

7. The process of determining non-conforming situations pertaining to environmental health and safety shall be through statutory audits, quarterly HSE audits, job safety analysis, risk assessments, third party audits and complaints from both employees and interested parties. Gaps recorded through these processes shall be treated as non-conformance and observations. Employees shall fill Form HSE 008A to initiate any preventive action.

8. Upon determining non-conformity, the HSE & CSR manager shall develop an action plan for closing the identified gaps to the HSE management system.

9. The O&M manager/shift supervisor shall be assigned the responsibility of coming up with mitigation measures and timelines acceptable to all stakeholders in the assessments.

10. Resource allocation and priority shall be on the basis of the weighting of the nonconformities as stipulated in risk assessment.

11. Complaints arising from the neighboring communities shall be handled by the HSE & CSR manager in liaison with other personnel and stakeholders as per procedure on internal and external communication, HSE 004.

12. Proposed corrective actions shall be evaluated by both the complainant and QPEA GT Menengai Ltd to determine its effectiveness.

13. All preventive actions shall be on the basis of pro-activeness on the part of the management. In doing so, the following shall be given emphasis:
   a) Total Preventive Maintenance of machinery and equipment.
   b) Competence evaluation, awareness and continuous training for staff.
   c) Behavior based programs, e.g. Job Hazard Analysis, Risk Assessments
   d) Routine/planned Medical examination.

14. For instances where the nonconformity has occurred and a preventive action preferred, the effectiveness of the preventive action shall be evaluated during the HSE committee quarterly meetings.

15. The HSE Committee shall determine the preventive actions needed to stem out non-conformities. These shall include but not limited to:
   a. Training;
   b. System correction;
   c. Resources up-grading.

16. If required, the HSE Committee chairman shall nominate one of the members to look into the identified preventive actions and controls to ensure that they are effective.
17. A report of these findings shall be presented to the management review meeting by the HSE & CSR manager during the next review meeting.
Purpose

1. To ensure that QPEA periodically & continually carries out self-assessment to evaluate her compliance to applicable legal and other requirements and standards to which QPEA subscribe.
2. To take self-corrective measures to ensure continued compliance to applicable legal, corporate and any other requirement to which QPEA subscribes.

Scope

To monitor and measure, on a regular basis, the key characteristics of QPEA GT Menengai Limited operations that have a significant bearing on the environmental health and safety performance.

Responsibility

1. HSE & CSR manager
2. HSE Committee

Reference documents

1. Legal Register
2. All Environmental and Social Management Plans and sub-plans developed under this system;
3. Relevant Work instructions;
4. Third party Plans developed under the QPEA approved HSE management system.
5. Internal and External audit reports;

Records

1. Legal register;
2. Internal and External Audit reports;
3. Corrective Action Plans and Orders;
4. Environmental and social parameter monitoring Records developed under the ESMP and related sub-plans;
5. Equipment service sheets/records;
6. Equipment calibration certificates; and
7. Disposal certificate
8. Statutory environmental and safety and health licenses, permits and approvals.

Forms

HSE 008/A: Equipment calibration record
HSE 008/B: Emission monitoring report
HSE 008/C: Pollution exposure assessment report
HSE 008/D: Waste tracking form
Procedure

1. The HSE & CSR manager shall maintain a legal register either in hard copy or electronic form detailing all the legal requirements for which QPEA subscribes. He/she shall also maintain relevant contacts with the relevant statutory bodies e.g. Directorate of Occupational Safety and Health Services (DOSHS), National Environment Management Authority (NEMA), etc. to keep abreast with any proposed changes to the law or general notices/directives that might have an impact on QPEA activities.

2. On a quarterly basis or as need arise the HSE committee shall carry out a facility audit/inspection to specifically evaluate hazards and associated risks to employees, neighboring communities and the environment. Records of the facility audit/inspection, corrective & preventive actions taken shall be maintained by the HSE & CSR manager.

3. The HSE & CSR manager shall develop an action plan, with time limits, and responsibility allocation to ensure that any identified hazards and risks are addressed. The following statutory audits shall also be planned and conducted at least annually by qualified professionals:
   a. Environmental audit;
   b. Occupational safety and health audit; and
   c. Fire safety audits

4. During the facility audit, the HSE & CSR manager shall make reference to statutory and legislative rules to ensure that the recommended corrective actions are compliant to the Legal requirements

5. QPEA GT Menengai Limited has developed and is implementing a HSE policy. She exercises responsible care by ensuring that:
   a. Noise and air emissions generated are within acceptable limits
   b. Effluents generated meet required standards prior to discharge into the environment;
   c. Chemicals are handled and stored only in bunded areas, and not on open grass yards;
   d. Low ecological impact chemicals packaging are used;
   e. Spills are cleared as soon as they occur and large spills are contained;
   f. Specific waste collection points are in place and are of impervious well bound floors, to eliminate seepage; and
   g. Fire risks are identified and managed

6. QPEA GT Menengai Limited shall periodically measure and evaluate the quality of the air and levels of noise within and around her premises and if outside specifications, take the necessary corrective actions. Results of the monitoring and measurements shall be maintained by the HSE & CSR manager.

7. QPEA GT Menengai Limited services will produce by-products in form of geothermal fluid discharges which shall be managed by GDC. QPEA GT Menengai Limited will thus closely liaise with GDC to continually monitor the amounts and quality of discharged fluid and efficacy of the reinjection systems installed.

8. Hazardous waste disposed shall in addition to being recorded by trade name, chemical name, quantities disposed, have a certificate of disposal from the National Environmental Management Authority (NEMA) maintained by the HSE & CSR manager.

9. The BM and the HSE & CSR manager shall review HSE records on a quarterly basis to ensure that they are effective and on course to continually keep on reducing on waste generation.
10. The HSE & CSR manager shall maintain records of all audits, e.g., fully closed gap analysis record, certified letters of compliance, copies of reports such as annual environmental audits, safety audits, fire audits reports, etc.
Purpose and scope

To ensure that prior to and after major modifications, e.g. installation/purchase of new equipment, utilization of new buildings, their impacts on current risk assessments are evaluated and appropriate measures are taken.

Responsibility

HSE & CSR manager

Definitions

HAZOP: Hazard and operability study: This is a structured and systematic examination of a planned or existing process/operation (work) in order to identify and evaluate problems/hazards that may present risks to personnel, equipment, and the environment or prevent efficient operation.

HAZOP Procedure: is an examination of an existing process or planned operation (work) procedure to identify hazards and causes for operational problems, quality problems, delays, equipment failure, environmental problems, etc.

Design Intent: A description of how the process/activity/work is expected to behave at the point of evaluation, e.g., an increase in temperature, flow rate, pressure, composition etc.

Deviation: This is the way in which the process conditions may depart from their design/process intent.

Consequence: This refers to the results of the deviation, if in case it occurs. Consequences may comprise both process hazards and operability problems, e.g., reduced product quality, shut-down. Could also be health or environmental related. One consequence may have several causes or several consequences may arise from one cause.

Safeguard: Refers to facilities that help to reduce the occurrence frequency of the deviation or mitigate its consequences, by way of:-

- Identifying the deviation, e.g. use of human operator detection, alarms or detectors;
- Compensating for the deviation, e.g. an automatic control system, control valves, etc. that control, e.g., vessel overfilling;
- Prevention of deviation from occurring, e.g., use of an inert gas blanket in storages of flammable substances;
- Further prevention of deviation escalation;
- Relieving the process from hazardous deviation, e.g., installation of pressure safety valves or vents valves.

Reference document

1. Feedback Forms from corrective and preventive actions
2. Corrective Action Plans / Orders / Instructions
3. HAZOP Reports;
4. JSA Reports
 Procedure 

1. Prior to and after any significant modifications to buildings, equipment, machinery, etc., a hazard and operability (HAZOP) study shall be conducted by the HSE & CSR manager in conjunction with the relevant line manager or technical manager to evaluate and re-evaluate existing environmental health and safety controls, operational efficiency, ergonomics, process parameters, viz; pressure, temperature, air flow, etc.

2. In the event of a serious incident/accident, the HSE & CSR manager and the line manager shall undertake an investigation to identify the cause (both immediate & underlying), then take appropriate corrective & preventive action. Details of the above report shall be documented in the incident/accident investigation report.

3. Where cause of the incident/accident is due to either ergonomics, modification, installation of a new equipment, utilization of new buildings, change in process parameters or improper/lack of appropriate skills, a full hazard and operability study shall be performed by the HSE & CSR manager and the technical manager.

4. Results of the findings, recommendations (corrective & preventive action) shall be instituted including milestones, completion dates, responsibility and resource requirement if any.

5. Review of the HAZOP shall be necessitated by a recurrence of an incident/accident or the changes stated above.

6. As a basis for HAZOP study, the following information is important.
   a. Process/activity/work flow diagrams;
   b. Layout plans;
   c. Material safety data sheets for chemicals used;
   d. Equipment data sheets/operation manuals;
   e. Startup and emergency shut-down procedures;
   f. Piping and instrumentation diagrams (P& ID).

7. The HAZOP procedure involves the following activities:
   a. Identify the process/activity /work to be studied;
   b. Divide the process/activity/work into sub activities/process: Follow each to logical conclusion, using process/activity parameters, e.g. pressure, temperature, flow etc;
   c. Evaluate the risks/operation/ work hazards.
   d. Determine cause(s);
   e. Evaluate consequences/problems;
   g. Record information, (HAZOP report). Contents of the HAZOP report shall include:
      i. Introduction - A brief summary of the process/work under study (Target subject);
      ii. System definitions (Apparatus, basic safety concept, target function, i.e. operation mode);
      iii. Reference documents and methodology used to do the HAZOP;
      iv. HAZOP team;
      v. HAZOP results - Problem, cause, safeguards, remarks & responsibility.

8. For operation based HAZOP analysis, it is important to consider the following for each sub-activity/process/ work, and any arising hazard/problem, in conjunction with:
   a. Normal operation;
   b. Reduced throughput operation;
   c. Routine start-up;
   d. Emergency shut down;
   e. Commissioning;
f. Special operation modes.

9. HAZOP assumes the process is working well when operating under design conditions and that problems arise when deviations from design conditions occur. In HAZOP analysis, guide words such as shown in the table below are used to create systematic imagination of deviations from the design/process intent on parameters; temperature, pressure, level, composition, viscosity, reaction, time, phase, speed, particle size, etc.

Example usage of guide words

<table>
<thead>
<tr>
<th>Guide-word</th>
<th>Meaning</th>
<th>Example</th>
</tr>
</thead>
<tbody>
<tr>
<td>No (not, none)</td>
<td>None of the design intent is achieved</td>
<td>No flow when production is expected</td>
</tr>
<tr>
<td>More (more of, higher)</td>
<td>Qualitative increase in a parameter</td>
<td>Higher temperature than designed</td>
</tr>
<tr>
<td>Less (less of, lower)</td>
<td>Qualitative decrease in parameter</td>
<td>Lower pressure than normal</td>
</tr>
<tr>
<td>As well as (More than)</td>
<td>An additional activity occurs</td>
<td>Other valves closed at the same time (logical fault or human error)</td>
</tr>
<tr>
<td>Part of</td>
<td>Only some of the design intent is achieved</td>
<td>Only part of the system is shut down</td>
</tr>
<tr>
<td>Reverse</td>
<td>Logical opposite of the design intention occurs</td>
<td>Back flow</td>
</tr>
<tr>
<td>Other than (other)</td>
<td>Complete substitution – another activity takes place</td>
<td>Liquids in a gas pipe</td>
</tr>
<tr>
<td>Early/late</td>
<td>Timing is different from the intention</td>
<td></td>
</tr>
<tr>
<td>Before/after</td>
<td>The step is effected out of sequence</td>
<td></td>
</tr>
<tr>
<td>Where else</td>
<td>Applicable for flows, transfers, destinations, sources, etc.</td>
<td></td>
</tr>
</tbody>
</table>
Purpose

To detail how QPEA GT Menengai Ltd maintains, approves, distributes and controls documents related to its HSE Management System.

Scope

All controlled documents

Responsibility

HSE & CSR manager
Functional managers

Records

1. HSE management system records as defined by the relevant procedures
2. HSE files
3. Document transmittal file
4. Master list of documents
5. In-coming mail register
6. Outgoing mail register

Forms

HSE 010/A: Document transmittal form
HSE 010/B: Document revision history
HSE 010/C: Master list of documents

Procedure

1. New or revised documents of the integrated EHSM System are controlled by the HSE & CSR manager and authorized by the Business Manager.

2. In issuing controlled documents, the HSE & CSR manager shall;
   a. Prepare adequate copies of the authorized documentation;
   b. Stamp the original "MASTER";
   c. Stamp copies "CONTROLLED";
   d. Remove the superseded master copy from the Safety file, stamp “SUPERCEDED” and place it in the archives file;
   e. Retrieve all superseded copies from the controlled copy holders and destroy all superseded copies with authority of the BM. Use the document transmittal form for transmitted and withdrawn copies;
   f. Issue new/revised copies;
   g. File the document transmittal forms in the document transmittals file.
3. The HSE & CSR manager is the custodian of documents of external origin related to environmental health and safety.

4. The HSE & CSR manager shall keep a master list of all HSE management system documentation.

5. The personal assistant to the BM receives in-coming postal mails and faxes and records them in the in-coming mail register. They are stamped with the date of receipt and distributed to the addressee.

6. Outgoing postal mails are also logged in the out-going mail register by the Personal Assistant to the BM.

**HSE Forms**

7. Company’s HSE Forms shall be used during process execution to record results of Measurements/ observations, or when requesting materials or actions/ instructions required to be taken as may be specified in Procedures and Work Instructions.

8. The HSE & CSR manager shall maintain only current versions or editions of Company Forms and control Forms using a Master List of Forms.

9. Issue of new internal Forms shall be authorised by the HSE & CSR manager before making an entry on the Master List of Forms.

10. Form amendment shall be done in accordance with the process described above and recorded on the Form Amendment Record.

**Guidelines for Completing Forms**

11. Only black or blue indelible ink or ballpoint pens shall be used to complete Forms. Pencils and red pens MUST NOT be used in the process of completing forms. The Management may use red indelible ink or ballpoint pens to highlight important issues or errors on Forms.

12. If mistakes are made, one line shall be drawn through the errors, it shall be initialled and the correct entry (ies) made by the side.

13. One shall not sign a Form unless they are sure about the contents.

14. One shall not sign a Form stating that he/she has carried a certain task, until it is actually done. Before passing on the Form it shall be checked for completeness and that all the necessary entries have been made.

15. If in doubt about completing a Form, consult either Functional Manager or HSE & CSR manager.
Purpose and scope

To ensure that internal audits are planned, implemented and corrective and preventive actions taken. To ensure the effective functioning of the system in fulfillment of the policies and objectives

Responsibility

HSE & CSR manager

Records

1. Audit/inspection schedules
2. Audit/inspections reports
3. Audit/inspection summary and non-conformity report
4. Audit summary
5. Corrective Action Plans and requisite implementation reports /record.

Forms

HSE011/A: Internal audit inspection schedule
HSE011/B: Internal audit summary

Procedure

1. The HSE & CSR manager is responsible for planning, implementing, maintaining internal audit/inspections reports, and reporting the internal audit results to the top management.

2. The HSE committee shall carry out internal audits (inspections) of the workplace at least four times per year as per the audit/inspection plan prepared at the beginning of the year.

3. The internal audit results/details, especially where non-conformity has been observed shall be recorded in the audit summary non-conformity form.

4. The auditee shall retain both the originals of the nonconformity form for implementation of the audit/inspection recommendations, and give copies to the HSE & CSR manager. Upon completion of the audit implementation actions, the auditee shall return the nonconformity form duly signed by the auditor(s)/inspector(s), to the HSE & CSR manager for action wherever possible and filing.

5. The HSE & CSR manager’s actions will include verification of the report to ensure effectiveness of the recommended corrective action, in line with the objectives and requirements of the integrated HSE management system.

6. Trained HSE Committee members independent of the process/activity being audited shall carry out internal audits/inspections. It is the responsibility of the auditee to ensure that audit recommendations are acted upon without delay at the earliest agreed time.
7. The HSE & CSR manager shall notify the auditee and auditor/inspector at least two weeks before the audit due date. This shall be done through a memo or posting the audit/inspection schedule at appropriate notice boards.

8. A summary of internal audits/inspections done is kept by the HSE & CSR manager and presented to the management review committee for discussion during their meetings.
Purpose and scope

To review the Integrated HSE Management System to ensure its continuing suitability, adequacy and effectiveness

Responsibility

1. The Business manager
2. HSE/CSR manager

Reference documents

1. Management Review Meeting Schedule
2. Internal audit/inspections summary report
3. Communication from external interested parties
4. Employee complaints
5. Corrective & preventive action reports
6. Follow up action report from previous management reviews

Records

1. Minutes of management review meeting

Procedure

1. The Business Manager is the Chairman of the Management review committee. In his absence, he shall appoint a senior manager to chair the management review meeting.

2. The management review committee comprises of:

   a. Business Manager - Chairman
   b. Finance/procurement manager - Member
   c. Human Resources Officer - Member
   d. Technical Manager/Project Engineer - Member
   e. Operation and Maintenance Manager - Member
   f. Procurement/contract manager - Member
   g. Shift supervisors - Member
   h. HSE & CSR manager - Secretary

3. Management review meetings shall be held at least quarterly. The HSE & CSR manager shall notify the participants by electronic mail (memo) at least two weeks before the meeting.

4. The agenda for the management review meeting shall include but not limited to:
   a) Review of the previous meeting minutes and follow-up actions;
   b) Review of summary report on internal systems audits/inspections results and compliance to legal requirements;
b) Review of summary report on achievement of integrated HSE management system objectives;

c) Review of communication(s) from external interested parties and employee complaints

d) Review of status of corrective and preventive actions;

e) Recommendations for improvement;

f) Status of reports and action plans on incident investigations

g) Review of changing circumstances, including developments in legal and other requirements related to the environmental health and safety; and

h) Any other issue as identified by the participants.

5. Participants shall make presentations and deliberate on the issues raised in the agenda.

6. The HSE & CSR manager shall review issues regarding the effectiveness of the environmental health and safety system, e.g. internal audit summary, review of external communication, review of HSE management system performance, resource requirement(s), etc. as per the above agenda.

7. The management review meeting shall resolve any other issues and where required actions shall be determined. Dates for completion of these actions shall be set and completed actions shall be forwarded to the HSE & CSR manager.

8. Where appropriate, improvement teams shall be formed to tackle critical issues as raised in the review meetings. The actions plans shall be incorporated in the subsequent years HSE plan for implementation.

9. The HSE & CSR manager shall take minutes of the review meeting.

10. The HSE & CSR manager shall distribute the management review meeting minutes to the participants and file the master copy of the minutes in the Management review file.

11. The BM shall sign the master copy of the review minutes during the next management review meeting.