December - October 2019

Execution Plan and Method Statement

1- INTRODUCTION

Our goal:

The project implementation plan outlines the objectives, processes and strategies to be used by the project managing parties to carry out the work. It also provides a framework to ensure that project expectations and key performance indicators are met.
The plan is intended to be adopted by all parties and to provide an audit control document for the Project.
This document is only valid for the construction activities of the project. Mining mining or outside the scope does not include the construction activities.

Related Documents

The project execution plan, the project identifies and how the project will be delivered describing is one of many documents. These descriptive documents are supported by specific management plans (eg safety management plan), policies and procedures.

This project is defined by the following documents:

- Scope study
- Approved bud get
- Approved program
- Project execution plan

Reference documents also include:

- Environmental Impact Statement - August 2005
- Environmental Impact Statement Supplement - December 2005
- Environmental Report - June 2006

2- SCOPE of APPLICATION

Mobilization & Demobilization

- Equipment m obilization,
- Disassembling equipment,

Drilling Area and Material Storage Area Studies:

- Providing surface preparation and material storage of the drilling area ,
- Drilling site and storage for material sub-class operations ,
- Provision of sub-base operations of drilling site and material storage area,
- Conductive pipe operation at drilling site,
- S ondaj field and the provision of the concrete foundation material storage operation,
- Preparation of drilling rig foundation pad in drilling field and material storage area,
- S ondaj pitch and material storage area providing concrete vault,
- Excavation and line mud pit and material storage in drilling area,
- Excavation of a water tank and material storage area at the drilling site,
- Excavation of pit and material storage area in drilling area,

Entry and Exit Ways:

- Preparation of road surface preparation in the entry and exit road area ,
- D for construction of u t road infrastructure work,
- In and out way filling works,
- Culvert construction in the entrance and exit ways,

Other Works:

- Worksite field environment have water, mud and safety fence flare pit area and the lighting provision and construction,
- Skeptic tank and leach field excavation, filling, forming and construction work ,
- Installation and fixation of water lines and water floppy system ,

3- OUR OBJECTIVES:

Our Goals:

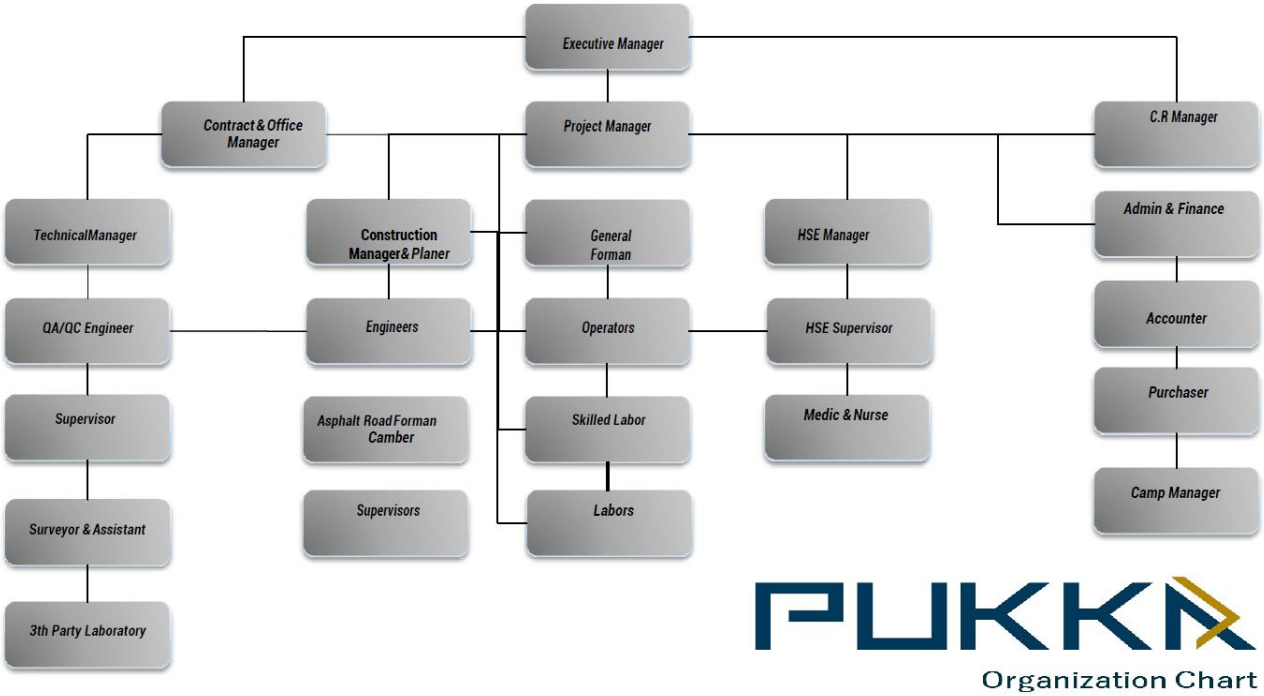
- Occupational Health and Safety: To ensure the continuity of the work without errors and accidents.
  - Lack of injuries,
  - No injuries,
  - Reporting 100% of the events to be experienced,
- Environment and Society: It is to work without harming the environment and disturbing the society.
  - Not to disturb the environment,
  - Reporting 100% of the events to be experienced,
- Delivering the Job: Delivering the job at the targeted time, cost and quality.
  - Performing the job in accordance with the definition,
  - Not to exceed the approximate cost calculation,
  - To progress within the work program,
  - Do business in accordance with the technical specification,
  - Not compromising on quality,

Our Performance Criteria:

- Project approval of progress made in accordance with agreed program,
- Completion of contractual arrangements in accordance with the agreed program,
- To give the contractor drawings and documents in accordance with the program,
- No delay about project.

4- ORGANIZATION & RESPONSIBILITIES:

Employer project management can be full-time or part-time. The Pukka Company project team must be on site full-time to achieve successful project completion, other specialist staff or organizations can support the project team as needed. The project team will be located in a special project office in the mine site.



Organization Chart

5- PROJECT MANAGEMENT:

Our strategy:
The main requirement is to complete the construction works according to the agreed program and take advantage of the max candle.

Other important aspects of the execution strategy are:
- Project-specific special resource te create ban has and continues,
- A contract delivery approach that benefits from existing commercial arrangements and relationships.
- Attaches great importance to health, safety, environment and community objectives for the project,
- Existing site si knowledge and implementation of past learning project methodology and related fields to be included in the intermediate,

Basic elements of business methodology:
Distance and Equipment for the utilization, optimize,
Identify suitable materials to meet the required technical specifications,
Selection of appropriate equipment and placement techniques that will meet the technical requirements and work effectively on site conditions,
Avoid or minimize the double processing of materials,
Inspection and testing to optimize and re-work effectively eliminate or minimize that an inheritance apply to the control system,
Provide clear operating instructions and effective site management to achieve the necessary productivity,
Set proper performance goals and parameters to meet the requirements of pro gram equipment efficiency, equipment availability / usage and labor productivity,
Detailed business plan or method statement to be prepared by the contractor and the application before the project manager and construction manager side from will be reviewed and approved,
Work plans will be regularly reviewed and updated or modified to reflect the applicable terms and conditions.

Resources:
A detailed resource plan will be developed and maintained by the project team . The project will be based on timely and detailed study plans. A basic requirement of the resource plan is that it is project specific and completely independent of other site-based activities.

Management Plans:
Detailed management plans are required for construction works. These plans describe in detail how various aspects of the works are implemented, managed and controlled. They are working documents and are directly related to the execution of the work.
The following includes, but is not limited to, plans.
- Business method plan / statement
- Resource plan
- Equipment management plan
- Quality management plan
- Traffic management plan
- Safety management plan
- Environmental management plan
- Subcontractors management plan
- Site management plan

All management plans will be prepared by the Pukka Technical team and will be reviewed and approved by the project manager and construction manager before implementation. Plans are regularly reviewed and updated. Some of these management plans are described in more detail elsewhere in this document.

Review and Monitoring:
The project execution strategy and methodology may need to be changed throughout the project in order to adapt to current conditions and requirements. The main mechanism for reviewing and monitoring the implementation of the project will be regular project meetings involving all affected team members.

6- SITE MANAGEMENT:

Site management requires general management and control of the implementation phase at the site and this will be primarily the responsibility of the construction manager. Given the integrated structure of the projector team, some of the site management functions may overlap with the project management functions. The project manager and construction manager will determine the allocation of tasks and responsibilities to effectively manage and prevent the site.

Site Management Plan: Generally the project site work will consist of the following wide functions.
A site management plan will be prepared by the construction manager to address the site functions. The plan shall include, but not be limited to, the following detailed functions. The site management plan will be regularly reviewed by the project manager and construction manager and updated as necessary.

- Administration
- Business activities of the coordination and supervision
- Inspection and supervision of three to Study design their
- Resource management
- Safety management
- Environmental management

Administration:
- General correspondence
- Site communication
- Access control
- Security
- Filing
- Site meetings
- Asset control
- Drawing and drawing documentation
- Site purchase si parishes and small contracts
- Sites consumable to be
- Material control
- Information record request

Coordination and Audit of Business Activities:

- Business methodology
- Business planning
- Progress monitoring and reporting
- Industrial Relations
- Operations with a ra faces
- Feasibility studies

Inspection and inspection studies:

- Inspection and test plans
- Inspection reports
- Incompatibility reports

Resource management:

- Resource planning and allocation
- Equipment maintenance and service
- Equipment registration
- audits

Safety management:

- Work Permits
- Operating procedures
- Education
- Operator expertise
- inductions
- Audit o lay investigation and reporting

Environmental management:

- Operating procedures
- Permits
- Audit
- Incident investigation and reporting

7- SECURITY:

Pukka Ltd. company, security on their commitments below indicates the Occupational Health and Safety (IR SG) has adopted the policy.

OCCUPATIONAL HEALTH AND SAFETY POLICY:

Pukka Company has adopted the principle that occupational accidents and diseases are preventable. Every employee, contractor and visitor's right to the site saves the site from injury or work- related discomfort.

- Our priority is safe production in a working environment where our employees feel that all risks are adequately controlled.
- We identify, assess and reduce all major risks that may be applicable in a recognized risk assessment process.
- We must demonstrate strong leadership and commitment to health and safety that we will meet or exceed all legal requirements to ensure a safe, productive and healthy work environment.
- We will use the secure strategy to achieve the best safety standards in the industry. this effort will be aimed at reducing incidents and, in particular, injuries.
- Undertake the necessary resources for the development of occupational safety management plans.
- Health and safety we make continuous improvements with the supervision of our health systems.
- We will provide training and instruction to our employees, contractors and visitors to ensure that they have the ability to provide an uneventful workplace.
- We will establish two-way communication with our employees, contractors, regulators and external stakeholders on health and safety issues.

OUR RESPONSIBILITIES:

- Our general policy is to ensure the implementation of this policy.
- Executives, inspectors and supervisors are responsible for implementing safety strategies, maintaining safety and hazard management plans, investigating incidents and promoting security improvements in the areas of control.
- Each individual is responsible for working in a healthy and safe way for themselves, our friends, people who are affected by their work and the environment in which they work.
- Everyone on the job site is responsible for identifying hazards, correcting where possible, or reporting for remedial action.

SECURITY MANAGEMENT SYSTEM:

The security management system (SMS) in force at Pukka Company is now largely based on the SiteSafe system.
The SiteSafe system is a risk-based system with the following key elements:

- Safety risk management procedure,
- Hazard reduction,
- Occupational safety analysis and standard operating procedures,
- Risk record
- Available in the SMS procedures, new HSEC management to ssistem by appropriate change to be reduced and will be updated.
- It intends to develop SMS in the form of an integrated HSE Management System that will comply with the requirements of the current Occupational Health and Safety Management System. System development is scheduled for certification in 2006.
- The construction phase of the open cut project will be included in the integrated HSEC Management System.

SECURITY MANAGEMENT PLAN:

A project-specific security management plan for the project will be developed by the contractor in cooperation with the project manager and Saman HSEC coordinator. The management plan will identify issues and processes aimed at security control and where appropriate may use existing straw procedures. The security management plan is a controlled document and is regularly reviewed and updated as necessary.

The management plan shall include:

- Responsibilities
- Targets and targets
- Hazard identification and control
- Training and induction
- Secure business systems
- Contact
- Incident investigation and reporting
- Emergency response

8- ENVIRONMENTAL POLICY:

Pukka Company Environmental Policy is to provide a high standard of environmental protection. In maintaining this standard, Pukka will take appropriate measures to minimize the potential negative impacts of its activities on the environment, society and employees. Pukka believes that strong environmental management is especially necessary for a sustainable business.

- Using Policy and HSEC Management Standards and related laws, regulations and standards appropriate that carry out the operations,
- To ensure that all employees and contractors are required to meet our environmental requirements,
- Evaluating the potential environmental impacts of our operations and integrating environmental considerations into all aspects of planning, operational decisions and processes,
- To communicate with our employees, society, regulators and other former employees about environmental problems,
- The efficient use of resources and production of waste and the disposal of at least ensuring a of the downloading,
- Gradual rehabilitation of areas that are no longer needed for efficient operation using the most practical methods,
- An efficient, integrated environmental management evacuation system,
- To provide continuous improvement in environmental performance including advances in environment, society and technology,
- Taking appropriate measures to eliminate identified deficiencies,
- Hay, accepts responsibility for environmental and other business objectives alternately is sort of the same way. Environmental management plans are an integral part of the overall planning and management process and will be continuously improved.

Management Plan:

A project-specific environmental management plan for the project will be developed by the contractor in cooperation with the project manager and MRM HSEC coordinator . The management plan will identify problems and processes related to environmental protection in the field and will be able to use existing Saman procedures where appropriate.

The management plan will include:

- Responsibilities
- Targets and license terms
- Training and induction
- Contact
- PROSED u are and mitigation strategies
- Emergency response
- O lay investigation and reporting

The plan will also be discussed in terms of specific aspects of the study :

- Waste management
- Vegetation management
- Surface water
- Noise
- Air quality
- Dangerous goods
- Mosquito

9- QUALITY

A planned and systematic approach to quality management will be implemented for the project, which will be relevant and will focus on delivering project results that meet or exceed project requirements.

Quality Assurance:

The quality system used in the project will comply with the requirements of AS / NZ ISO 9001: 2000. A quality management plan will be developed by the project manager for the project manager together with the construction manager.

The plan will define the requirements and processes for quality management in the project and will be the main mechanism for ensuring the appropriateness and consistency of the completed work on the project.

The Quality Management Plan will include:

- Ties of responsibility
- Best practice
- Continuous improvement
- procedures
- Standards and codes
- Inspection and inspection
- Corrective actions
- Contact

Quality Control: All construction works will be controlled by site based quality control plan.

Main Elements of the Quality Management Plan:

- Compliance with the scope of work,
- Compliance with specifications,
- Inspection and testing

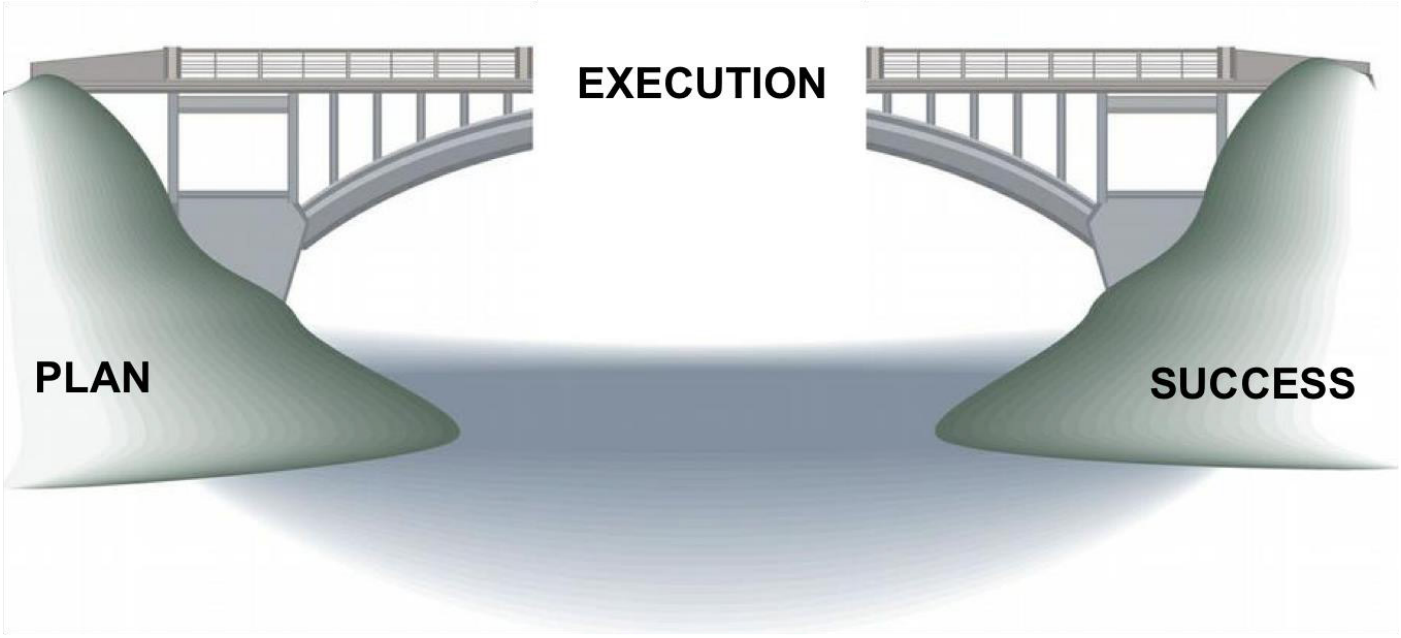
The quality control plan will be developed by the construction manager together with the project manager. The plan is a controlled document and will be reviewed if necessary.

10- PROJECT COMPLATION:

Practical Completion Ion:
Practical completion will be achieved when the project works are completed in accordance with the scope and performance criteria and are functionally ready. Details of applied completion will be recorded in the applied completion certificate.

Handover:
Upon completion of the applications, the works will be delivered to the owner for business purposes. The handover certificate shall be prepared and signed by the project manager for acceptance and signature by the owner. Extraordinary business items and a reeds time zone for their completion will form part of the transfer document. When all pending jobs are completed, the handover certificate is updated accordingly. The staged handover of the completed parts of the work is determined and will be agreed with the project man to a ger and mining manger.

Final Acceptance:
The closure of the project occurs when all work is completed and delivered to the owner. Following the installation, a project review will be carried out by the project manager and senior members of the project team. The review will identify positive project outcomes and areas of improvement. Feedback on project results and performance will be communicated to individual project team members as appropriate. A project closing report will be prepared by the project manager. The report will include all relevant project outputs and results of the project review. All related projects do will be archived in kümantasyo and registration or shall be delivered to the author.



PUKKA
ANTI-BRIBERY & CORRUPTION POLICY

POLICY STATEMENT

We take a zero-tolerance approach to Bribery and Corruption and are committed to acting professionally, fairly and with integrity in all our business dealings and relationships wherever we operate and implementing and enforcing effective systems to counter bribery.

We will uphold all laws relevant to countering bribery and corruption in all the jurisdictions in which we operate. We remain bound by Iraqi and International laws.

DEFINITIONS

"Agent": Any acting individual as an agent, paid by the company, acting on the company's behalf in negotiating with Third Parties.

"Bribery" / "Corruption": Bribery occurs when one person offers, pays, seeks or accepts a payment, gift, favour, or a financial or other advantage from another to influence a business outcome improperly, to induce or reward improper conduct or to gain any commercial, contractual, regulatory or personal advantage. It can be direct or indirect through Third Parties.

"Company": All subsidiaries and affiliated companies.

"Conflict of Interest": Occurs when an individual or organization is involved in multiple interests, one of which could possibly corrupt, or be perceived to corrupt, the motivation for an act in another.

"Donation": A Donation is a voluntary contribution in the form of monetary or non-monetary gifts to a fund or cause for which no return service or payment is expected or made. Contributions to industry associations or fees for memberships in organizations that serve business interests are not necessarily considered Donations.

"Employee": For the purposes of this policy this includes all individuals working at all levels and grades, including senior managers, officers, directors, employees, consultants, contractors, trainees, seconded staff, home-workers, casual workers and agency staff, volunteers, interns, agents, sponsors, or any other person associated with us, or any of our subsidiaries or joint ventures or their employees, wherever they are located.

"Facilitation Payments": A form of Bribery in which small payments are made with the purpose of expediting or facilitating the performance by a Public Official of a routine governmental action and not to obtain or retain business or any other undue advantage. Facilitation payments are typically demanded by low level and low income Public Officials in exchange for providing services to which one is legally entitled without such payments.

"Gifts, Invitations & Hospitality": Invitations given or received to social functions, sporting events, meals and entertainment, gifts or customary tokens of appreciation.

"Intermediary": Includes but is not limited to Agents, distributors, consultants, sales representatives, implementation partners, sales partners.

"Kickback": A bribe to obtain an undue advantage, where a portion of the undue advantage is 'kicked backed' to the person who gave, or is supposed to give, the undue advantage.

"Public Official": Officials or employees of any government or other public body, agency or legal entity, at any level, including officers or employees of state-owned enterprises and officers or employees of enterprises which are mandated by a public body or a state-owned enterprise to administrate public functions.

"Sponsorship": Sponsorship is about partnering with external organisations to deliver mutual benefits through an exchange of monies, products, services, content or other intellectual property.

"Third Party": Any individual or organisation you come into contact with during the course of your work for us. This includes actual and potential customers, suppliers, business contacts, Intermediaries, government and public bodies, including their advisors, representatives and officials, politicians and political parties.

INTRODUCTION

PUKKA is committed to conducting its operations and business activities with integrity and preventing bribery or corruption by any of its directors, officers, employees or any other party acting on its behalf. PUKKA is committed to complying with all laws that apply to it, including anti-bribery and corruption laws.

The purpose of the Anti-Bribery and Corruption Policy is to:

- Supplement Pukka's Code of Conduct by setting out the conduct expected by Pukka to minimise the risk of bribery or corruption occurring in connection with its operations and activities; and
- Provide guidance on how to deal with instances of bribery or corruption.

APPLICATION OF THIS POLICY

This Policy applies to Pukka and its directors, officers, employees, seconders, and other individuals or entities that are effectively controlled by Pukka Personnel.

Prohibition on bribery and corruption

- Bribery and corruption in any form are prohibited.
- Bribery involves the offering, giving, soliciting or accepting of a benefit (monetary or otherwise) to any person where the benefit is: not legitimately due; offered or given to that person with the intention of influencing them in the exercise of their duties or functions; and offered or given with the intention of obtaining business or a business advantage that is not legitimately due to Pukka.

For the avoidance of any doubt:

- This prohibition on bribery applies irrespective of whether the person sought to be influenced works in the public or private sector;
- the prohibition applies throughout the world;
- it is irrelevant whether a bribe is accepted or ultimately provided. Merely offering a bribe is a contravention of this Policy and usually is sufficient for an offence to be committed; and
- this prohibition is not subject to any local customs or business practices.
- Also for the avoidance of doubt,

in this Policy *Public Official* means anyone who is:

- a member of any legislative, administrative or judicial body;
- a party official or a candidate for political office;
- an employee, official or contractor of a government body or a wholly or partially state-owned enterprise;
- an official, employee or contractor of any public international organisation;
- a person who holds themselves out to be an intermediary of a Public Official;
- a member of a royal family; or
- a commercial entity, or the directors, officers or employees of a commercial entity, in which a government body has a significant ownership interest or over which it otherwise exerts control (i.e. a foreign public enterprise).

GIFTS AND ENTERTAINMENT

Pukka does not permit the exchange of gifts or involvement in hospitality activities that is beyond general commercial practice or that occurs in circumstances that could be considered to give rise to undue influence.

The offer or acceptance of gifts or hospitality is permitted where it:

- is for a legitimate business purpose, which may include developing business relationships;
- does not take place with Public Officials from which a decision regarding any licence, permit, authorisation or any other official act or decision is pending;
- involves, or is reasonably likely to involve, a third party paying for travel or accommodation, and that payment is approved by management;
- complies with the local law and government policies of the country in which the expenditure is made;
- is given in an open and transparent manner;
- does not include cash, loans or cash equivalents (such as gift certificates or vouchers); and
- Complies with the financial approval requirements referred to below.

Pukka Personnel must obtain approval from their direct supervisor.

A declaration must be made in the Gifts and Entertainment Register where the offer or acceptance of gifts (including personal favours) or hospitality is over the Threshold Value. The entry must include the value (or approximate value) of the gift or hospitality and whether the gift or invitation to participate in hospitality was accepted or declined.

PROHIBITION ON FACILITATION PAYMENTS AND SECRET COMMISSIONS

- The making of facilitation payments is prohibited. Facilitation payments are typically minor unofficial payments to Public Officials made either directly or indirectly to expedite or secure the performance of a routine government action.
- The giving or receiving of secret commissions is prohibited. Secret commissions typically arise where a person or entity (such as an employee of Pukka) offers or gives a commission to an agent or representative of another person (such as a contractor of Pukka) who is not disclosed by that agent or representative to their principal. Such a payment is made as an inducement to influence the conduct of the principal's business.

DONAIONS POLITICAL DONATIONS

- Pukka Personnel must not, on behalf of Pukka, make a political donation to any political party, politician or candidate for public office in any country unless the donation has been approved in advance by the Board and complies with the local law and government policies of the jurisdiction where the donation is made. It must also be recorded accurately in Pukka's accounts.
- Attendance at political gatherings, meetings and functions in a professional capacity is permitted where there is a legitimate business purpose. Records of attendance (and the cost of attendance) must be declared in the Gifts and Entertainment Register.

CHARITABLE DONATIONS AND SOCIAL PROGRAMS

- Apart from political donations, Pukka may make charitable donations and contribute to social programs as permitted by local laws and practices. No charitable donation or social programs may be offered or made on behalf of Pukka without the prior approval of the managers.
- Care must be taken to ensure that charitable donations and social programs are applied for a legitimate and appropriate purpose.

ENGAGING WITH THIRD PARTY CONTRACTORS, AGENTS AND INTERMEDIARIES

- It is prohibited by this Policy and the law to offer, give, solicit or receive a bribe indirectly, through a third party.
- It is important that appropriate controls are implemented in respect of Pukka's engagement of third parties to ensure that the actions of the third parties do not affect Pukka adversely.
- Third party agents and intermediaries that pose particular risk to Pukka of breaching anti-bribery laws include those that are involved in negotiating any business arrangements or transactions with the public or private sector on behalf of Pukka.
- In the circumstances set out at 7.3, it is important that:
    - the standards of conduct set out in this Policy are clearly communicated;
    - sufficient due diligence is performed to ensure that it is appropriate for the third party to represent Pukka. This includes completion of an appropriate due diligence report. In many instances it will be appropriate to conduct reference checks;
    - the fees payable to the representative must be reasonable and at market rates for the services being rendered and not provide an incentive to act improperly;
    - success based or percentage-based fees are not negotiated or paid without the express prior approval of the CEO;
    - the appointment of the representative is documented in a written agreement which:
    - contains anti-bribery provisions that satisfy the requirements of this Policy; and
    - expressly reserves Pukka's right to conduct performance monitoring and regular audits;
    - Due diligence enquiries will also be made in respect of third party contractors performing services in developing or emerging economies if the nature of the services poses a material risk of breaching anti-bribery laws.

JOINT VENTURES AND ACQUISITIONS

- Where a joint venture partnership or acquisition is under consideration, a due diligence report must be completed and signed off by the General Counsel before entering into contractual relations.
- Contracts with proposed joint venture partners should include standard terms concerning the issues addressed by this Policy and Pukka should work with its partners to adhere to the standards outlined in this Policy.

ACCOUNTING, BOOKS AND RECORDS

- Internal financial recording and accounting systems and procedures must be maintained to make and keep books and records which accurately and fairly reflect, in reasonable detail, the parties, the payment arrangements and the purpose of all transactions and disposition of assets.
- No undisclosed or unrecorded fund or account may be established for any purpose.

COMPLIANCE WITH LOCAL LAWS REQUIRED

This Policy reflects the laws applicable to Pukka. As such, compliance with the Policy should generally result in compliance with local laws. Nevertheless, Pukka Personnel should ensure that they are familiar with local laws and, where a law imposes a higher standard than the Policy, Pukka Personnel operating in that country must fully comply with the higher standard.

CONSEQUENCES OF NON-COMPLIANCE

- Bribery and the other types of improper payments prohibited by this Policy are prohibited under the laws of the countries in which commercial dealings on behalf of Pukka take place.
- Under relevant laws, for companies, possible consequences of contravention include the imposition of substantial fines, exclusion from tendering for government or private contracts and reputational damage. For individuals, possible consequences include criminal and civil liability with associated significant fines and/or lengthy terms of imprisonment.
- Further, any breach of this Policy by Pukka Personnel or third parties acting on Pukka's behalf is a serious matter that will be investigated and addressed by Pukka. It may result in disciplinary action, including immediate termination of employment or engagement with Pukka.

REPORTING PROCEDURE AND QUERIES

- Pukka Personnel must report any instance where they believe that non-compliance with the Policy has occurred, is occurring, or is being planned, as soon as they become aware of it.
- The report should be made to the managers and/or General Counsel. Reports may be made anonymously. Pukka will make available an email address for this purpose.
- All disclosures will be taken seriously, thoroughly investigated and treated with the utmost confidentiality.
- Pukka Personnel are also encouraged to contact the General Counsel if they have any questions or concerns regarding this Policy or subject matter to which this Policy relates. Any enquiries will be treated with the utmost confidentiality.

PROTECTION FROM SANCTION

- Pukka Personnel will not be subjected to any form of punishment for:
  - raising a concern regarding, or reporting, any instance of, non-compliance or suspected non-compliance with this Policy, provided the report is made in good faith; or
  - Refusing to provide or receive a bribe or for refusing to participate in corrupt activity.
- Pukka prohibits retaliatory action by Pukka Personnel against any individual who:
  - refuses to follow any directive or participate in any activity in circumstances where they are concerned that doing so may amount to a b reach of this Policy; and/or
  - is involved in t e reporting of conduct which they believe or suspect amounts to non-compliance with this Policy, regardless of whether or not the targeted individual is Karoo n Personnel.

HEALTH, SAFETY AND ENVIRONMENT POLICY

HEALTH, SAFETY AND ENVIRONMENT POLICY:

The Policy of Pukka Company is to conduct activities in a manner that protects people, the environment and our property. To achieve this goal we will:

- Strive to provide and maintain a safe working environment.
- Ensure all employees and subcontractors, are provided with relevant information and training to work safely.
- Ensure that all employees and subcontractors recognise that they are accountable for their own safety, and the safety of those around them.
- Ensure adherence to all relevant safety and environmental regulations and procedures.
- Consult, listen, and respond openly to our employees, stakeholders, customers, neighbours and those who work with us.
- Strive to consume fewer materials, water and energy, and reduce emission into the air, soil and water with the aim of preventing waste.

The requirements of the HSE Policy are to:

- Pro-actively identify, eliminate, or minimise any potential source of harm to people or the environment arising from our activities to acceptable levels.
- Provide the necessary information, instruction, training and supervision to our staff and contractors, so enabling them to work without causing or sustaining harm.
- Define objectives and targets for HSE performance for the company.
- Manage and maintain effective management controls to achieve our HSE objectives.
- Measure and monitor performance against HSE objectives.
- Work towards the continuous improvement of our HSE performance.

HSE Management System Framework:

The HSE Management System sets corporate requirements for the systematic and comprehensive integration of HSE issues in the management of the Company's operations. It also serves to ensure that all operations meet Pukka Company legal and ethical obligations, responsibilities and commitments. It ensures:

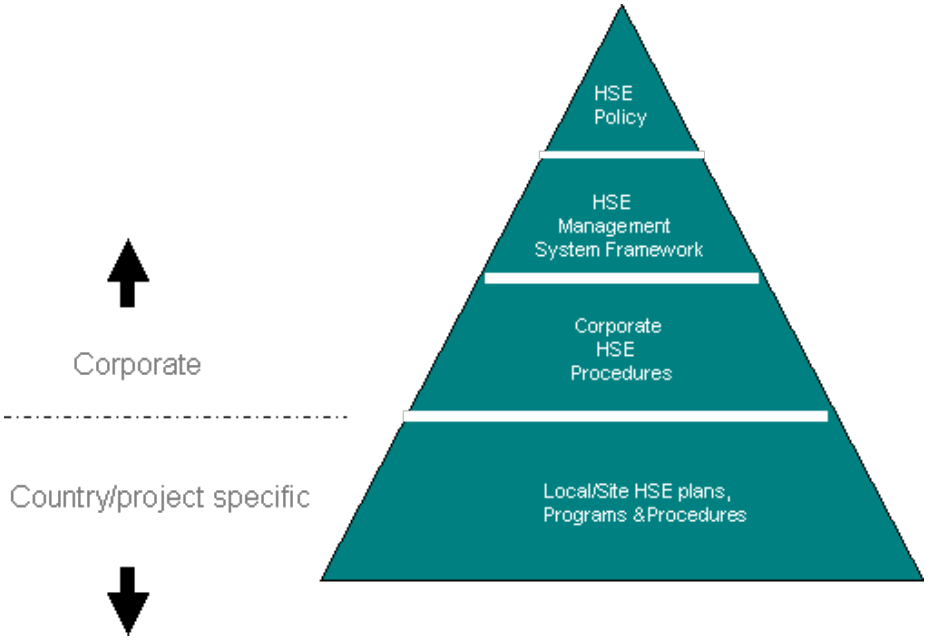
- Clear assignment of responsibilities;
- Efficient and cost-effective planning and operations;
- Effective management of HSE risks;
- Compliance with company policy and legislation; and
- Continuous improvement.

The system is goal-oriented and allows sufficient flexibility for each project to achieve these goals in a manner which best suits our business.

Structure

The system structure is illustrated in Figure 1. At the top, the HSE Policy establishes the intent of the Company and demonstrates the commitment of senior management. The HSE Management System Framework provides guidance on the implementation of policy requirements across the Company. At the second level are the Corporate HSE Procedures which provide a common process for performing key HSE activities across the Company. At the base of the structure are the country/project-specific HSE Plans and Procedures; these provide the specifics of how things are done within each country or project. These are linked through bridging arrangements with Pukka Company contractors' HSE Operating Systems/Procedures.

Figure 1 HSE Management Structure



Management Process:

The HSE-MS Framework is consistent with existing international models for health, safety and environmental management (e.g. ISO-14001, OHSAS -18001, and OGP). The system is structured around an 'organize, plan, do, review & improve' process to assure continual improvement in performance. The system can be visualized as illustrated in Figure 2. It consists of a number of elements and requirements which are relevant throughout the business lifecycle.

Organise:

The system is driven by the organization through leadership and visible commitment to its HSE Policy. HSE goals are established by Pukka Company and, where appropriate individual country or locations can have their own HSE targets.

HSE Responsibilities:

Are clearly defined, Personnel are selected that have the appropriate qualifications, experience and skills to meet their responsibilities. HSE expectations are communicated through internal and external networks. Competence will be an improving element of the HSE-MS

Planning:

Regulatory requirements for planned activities are identified and requirements implemented. Procedures are implemented to assure asset integrity. Potential hazards and risks associated with new and planned activities are identified and appropriate measures to control are introduced and communicated. Effective response plans to emergencies are developed.

Do:

Competent Sub-Contractors are selected and managed to undertake specialist tasks. Incidents are reported and investigated and the findings used to guide actions to prevent recurrence.

Review & Improve:

Routine monitoring is undertaken to assess and where necessary improve HSE performance. Periodic inspections and audits are conducted to ensure the effective functioning and continued suitability of the management system. Management reviews the system annually and introduces system improvements.

Key Elements of the HSE-MS:

The HSE Management System (HSE-MS) reflects the overall objectives of Pukka Company and describes the manner in which these objectives are to be met as laid down by its Senior Management. The key elements of the HSE-MS are as follows:

HSE Policy:

This document reflects the Company's high level goals to protect People, the Environment and its property. The Policy is displayed in all business locations.

Commitment and Responsibility:

The company will determine, document and announce the clear authority and also accountability which is needed to implement this HSE Management System. The foundation of an HSE-MS is leadership and commitment from the top management of the company, and its readiness to provide adequate resources for HSE matters.

HSE Implementation:

HSE Implementation requires good communication of the HSE-MS to the employees and sub- contractors to promote a good working culture in the company. The Management team in Pukka Company will be responsible for ensuring that all workers are familiar with the HSE-MS content and its use.

This will result in the HSE-MS being correctively used both corporately and at local/site level.

The commitment from the workers in all levels is very important, so that the HSE-MS can function effectively and motivate all Pukka Company employees and subcontracts to use the system to the full. The workers will also be encouraged to feedback improvements and lessons learned.

HSE Documentation:

The HSE-MS uses documentation in the form of;

- Guidance
- Procedures
- Instructions
- Forms
- Reports

Hazard and Risk Management:

Management process of hazard and risk consist of four main steps:

- Systematic hazard identification.
- Evaluation for level of hazard
- Applying of Financial Control.
- The planning for Restoration.

Hazard Identification exercises will be recorded on a company action tracking system for timely closure.

HSE Plan:

HSE plans will be developed for calendar years to ensure the high level goals and objectives can be met. The HSE plan should look at particular activities and ensure the correct Hazard Identification and review exercises are built in.

Effective planning is essential for all aspects of the business, with plans based upon known and researched information, and reasoned assumptions.

A plan for continuous improvement is contained in the HSE plan. The HSE Plan is developed from such things as:

Requirements carried over from the previous year's plan.

- Audit and inspection findings.
- Incident findings.
- Accident investigation findings.
- HSE Suggestions from the employee.
- Management review/HAZID/HAZOP action items

HSE Aspects, Objectives and Targets:

It is essential to set HSE targets that are accepted by management and employees as achievable. Typically, a progressively reducing target is set, which in the long term will lead to accident free performance. Realistic targets can only be set after assessing the scope of work for the period under review and allocating tasks to manage such work. The only way to reach an HSE target is to manage effectively the risks.

Effective management demands that hazards and their controls shall, so far as reasonably be addressed in the HSE plan.

Staff reports shall include HSE-related targets or tasks against which performance can be measured. These should be cascaded down from departments giving individuals the tools to do the job, such as training and proper equipment.

HSE Meetings / Communication:

Pukka Company are to hold regular HSE meetings and the minutes recorded for distribution. A meeting once per quarter shall be held by senior management to review quarterly performance against the set goals and objectives and to discuss any HSE shortfalls.

HSE Committee:

Section heads will hold an HSE committee meeting every 3 months to review HSE performance within their groups and record any identified improvements.

Section HSE Meetings:

Section HSE meetings will be convened once per month. Generally section supervisors chair these meetings although rotating the chair amongst senior staff members will increase the HSE involvement. The Section HSE meetings are to discuss relevant section HSE matters and to pass on comments and information from the Management meetings.

Toolbox HSE Meetings:

Every site team shall hold toolbox meetings on a daily basis. Further toolbox meetings will be held before the commencement of any unusual operations or whenever specific problems arise. Meetings will also be held after any incident or accident to disseminate information.

Safety Induction:

All employees and subcontractors are to be given an HSE induction at the location of work. A safety Induction will include:

- Scope of the work
- Preparation of crews
- Equipment preparation
- Method of work , known risks
- Execution of work

Safety Briefings / JSAs:

Prior to workers departing for the work location, a safety briefing must be completed. This briefing is primarily directed at the worker being adequately prepared for the tasks. Workers should ideally be equipped with;

- Standard Operating Procedure
- Communication methods
- Personal Protection Equipment
- House Keeping
- Hazard Identification findings.

Notice Boards:

Notice boards will be used to pass on information at crew level.

Safety Training:

To ensure all Pukka Company workers remain at the best of their abilities adequate training shall be given in accordance with a training needs matrix for both corporate and site activities.

Method of Training:

Awareness training will be provided by the processes of induction as described in detail in the crew procedures.

Pukka Company will detail training needs for the Corporate and Site based teams. Evidence of training will be kept as well as planned dates for refresher training.

Training Matrix Records:

Maintenance of the crew training matrix and records will be the responsibility of the supervisor in the corporate location or site office. HSE personnel will keep database records of training completed.

Safety Audit and Inspection:

HSE auditing will be conducted by Pukka Company audit assignees. Such audits will follow a process of review by management and follow-up, all of which will be documented.

HSE audits will be conducted at various levels within the company. Each level will develop and document a scheme of audit types that may include Practical and Operational considerations.

Trained and certified Auditors will be employed and be required to work in accordance with ISO-9001.

Performance:

The company will set and monitor performance on a monthly, Quarterly and Yearly basis. The following may be selected for measurement;

Proactive performance:

- Exposure Hours
- Day without LTI
- Km Driven
- Km Seismic line (if applicable)
- Positive contributions by crew

Realization against Targets:

- Training
- Inspection
- Meeting
- Drills/exercises (if applicable)

Reactive Performance:

- Lost Time Injury (LTI)
- Fatality (FAT)
- Permanent Total Disability (PTD)
- Permanent Partial Disability (PPD)
- Restricted Work Case (RWC)
- Medical Treatment Case (MTC)
- First Aid Case (FAC)
- STOP Cards
- Near Miss Reports

Reporting:

Reporting will be done in the form of daily notes, weekly notes and monthly notes. The Report format is to consist of:

Safety Report:

- The Work Activities
- The Working Hours, Safety Briefing, Near Miss, Number of Accident, Lost Work Days, etc.
- Key Performances Indicators
- The Safety Report will be collected so when it audited, it can be accountable.

Incident and Investigation Report:

The objectives of an incident and investigation report system are:

- To investigate all hazardous and potentially hazardous occurrences at a level, depth and speed appropriate to their seriousness.
- Determining root causes, to take appropriate action to prevent the recurrence of incident or similar incidents. Use of root cause software to be recommended such as Taproot©
- To communicate the findings of incident investigations, the conclusions reached and recommendation made to all appropriate personnel.
- To identify trends in a timely fashion and target areas of particular concern.

Emergency Response and Evacuation:

Management will instigate, maintain and test arrangements to support any emergency plans or arrangements set up by or for their offices and local sites. Such arrangement must be recorded so that Emergency plans can be mobilized at short notice. Key members of the Emergency team will maintain good communications, duty rosters and procedures to handle emergencies. The Pukka Company Emergency Response Plan is described in Section 7 of this Manual and the Emergency Evacuation Plan is given in Section 10.

Occupational Health and Environment:

Employees working for Pukka Company must be encouraged to world for their best health and the company will assess health risks on an ongoing basis. Procedures will be put in place to ensure the best medical care and screening is given and newly joining personnel may at the discretion of the company be required to have up an up to date medical. Health risks will be recorded and tracked through the company's action tracking system.

PREVENTING HARM FROM OPERATIONS:

Preventing harm from operations' is achieved by controlling hazards to people or the environment that may be created by the following:

- The work place;
- The work equipment;
- The materials and consumables;
- The work method.

Controlling Hazards:

Identifying and controlling hazards from the workplace, equipment, materials, consumables and the work method is essential to prevent harm as a result of the operation. If any of these factors are not properly controlled, the risk of harm is significantly increased.

The process of identifying hazards to people and the environment, assessing the risk, establishing suitable controls, ensuring awareness of risk and implementation of controls is termed 'Risk Management' and is fully described in PRO/010.6 which is attached in Section 6.1

Minimum requirements for assessment and control of the workplace equipment, materials/ consumables and work method hazards are described in:

Section 6.2 – Control of Work Procedure (PRO/010.3);
Section 6.3 – Control of Work Equipment (PRO/010.4);
Section 6.4 – Control of Hazardous Substances (PRO/010.5).

All maintenance and inspection programmes that directly affect HSE are carried out in accordance with established procedures, which were identified in the programmes will include workshop equipment.

These procedures ensure that all personnel working on these programmes have sufficient skill, training and/or instruction, and are adequately equipped.

Detailed work instructions are provided in all cases where their absence would affect product quality and competent personnel monitor processes.

Acceptance criteria are established clearly and defined for all operations, and personnel are instructed to report all cases of doubt or difficulty to their relevant department head.

Special processes are subcontracted and subject to qualification procedures for operators, equipment and procedures, and are monitored by competent personnel to ensure compliance with requirements. Records of these qualifications are made and retained, and qualifications are updated as necessary.

HSE Training:

Awareness of basic HSE requirements and responsibilities is fundamental to ensuring adequate control of operations. HSE awareness training is provided to all personnel in accordance with the requirements of the operations they are expected to perform. HSE training and awareness is provided in accordance with the Training Procedure given in Section 6.6.

In all operations there is a degree of risk that cannot be removed. As a result, emergency and contingency plans are established for foreseeable situations that may be created by the risks from the operation. This process is described in the Emergency Response Plan given in Section 7.

Management is responsible for identifying the significant hazards present in the work place, work equipment, work method, materials/ consumables, personnel and emergency/ contingency plans. They are also accountable for ensuring that such controls are implemented and effective. All employees are responsible for ensuring they understand the required controls, implementing them and notifying management of any concerns.

Employees identifying hazards with the work place, work equipment, materials/ consumables or work methods are responsible for making them safe and reporting the hazard to management for any further action.

Employees who are asked to perform a task they believe is beyond their competence must not proceed with the task and contact management immediately.

HSE Procedures and Supporting Documentation:

Where appropriate HSE procedures and supporting documentation will define mandatory requirements. All such requirements must be undertaken without exception. Where requirements cannot be achieved, the operation must not proceed and management must be informed of the situation. Personnel who deviate from mandatory HSE requirements may be subject to disciplinary action.

HSE Procedures may be grouped as follows:

- Risk management;
- Worksite Controls;
- Emergency Response;
- Audit and Inspection;
- Reporting.

Section 6 of this Manual contains Pukka Company worksite HSE Procedures.

HSE Objectives and Targets:

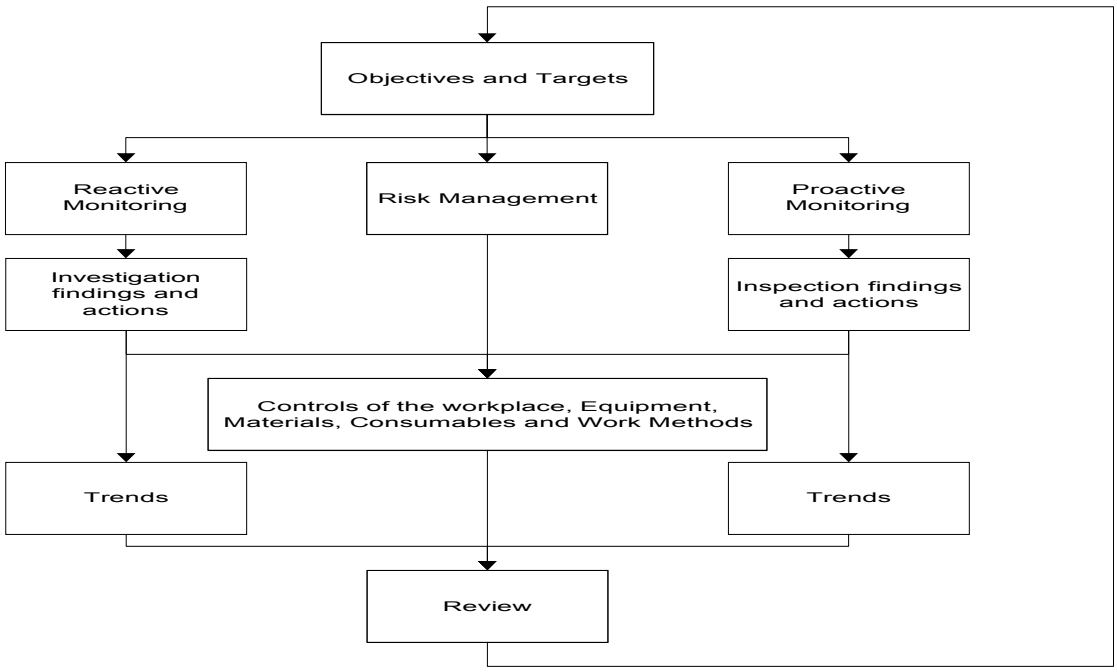
In accordance with Pukka Company HSE Policy, objectives are set to maintain a safe workplace, minimise harm to the Environment and avoid damage to Company assets.

Targets are set to ensure that the objectives are adhered to within an agreed time frame.

If a project relates to new developments and new or modified activities, products or services the new activities, products or services will be identified and evaluated.

Adequate resources will be made available by senior management for the reduction of the risk. The HSEQC objectives are reviewed on an annual basis.

HSE objectives and targets are inter-linked to ensure adequate control of operations is achieved and continuous improvement is generated. The following flowchart describes this inter-relationship.



Supervision:

Supervisors of each operation are responsible for ensuring that all personnel involved in the operation are made fully aware of the risks from the operation and required controls. All personnel must also be made aware that they all have the authority and responsibility to stop the operation at any time if there is any doubt over the effectiveness of HSE controls.

Supervisors must make clear to all personnel engaged in the operation that they will be fully supported when taking action to stop the operation. Individuals: who stop operations when there is a concern over the effectiveness of HSE controls will be recognised as performing their job correctly.

Harm can occur when conditions at the worksite change, when conditions are not as foreseen, or when there is a deviation from the work plan. Supervisors must ensure all personnel understand that they are expected to STOP the operation should any such changes arise. Work should not continue until the effect of the change has been assessed, any additional controls identified, communicated and agreed.

Personal Protective Equipment (PPE):

Pukka Company will ensure that all any PPE that is provided and or used will be: Appropriate:

- Of good quality
- In sufficient quantity

The requirement for any additional protective equipment is continually assessed by the employees and line supervisor in accordance with the risks identified. All PPE complies with recognized national or international standard and the company keeps a record of current standards. Current standards used for PPE are as follows:

- Coveralls
- Hand Gloves
- Safety Helmet
- Safety Goggles
- Ear Plugs
- Safety boots - Shoes.

The Pukka Company PPE procedure and specification is given in Section 6.7

PROTECTING THE ENVIRONMENT:

This section identifies the process of defining and implementing actions to

ensure that Pukka Company protects the environment in all of its operating activities.

Policy:

Pukka Company will conduct its activities in such a manner so as to:-

- Take in to account the Environmental Effects of its activities and that of its contractors and suppliers, and of third parties on the ecosystem of the work location.
- Prevent pollution to, and protect the environment of the work area and strive to reduce waste and use efficiently the natural resources available to us.
- Strive to reduce waste generated by their operations and dispose of any such waste in a managed manner, and in such a way as to have the minimum environmental impact.
- Monitor the use of raw materials and resources (material, fuel and energy) in order to ensure that only the minimum compatible with our operations is used. Where appropriate the use shall be audited to ensure efficient utilisation.
- Comply with the laws and statutes of the Country of Operation as they apply to the company's operations and where possible strive to apply more stringent standards.

Objectives:

Pukka Company will:

- Pursue and support the continual improvement in the Environmental Management of its own activities and that of its contractors.
- Provide proper and adequate training in environmental matters for all staff to permit them to comply with the needs of this policy.
- Ensure that through the use of recognised proprietary equipment and approved maintenance that equipment and materials meet national and where appropriate, international standards for environmentally acceptable operations.
- Ensure that through proper procedures that all equipment is operated in accordance with the manufacturers' instructions so as to present the minimum risk of failure that is liable to lead to environmental pollution
- Develop and Use programmes to promote environmentally friendly working conditions.
- Audit on a regular basis the company's procedures to ensure their compliance and review the results with the intent of making any improvements that may be necessary.
- Comply with the requirements of the client where the effect the company's operations.

Responsibilities:

Directors:

Directors are responsible for:

- Providing working equipment, plant and facilities which are designed to have an acceptable Environmental Impact.
- Providing environmentally safe and healthy working conditions.
- Providing sufficient and adequate training for all personnel in order that they may fully appreciate the impact of their activities
- Providing adequate accommodation and work places for all staff.

Field Operations Manager/Supervisors:

The Field Operations Manager/ Supervisor is responsible for:

- Carrying out all operations in accordance with the company's current standards and procedures.
- Ensuring that all staff are adequately trained for the jobs they are assigned and understand the Environmental Impact of their activities
- Providing the necessary equipment to carry out the work in hand and that it is of adequate quality for the job.
- Ensuring all Environmental Incidents are promptly and sufficiently investigated and that all remedial actions are taken promptly to prevent a recurrence
- Ensuring that all contractors comply with the company's Environment Management policy
- Ensuring that management is kept informed of all environmentally hazardous conditions of plant, equipment and operations while taking prompt steps to rectify the situation.

Field Supervisors:

Supervisors are responsible for:

- Ensuring that the work carried out is done in accordance with this policy and in compliance with company rules and procedures.
- Ensuring that any contractors also comply with these procedures.
- Ensuring that all subordinates are adequately trained in environmental matters, so far as is required, for the tasks given them, and in the use of all necessary protective and safety equipment.
- Carrying out inspections and audits to ensure that the company's procedures are being complied with and that all employees are fully aware of the effects of the work they are undertaking.
- Ensuring that all necessary protective clothing is provided and used.
- Investigating all Environmental Incidents occurring within their area of influence.
- Holding regular meetings with subordinates to discuss all relevant environmental measures and procedures for their jobs and to encourage safety awareness within their staff.

Employees:

All employees are required to:

- Follow the instructions of their supervisor in line with the company's policies and procedures.
- Use all necessary protective equipment need to complete their tasks.
- Dispose of all materials in a safe and acceptable manner and maintain their work area in a clean and tidy condition.
- Report all hazardous conditions to their supervisor.

WASTE MANAGEMENT:

It is Pukka Company to prevent pollution to, and to protect the environment of the company's work area, and to strive to reduce waste. We will also strive to use efficiently the natural resources available to us. It is the duty and responsibility of each and every employee to use his best efforts to achieve this vision of our working practices and the following objectives are set:

- To ensure the responsible and safe disposal of non-hazardous wastes from our camps, rigs and offices
- To reduce the volume of waste generated, both hazardous and non-hazardous
- To treat hazardous waste and render it non-hazardous before disposal, or where this is not possible to ensure, safe ultimate disposal of all hazardous waste

Responsibilities:

The overall responsibility for waste management at the rig site is the Pukka Company Supervisor. The Camp Boss (or designated Person) is responsible for the waste management activities at the site.

Where sites are close to permanent facilities efforts should be made to ensure that the waste collection facilities are used, however when the site is in a more remote location and this facility is not available waste disposal shall be restricted to:

- Burning and
- Land filling in dedicated waste disposal pits

While this is acceptable for remote interior locations, near to areas of more intensive land use or industrial or human settlements, may be subject to specific restrictions as regards the use of materials and the disposal of other wastes.

Site Wastes:

The following wastes are generated by construction and associated operations:

- Domestic and Office waste
- Maintenance waste from camp/rig facilities and engines
- Cuttings and drilling fluids
- Chemicals and packaging

- Cement and completion materials
- Accidental wastes.

Domestic Waste:

Depending upon the location of the drilling site and the provision of acceptable disposal facilities waste should by preference by disposed of in a recognised waste disposal facility. If such facilities are not available waste shall be disposed by burning in the immediate vicinity of the site and the subsequent residual material disposed of in a dedicated landfill pit.

For local disposal, a dedicated domestic waste pit will be constructed and waste from the camp shall be collected each day and burned. When the campsite is vacated, the waste pit will be backfilled with an overburden if 1m and compacted.

A rubbish container will be maintained at the rig site for collection of industrial waste and this shall be disposed of in a dedicated scrap yard.

Domestic Waste:

Depending upon the location of the drilling site and the provision of acceptable disposal facilities waste should by preference by disposed of in a recognised waste disposal facility. If such facilities are not available waste shall be disposed by burning in the immediate vicinity of the site and the subsequent residual material disposed of in a dedicated landfill pit.

For local disposal, a dedicated domestic waste pit will be constructed and waste from the camp shall be collected each day and burned. When the campsite is vacated, the waste pit will be backfilled with an overburden if 1m and compacted.

A rubbish container will be maintained at the rig site for collection of industrial waste and this shall be disposed of in a dedicated scrap yard.

Waste fluids:

Waste fluids shall be disposed of in a dedicated cuttings disposal pit. After use the cuttings pit will be backfilled with an overburden of 0.5m and compacted when the water content has decreased sufficiently

Chemicals and Packaging:

It is the responsibility of the Site Manager to ensure that chemicals are managed in an efficient manner and in such a way as to minimise losses.

Packaging materials may be disposed of as non-hazardous waste if this is appropriate and safe. In general, such disposal is allowed provided:

- Contamination to soil and water is minimised

- Gross contamination of soil and water is avoided
- There is not a recognised explosion risk requiring evacuation of the site or
- Toxic fumes are not emitted.

Otherwise disposal must be as for hazardous wastes
Disposal of limited quantities of chemicals in to the cuttings pit is acceptable.

All disposals must be in accordance with the "Chemical Data Sheets" provided by the supplier and the data sheet for each chemical in use should be available on the rig site for information

Accidental Waste:

Accidental waste may occur as a result of spills of mud, chemicals, crude oil, fuels or other materials. For practical purposes accidents are defined as loss of containment beyond the immediate control and requiring extraordinary mitigation measures.

Spills must be contained as quickly as possible and cleaned up or recovered. Any material resulting from the containment, recovery and clean up, that cannot be used for its intended purpose must be disposed of in the same manner as redundant chemicals.

Waste Reporting:

At the end of each Project a report is submitted to the client on the state of the site on departure. On normal operations this is done by the company representative; however turnkey work this report is the responsibility of the Site Representative. Attached is a form which should be used for this report.

Chemical Information:

All chemicals used in operation are supplied with a "chemical data sheet" and the supplier of the chemical must supply this sheet prior to its use. The data sheet contains information on the properties of the chemical, the toxic effects (if any) the precautions to be taken, and advice on the safe method of disposal.

These sheets should be kept on the rig site and kept up to date by the Site Representative.

MANAGEMENT OF CONTRACTORS ON PUKKA COMPANY SITES:

Pukka Company has Pukka Company a responsibility to ensure that Contractors on our sites work to acceptable safety standards. Pukka Company will ensure prior to any acceptance of a subcontractor that a Health, Safety and Environmental Assessment of the company are completed.

This section describes the minimum standards to which Contractors must conform whilst working at Pukka Company worksites.

Safe System of Work:

Contractors are required to provide a written Safe System of Work for any activities in which they are to be involved in which risk has been identified. It is the responsibility of the Responsible Person (RP) to ensure that any new Contractor is approved and recorded onto the HSE Approved Suppliers List prior to commencing any work activity on site owned, managed or controlled by Pukka Company.

If suitable time is not given to review Contractor Safe Systems of Work it is at the discretion of the HSE representative authorise the access to a Contractor. Authorisation can only be given when the Contractor has demonstrated that Control Measures are adequate and meet the satisfaction of the HSE representative. If the Control Measures do not meet the satisfaction of the HSE representative it is within the rights of the HSE representative to refuse access to the Contractor. If this action is necessary a PIR shall be raised and arrangements will be made for Contractor to perform the activities at a future date appropriate for all parties.

Before undertaking any element of their assigned tasks Contractors must obtain authority to proceed from an authorised Pukka Company employee. This authorisation will normally be provided in writing in the form of an approved Permit to Work.

Pukka Company Procedures and House Rules:

Prior to the commencement of work the Contractor and the Responsible Person (Site Supervisor) will meet to agree those areas where the requirements of the Company's Permit to Work System, House Rules and any other Company Procedures will apply.

The Site Supervisor will ensure that these are issued and fully understood prior to Contractor arriving on site.

Out of Regular Hours Working:

Work planning should be carried with the involvement of the HSE representative, but there may be situations where a Contractor may be required to perform work "out of regular hours" that could mean a lack of access to the required HSE personnel. With this in mind the following basic guidelines are given but the need for further action and control measures is at the discretion of the Site Supervisor:

A Site Supervisor with the delegated authority will be personally and legally responsible for the following:

- Ensuring all Contractor personnel are signed and accounted for

- Perform a Contractor Induction covering application of the Visitor Evacuation instructions, Pukka Company House Rules and Rules For Contractor Permit To Work
- Review Contractors Risk Assessment and / or perform on any Pukka Company site
- Risk Assessment and any other associated assessments (e.g. COSHH Assessment, Manual Handling Assessment, Lifting Operations Plan etc).
- Complete a Contractor Permit To Work form (if Required)
- Authorise Contractor to carry out agreed activities in agreed areas.
- Ensure full and effective closure of all Contractor Permit to Work form requirements before allowing Contractor personnel to leave premises.

The Control of Contractors on Pukka Company premises Procedure (PRO/010.8) is given in Section 6.8.

WORKSITE HSE PROCEDURES

HSE Procedures may be grouped as follows:

- Risk Management;
- Worksite Controls;
- Emergency Response;
- Audit and Inspection;
- Reporting.

The following pages contain Pukka Company HSE key procedures. Many of these procedures use supporting forms and these are given at the end of each procedure.

HAZARD AND RISK ASSESSMENT

1. Purpose:

This document identifies the process used to ensure harm to people or the environment caused by the workplace is prevented, for all work locations under Pukka Company control.

2. Responsibility:

Management is responsible for the effective application of this procedure within Pukka Company. Site Supervisors are responsible for ensuring workplace hazards with the potential to harm people or the environment are identified, assessed and controlled.

The HSE Representative will audit and review this procedure to ensure implementation and effectiveness.

3. Procedure:

The Hazard and Risk Assessment flowchart is given at the end of this procedure.

Pukka Company Bases:

A hazard identification and risk assessment exercise will be conducted for each Pukka Company base by management with support from the HSE Representative. Identified hazards will be recorded on a Risk Assessment Form

The risks from each identified hazard will be conducted and documented on the Risk Assessment Form, shown at the end of this procedure.

Further action identified during the risk assessment process will be prioritised according to the level of risk encountered.

Pukka Company Risk Control Standards define the minimum requirements that must be achieved for all hazards identified in. Management and HSE are not permitted to deviate where local legislation or other requirement states a level of control beyond that defined in the Pukka Company Control Standards; the higher standard must be achieved.

Line management, with support from the HSE function, will define active monitoring requirements to ensure risk control methods are implemented and effective.

Active monitoring of the workplace includes routine inspections recorded on the Planned Inspection Checklists but may also include specialist inspections such as Noise Assessments, Air Quality Monitoring or Interceptor Inspection.

Active monitoring requirements will be appropriate to the level of risk encountered and nature of implemented risk control methods. Where engineering controls are selected as the risk control measure, relatively less frequent monitoring may be required. Where procedural controls are implemented as the risk control measure, relatively more frequent monitoring may be required.

Off Base Workplaces:

Off base workplaces include land well sites, offshore installations, barges and other similar facilities used by Pukka Company Locations.

All off base workplaces to be used by Pukka Company employees and contractors under Pukka Company control must be inspected prior to work commencing. Line management are responsible for ensuring such inspections take place and are effective.

Management, with support from local HSE representative are responsible for developing checklists of safety critical items to be used during inspection of off base workplaces. The Planned Inspection Checklists will be used to record inspections of off base worksites.

Planned Inspection Checklist:

The Planned Inspection Checklists is the document used to record workplace inspection findings. Specific for the office, workshop and yard we have Inspection checklist office, workshop and yard in place.

The person conducting the inspection allocates a risk category to each inspection requirement based on the conditions seen at the workplace. The risk categories used are High Risk, Medium Risk and Low Risk.

LOW RISK	Risk may be acceptable, however review to see if risk can be reduced further.
MEDIUM RISK	Task should only proceed with appropriate line supervisor management authorisation after consultation with appropriate specialist personnel and the work party. Where practicable, the task should be redefined to take account of the hazards involved or the risk should be reduced further prior to the task commencing.
HIGH RISK	Task must not proceed. Task must be redefined or further control measures put in place to reduce risk. The controls should be reassessed for adequacy prior to task commencement.

All actions required to reduce workplace risks to 'Low Risk' must be implemented prior to work commencing. Any outstanding actions must be recorded on the Planned Inspection Checklist with defined responsibility and timescale. Any items that must be completed prior to work commencing must be clearly documented and communicated to the work party.

Workplace risks must be communicated to the work party during a pre-job Toolbox Talk. Any actions required to control risk prior to work commencing must be verified as having been completed prior to work commencing.

Inspection checklists will be reviewed by management to ensure implementation, effectiveness and to identify any trends in required actions that may require management intervention.

Permit to Work / High Risk Operations:

For specific, high-risk operations, an additional level of control is required to ensure adequate controls and responsibilities are assigned prior to work commencing. A permit to work will control these operations. When working on customer premises, the customer permit to work system can be used.

Pukka Company requires a permit to be raised for, but not limited to:

- Confined space entry
- Welding, cutting and burning
- Pressure testing outside properly constructed pressure test facilities

Health and Hygiene:

General Requirements:

All personnel on sit shall maintain a high standard of personal hygiene and housekeeping and shall ensure that all areas are maintained in a clean and tidy condition

Personal Hygiene:

A high standard of personnel hygiene shall be maintained at all times. Protective equipment and coveralls shall be kept clean and in good repair. They shall be laundered regularly.

Housekeeping Routines:

Good housekeeping standards shall be maintained on site. Access routes must be kept clear and free from obstruction that may restrict access to firefighting or emergency equipment

Flammable materials and paints shall be stored securely and in a tidy manner. Oil spills shall be cleaned up immediately they occur.

Risk Assessment Procedure:

Purpose:

This procedure defines the process for the identification of hazards and management of risk in order to prevent harm to people as a result of operations within Pukka Company operations.

Responsibility:

The Field Site Manager is responsible for ensuring an effective system of risk control is implemented within his Field Operations of responsibility.

Risk Assessments are conducted recorded and reviewed prior to undertaking any job that may cause harm to people.

Risk Assessments are used to ensure that all persons ultimately involved in the Job are aware of the hazards associated with the job and the controls necessary to reduce those hazards to As Low as Reasonably Practicable (ALARP)

Procedure:

Definitions:

Hazard – Anything with the potential to cause harm to people or

the environment. Severity – Is the extent of harm that could occur if exposed to the hazard.

Probability – is the likelihood of the hazard causing harm. Exposure – is the time that people are exposed to the risk.

Risk – Is the combination of the probability and the severity of harm.

Identification of Hazards:

The task supervisor for each operation conducted by the Pukka Company is responsible for reviewing the proposed task and ensures any task hazards are identified. Common Task Hazards are described in section 6.3.6 of this procedure.

All tasks must be reviewed by the task supervisor to determine if any hazards are likely to be present during the task and may present a significant risk of harm to personnel.

Where no formal task supervisor is defined, one shall be nominated prior to the task commencing. Significant changes in the process, procedures and/or personnel shall be reviewed and be subjected to a formal risk assessment if such changes would constitute a significant risk to the Pukka Company operations or the operation of its contractors

No significant Hazards Identified:

Where no significant hazards are identified, work may proceed without the requirement to conduct a Risk Assessment or Toolbox Risk Assessment. The option to 'not risk assess' will only apply in the most simple and low hazard of activities and will be covered in risk assessment training.

If the task changes work must be reassessed for hazards.

Where any employee identifies a potential hazard, it should be reported to the task supervisor to decide whether the hazard is a significant source of harm.

Significant Hazards Identified:

Risk Assessments already exist for most routine operations. The HSE Supervisor is responsible for reviewing the Risk Assessment register to determine whether a suitable Risk Assessment exists for the task.

Existing Risk Assessments must be reviewed by the HSE Supervisor to determine whether they are appropriate to the operation being conducted.

Where an existing Risk assessment is appropriate, the Risk Assessment may be used by the task supervisor as part of the Toolbox Risk Assessment process.

The reviewed risk assessment will be refreshed on the toolbox risk assessment card. Only additional/ changed hazards need to be defined and assessed on the Task Risk Assessment form.

Where the existing Risk Assessment is not appropriate a new Risk Assessment is required.

Risk Assessment Process:

The HSE Supervisor is responsible for ensuring a suitable team of people is assembled to conduct the assessment.

All risk assessments for hazardous operations shall be recorded on a Risk Assessment Form FRM/010.6.1.3 given at the end of this procedure. Hazardous substances, VDU workstations, noise and manual handling Assessments may be assessed on separate specialised reports in accordance with procedures available from the HSE Representative.

The process of Risk Assessment is depicted in the attached flowchart at the end of this procedure. This process can be broken down into five stages each of which are explained further in this procedure:

- Identify the hazards
- Analyse the probable effects/ consequences
- Assess the overall risk
- Accept/ Reject the risk
- Identify further action for rejected risks and reassess

In order to ensure the assessment is adequate, the personnel conducting the assessment should be suitably experienced in the task to be assessed and have been trained in the process of risk assessment. This level of competence will normally be achieved by using a team of two or more persons to conduct the assessment.

Identification of Hazards:

The objective of Hazard Identification is to isolate the foreseeable significant sources of harm generated by or present during each operation.

The process of identifying hazards should be conducted in a methodical and systematic manner. This can be achieved by going through the work plan or task as a sequence of steps and identifying the perceived hazards at each stage. The process of 'walking and talking the job' is often used where the actual worksite and/ or equipment is seen and discussed, however this may not be practical for certain offshore assessments conducted at base. These assessments must therefore be reviewed at the worksite to ensure they are adequate prior to being authorised and work commencing.

Table 1 provides a list of common hazards to be considered during Hazard Identification. This list is intended to provoke thought and discussion and is not meant to be exhaustive.

Slipping & tripping Restricted access/ work Field Operations Falls/ falling objects Striking/ walking into object Noise Hot/ Cold surface Fumes/ Dust/ Gases Oxygen depletion Chemical agents Third party involvement Sharp edges	Electricity Manual Handling Vehicle movements Fire/ Explosion Stored Pressure Lone/ Remote working Hand tools Machinery Stored energy Concurrent operations Explosives	Repetitive lifting Fatigue Hazardous substances Ionising Radiation Non-ionising radiation Poor lighting/ night Poor communication Over the side work Adverse Weather Inadequate/ defective tools Inexperience

Hazard Identification should consider hazards generated by other concurrent operations (overhead work), continuing hazards (always and normally present) and abnormal hazards (generated as a result of process or equipment failures).

Those persons/ groups of people affected by identified hazards should be detailed on the Risk Assessment form. The assessment should be reviewed by each of these groups of persons to ensure they are aware of the hazards prior to work commencing.

Establish Probable Harm:

The probable harm is the type of injury, health impact and process loss or asset damage that would probably occur in the event of the hazard being exposed. The probable harm should be defined for each hazard and described on the risk assessment under 'probable harm' (see Figure 1).

Probable harm may vary for the same hazard but under different circumstances. (For example, a trailing cable presents a trip hazard. On a level floor in the centre of an unfurnished room the probable harm may be trivial injuries such as minor bruises. If the trailing cable was across the top step of a flight of stairs the probable harm may be severe injuries such as broken bones.)

Assess the Risk of Harm:

A number is used as a tool to assist in expressing the degree of risk generated by each hazard. Agreeing a number for the severity of harm and the likelihood of harm occurring generates this number. These values are derived from the Risk Assessment/ Incident Potential Matrix FRM/010.6.1.2.given at the end of this procedure.

The risk rating (R) is the result of the subjective assessment of the assessment team. This figure is a simple tool to allow the degree of risk to be quantified and therefore prioritised.

Identify Existing Controls:

Current systems of control for each identified hazard should be described. These should be taken into account by the risk assessment team prior to arriving at the final risk rating. The objective of the defined controls is to reduce the risk to as low as reasonably practicable.

Where existing controls have been taken into account and the final risk rating remains (in the opinion of the assessment team) too high, additional controls will be required. Additional controls required shall be stated under 'further action required' on the risk assessment form.

Define further action required:

In defining 'further action required', control methods should be selected using the methods in Figure 2. Priority should be given to selecting the lowest ranked control method; those of higher ranking should only be selected when it is impractical to use a lower ranked technique. Personal Protective Equipment is given the highest ranking and should therefore only be used a last resort.

In many cases a combination of control methods may be required to achieve effective control. It should also be noted that as well as being in rank order of effectiveness, these controls are in reverse rank order with respect to management/ supervisory time needed to maintain them. (ie item 5 takes the greatest amount of time and effort to ensure effective application and item 1 takes the least).

Rank	Control	Consideration	Examples of control
1	ELIMINATION	Does the task need to be done?	Use of rig crane in preference to manual handling. Buying pre-sawn timber in preference to cutting to size.
2	SUBSTITUTION	Can a lower risk alternative be found?	Using 110v electricity supply in preference to 240v.
3	ENGINEERING CONTROLS	Can equipment be designed or modified to reduce the risk	Local exhaust ventilation, guarding, overpressure valves, interlocks.
4	SEGREGATION	Can people be kept away from the danger?	Barrier signs, warnings and tannoys. Walkways kept separate from hazardous Field Operations s.
5	REDUCE EXPOSURE	Can the number of people exposed or the time of exposure be reduced?	Hazardous works done when less people are around (nights). Job/ shift rotation.
6	PROCEDURES	Has a safe work method been defined and communicated?	Permit to work. Risk Assessment. Toolbox talk.

Training and Awareness:

At least one person in the team undertaking the risk assessment must have had formal risk assessment training. All personnel conducting Risk Assessed operations will be required to be made aware of the results of the risk assessment prior to commencing work, this is the Supervisors responsibility.

Implementation and Monitoring:

Management and supervisors will be responsible for monitoring the worksite to ensure the effective implementation of controls detailed on relevant Risk Assessments. All personnel performing work described in Risk Assessments are responsible for ensuring specified controls are implemented.

Review:

All risk assessments shall be reviewed prior to the work being performed and recorded on the TRAC. All generic risk assessments shall be subject to an annual review as a minimum.

Where there is any reason to believe that the assessment is no longer valid or there are significant changes to the work plan, work method or equipment used, the risk assessment must be reviewed and if necessary revised.

CONTROL OF WORK METHOD

Introduction:

This document identifies the process used to define and implement a work method that prevents harm to people or the environment within the Pukka Company.

Responsibility

The Field Operations Manager/Supervisor is responsible for the effective application of this procedure within Pukka Company.

Line Managers and Supervisors are responsible for ensuring an approved work method is adequately defined, known, understood and implemented for all operations with the potential to harm people or the environment.

HSE functions will audit and review this procedure to ensure implementation and effectiveness.

Procedure

Introduction:

Pukka Company Safety policy and expectations require a safe method of work to be established for each operation with the potential to cause harm. This covers routine operations and non-routine operations and includes ensuring any variations to the normal work method are assessed for safety before they are implemented.

Pukka Company requires a safe work method to be adopted for all potentially hazardous operations. This procedure describes how the safe work method is defined and responsibilities for implementation.

Harm can be caused due to inadequate control of the work method. This typically occurs due to:

- Lack of a safe work method
- Safe work method exists but is not available at point of use
- Safe work methods exists/ available but is inadequate
- Safe work method exists/ available/ is adequate but is not followed

Routine Operations:

Many of the operations conducted by Pukka Company are largely routine.

For each routine operation, an Operations Guideline will be documented and will define the safe work method required for the operation.

Pukka Company is responsible for defining minimum HSE requirements for standard operations within Operations Guidelines. These minimum requirements must be based upon a competent risk assessment of the operation conducted in accordance with PRO-010.6. Operations Guidelines must be available, communicated and implemented at the work site. Personnel must not deviate from these Operations

Failure to comply with Operations Guidelines or to obtain appropriate management approval for any deviation may be dealt with in accordance with Pukka disciplinary procedures.

New Operations (not previously performed by Pukka Company)

New operations require a risk assessment to be performed in accordance with. Following completion of the risk assessment, an Operations Guideline for the new operation must be defined and used as the safe work method.

Variations to routine operations:

Operations Guidelines describe generic procedures for each routine operation. Conditions at the work site, changes to planned operations and other circumstances can result in changes to the work method described in Operations Guidelines. All proposed changes to Operations Guidelines must be assessed for potential to cause harm prior to the operation proceeding.

Assessment of local variations to Operations Guidelines must be subject to Risk Assessment. The Toolbox Risk Assessment process is the normal method for this assessment, although the Generic Risk Assessment can also be used if appropriate.

Safe operating requirements within Operating Guidelines will often be supplemented by a variety of documents that may include project specific/ client or third party procedures, permit to work and similar documentation. The person responsible for the operation is responsible for reviewing all applicable documents to ensure a clear, acceptable, documented safe work method has been defined and agreed.

Permit to Work/ High Risk Operations:

For specific, high-risk operations, an additional level of control is required to ensure adequate controls and responsibilities are assigned prior to work commencing. A Permit to Work will control these operations. The Pukka Company Permit to Work Procedure is given in Section 6.5

- Approved Contractor or site Permit to Work procedures may be used. The Pukka Company Permit to Work System is described within HSE Instructions.
- Pukka Company require a permit to be raised for:
- Live electrical work
- Work in explosive/ flammable atmospheres
- Confined space entry
- Welding, cutting and burning
- Pressure testing outside properly constructed pressure test facilities

Client/ Site Interface:

At the work site, clients and other contractors may hold procedures for work activities conducted by Pukka Company unless otherwise agreed by Pukka Company management, Operating Guidelines and Procedures must be implemented for Pukka Company operations.

Where agreed by line management, an interface document may be created where Pukka Company share control of a work activity with others. The interfacing process is described within Pukka Company.

HSE Instructions: In the absence of an agreed interface document, Pukka Company Operating Guidelines and Procedures must be used.

Verifying that the safe work methods are implemented and remain effective:

Line management is responsible for verifying that Operating Guidelines are implemented and effective for the operations under their control.

The HSE departments will audit each operation (where possible) in accordance with the internal audit plan to verify the effectiveness of controls.

The issuing authority to ensure they remain current and valid must review operating Guidelines annually.

All employees are responsible for raising any concerns they may have regards Operations Guidelines or the planned safe work method for any operation.

Where the safety of any operation is in doubt, all personnel are empowered to suspend the operation until concerns have been addressed.

CONTROL OF WORK EQUIPMENT

Purpose:

This document identifies the process used to prevent harm to people or the environment from use of safety critical tools and equipment within the Pukka Company.

Responsibility:

The Field Operations Manager/ Supervisor is responsible for the effective application of this procedure within

Line Managers and Supervisors are responsible for ensuring tools and equipment are fit for purpose, used correctly and maintained in safe condition for all tools and equipment with the potential to harm people or the environment.

The HSEQ Representative will audit and review this procedure to ensure implementation and effectiveness.

Procedure:

We all require using equipment whilst at work to do our job. Much of the equipment at work has the potential to cause harm if:

- It is not properly designed, manufactured or has been adapted from original design without proper change control
- It is not maintained and inspected to ensure safe operating condition
- It is used for a purpose other than that it was designed for
- The operator has not been properly trained in its use or makes an error during use;

The purpose of this procedure is to describe the system of control for work equipment implemented by Pukka Company to prevent these sources of harm;

Work Equipment;

This procedure applies to all work equipment in use under Pukka Company control with the potential to create risk, including:

- Operations equipment (either Pukka Company designed or third party) e.g. pipework, etc
- Base equipment e.g. compressors, welding plant, pillar drills, circular saws, grinders etc
- Lifting equipment e.g. slings, shackles, lifting eyes, fork lift vehicles, masts, cranes etc
- Hand tools e.g. wrenches, flogging spanners, hammers, saws etc
- Office/ electrical e.g. photocopiers, printers, computers, kettles etc
- Personal Protective Equipment e.g. coveralls, safety boots, safety glasses etc

Control Process;

To comply with Pukka Company requirements for control of work equipment, the following steps must be taken and are described in greater detail in the following procedure:

- Assess the risks
- Define the precautions required
- Ensure adequate provision of operating guidelines, user training and supervision
- Verify that controls are implemented and effective

CONTROL OF HAZARDOUS SUBSTANCES

Purpose:

This document identifies the process used to define and implement controls over chemicals and other substances with the potential to harm people or the environment.

Responsibility:

The Field Operations Manager is responsible for the effective application of this procedure within Pukka Company.

Line Managers and Supervisors are responsible for ensuring hazardous substances are identified, assessed and effective controls are implemented in order to prevent harm to people or the environment.

The HSE Representative will support the implementation of this procedure and perform audit and review of this procedure to ensure implementation and effectiveness.

Procedure:

Introduction:

This procedure defines the step-by-step methodology to be applied in the identification, assessment and control of health risks created by hazardous substances.

Exposure to chemicals or other hazardous substances such as gasses, dusts, fumes and vapour can place the health of people at risk. Pukka Company requires line management to identify the potential for exposure of people to hazardous substances, assess the risks and implement suitable controls to prevent health effects.

The COSHH assessment form is given in Section 11.3.

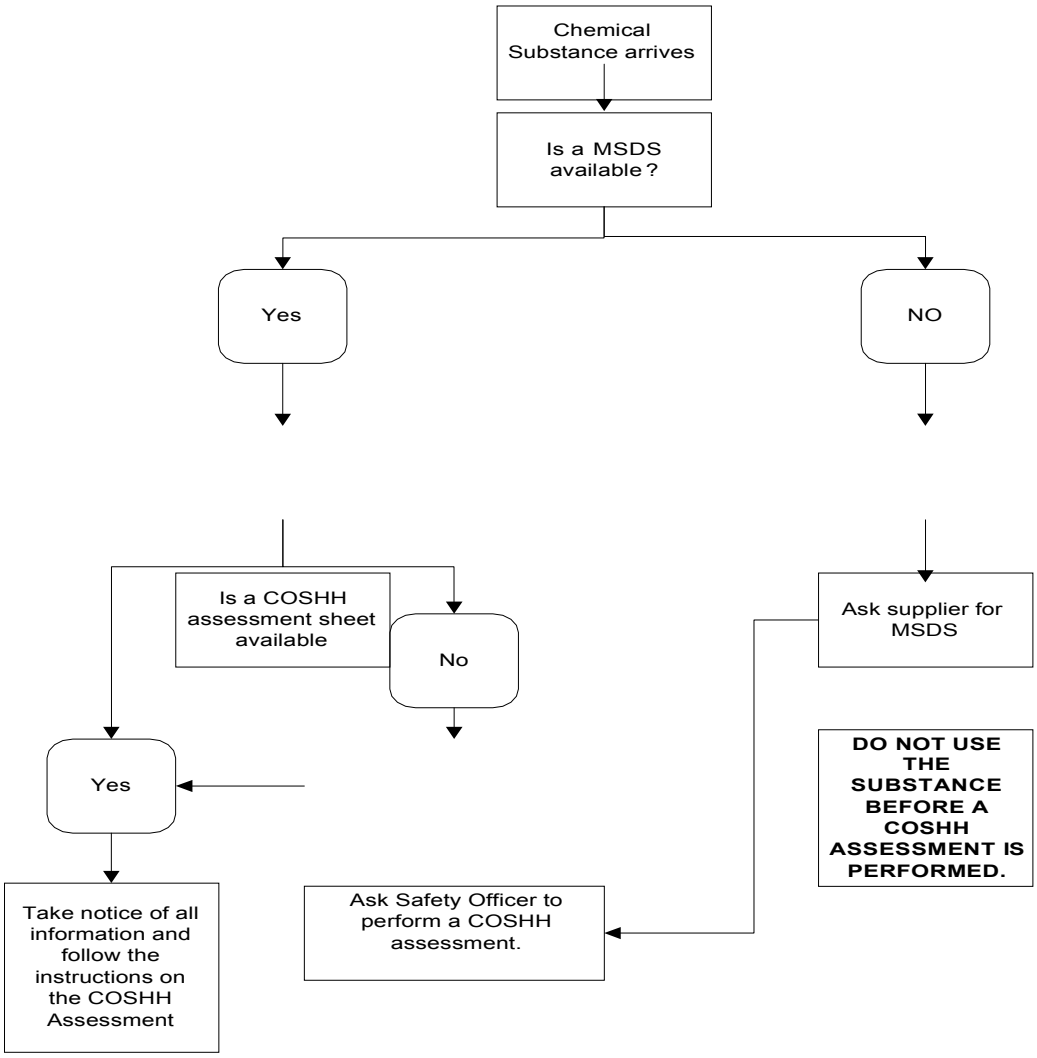
Hazardous Substances:

Hazardous substances include:

- Substances used in the work process (oil, solvent, paint)
- Substances created by the work process (weld fume, exhaust fumes, dust)
- Naturally occurring substances (crude oil, Hydrogen Sulphide, NORM) Hazardous substances are present in most work areas and activities.Effects of hazardous substances may be short term and immediately obvious (such as nausea, dizziness or chemical burn) or long term, taking several years to develop (such as asthma, cancer and liver/ kidney damage).

Control Process:The process for complying with Pukka Company requirements for control of hazardous substances is shown in the following flowchart.

CONTROL OF SUBSTANCES HARMFUL TO HEALTH



The process can be summarised by these five steps:

- Identify hazardous substances
- Assess the risks to health
- Define the precautions required
- Ensure users are informed, trained and supervised
- Verify that controls are implemented and remain effective

Identification of Hazardous Substances:

Management, with support from the HSE Representatives are responsible for identifying hazardous substances likely to be present in the operations under their control.

Identification of substances will include proprietary products, substances generated by the work process and naturally occurring hazardous substances.

In general, proprietary substances that may be hazardous will be identified via product labelling and Material Safety Data Sheets (MSDS). In the absence of product labelling or MSDS, the product should be assumed hazardous and quarantined until the nature of hazards and controls required can be determined.

PERMIT TO WORK

INTRODUCTION:

This document describes the control of all work activities requiring Permits to Work and supplementary certificates. It includes:

- The initial planning stage;
- The application;
- The preparation;
- The commencement;
- The suspension;
- The revalidation;
- The completion;
- The return of the work site to normal operating conditions;
- Work status communication and handover throughout.

The issue of a Permit does not, in itself, make any job safe.

Before any work begins, consideration must be given to all potential hazards and the taking of suitable precautions to minimise risks to those directly or indirectly involved. Those responsible for normal operations and safety are also responsible for implementing the precautions at the work site.

Supervision and management are involved to maintain overall control and co-ordination of all work and simultaneous work activities.

All personnel involved in work activities at all locations are required to act with due regard for their own welfare and the welfare of those that may be affected by their activities.

A safe system of work is a Pukka Company requirement and a legal requirement within Kurdistan Region.

PURPOSE:

The purpose of the Permit to Work is to ensure that:

- The Supervisor, who is responsible for the safety of the Field, is fully aware of all hazardous activities being undertaken within his sphere of responsibility;

- All work activities are co-ordinated to provide a safe working environment for all personnel working in the Field;

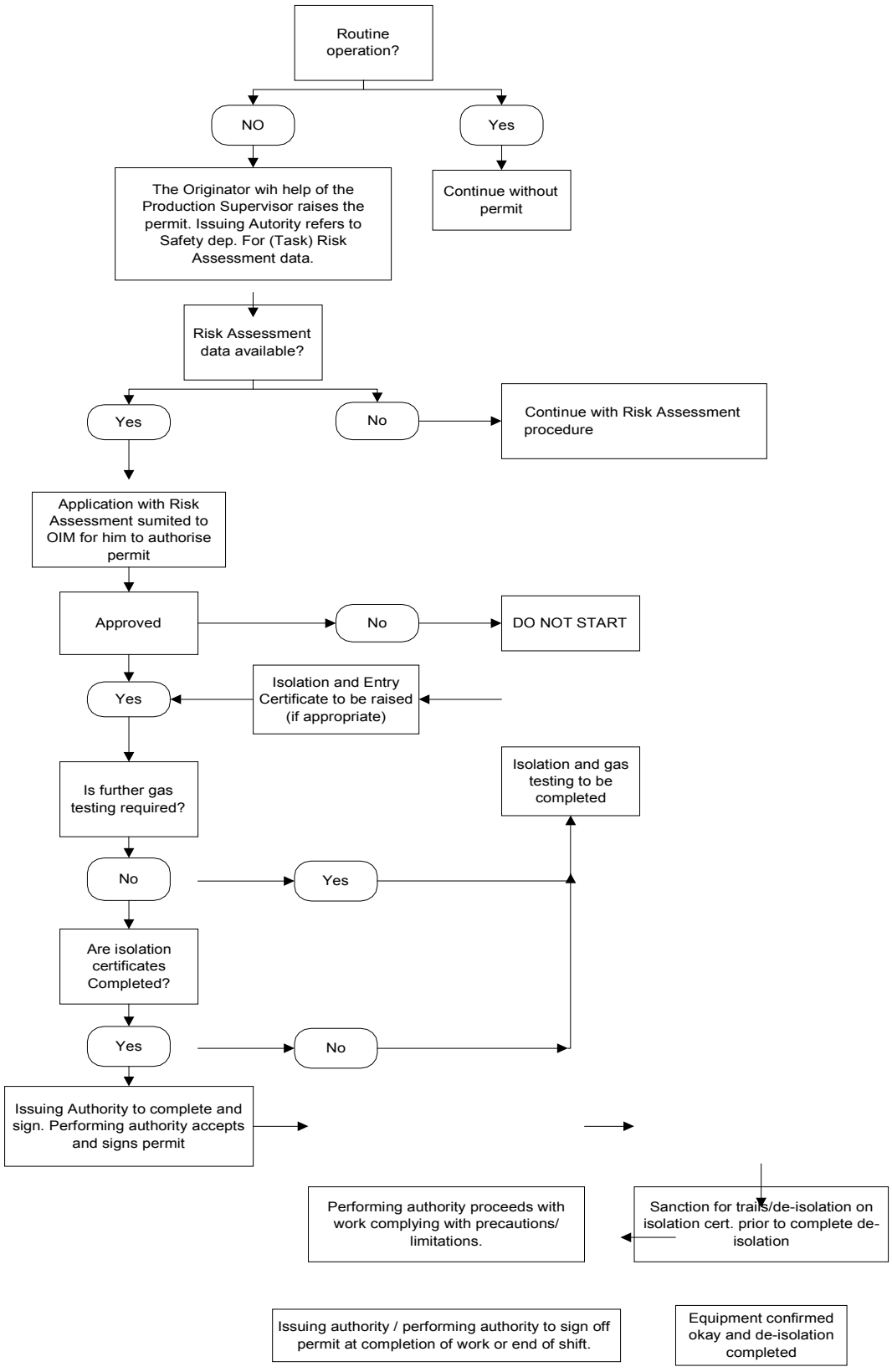
- All work activities, the hazards involved and precautions to be taken are defined prior to the execution of the work;

- The persons carrying out the work are aware of what precautions must be taken to complete the work safely;

- A clear record of the work is being maintained;

- Time limit is placed on the duration of the work.

PERMIT TO WORK FLOWCHART



DEFINITIONS:

The following definitions apply to this procedure.

Permit:	An authorised document approved by management, specifying the required precautions and conditions under which potentially hazardous or interacting activities can take place
Isolation:	A process isolation involves the closing and locking of valves or the physical disconnection of plant from sources of motive power, liquids & gases
Electrical Isolation:	Is the secure disconnection and separation of a circuit, or item of equipment, from every source of energy
Mechanical Isolation:	Is the secure disconnection and separation of a pipeline, pump or vessel from the process. This is achieved by removal of spool pieces, insertion of spades or closing of valves
Isolation Certificate:	This combines in one document a record of all isolations required for a task whether they be mechanical and/or
Confined Space:	An area, such as the inside of a tank or vessel where there is inadequate ventilation to dispel fumes, vapours or gases or to provide sufficient oxygen
Permit Register	A register maintained in the control room identifying the status of all permits
Isolation Certificate Register	A register maintained in the control room identifying the

RESPONSIBILITIES:

No person may be an Issuing Authority and a Performing Authority on the same Permit.

The Installation Manager has overall responsibility for the Permit to Work Procedures in the Field. He is the **'Authorising Authority'**. This person is responsible for ensuring that the permit system is subject to active monitoring. He must approve all applications for permits and must monitor compliance with the Company and Field procedures.

Certain persons may have more than one role within the Permit to Work System. For example, the Installation Manager may act as the Authorising Authority **and** the Issuing Authority if the usual Issuing Authority (Site Supervisor) is carrying out the work.

Also, the Performing Authority may be a supervisor in charge of a work group and also one of the persons performing the work.

The 'Issuing Authority' is the senior person on shift responsible for normal production operations i.e. the Site Supervisor.

This position is responsible to the Site Manager for the control and safety of all activities within his area, including the issue of permits.

The Issuing Authority is responsible for ensuring that all potential hazards are identified, the risks assessed and that the precautions that are specified to control those risks are put in place before the work commences.

The Issuing Authority must sign all Permits at the time of issue and / or revalidation.

The 'Originator' is the person who will perform the work or requires the work to be performed.

The Originator must give a description of the proposed work in detail, the location, the equipment description, and tag numbers together with any potential hazards and the precautions that need to be taken.

The originator must print his name on the Permit form and that of the Performing Authorities. He will also liaise with the other Supervisors during the planning of the work, as required.

'The Performing Authority' is the senior person in charge of work controlled by a permit. He is responsible for safety at the work site.

The Performing Authority may be the sole person doing the job or he may be the supervisor of several persons on the worksite.

The Performing Authority shall ensure that he is aware of all specified precautions, conditions and emergency procedures before accepting responsibility for individual Permits. He must sign the Permit to confirm acceptance of the Permit conditions.

The Performing Authority must ensure that all persons involved with the work are aware of the requirements and their individual responsibilities and that they sign the reverse of Copy 2 of the Permit (work site copy). By signing this form they acknowledge that they have read and understood the requirements and the limitations of the Permit.

The Safety Officer is the 'Audit Authority' and is responsible for auditing compliance with this Permit System Procedure. He will also have input into the risk assessments to assist with defining the precautions required to control risk.

The Safety Officer will also ensure that precautions and limitations stated on the permit are being complied with.

A 'Firewatcher' must be present for hot work jobs such as welding and burning. He will be advised of his responsibilities by the Issuing Authority and the Performing Authority, and acknowledge his responsibilities by signing the back of copy 2 of the permit.

The Firewatcher will follow a checklist which helps ensure that flammable materials are cleared away from the work area, drains remain covered, sparks and welding splatter are contained, firefighting equipment is available and ready for immediate use. He must ensure that the alarm is raised immediately where a fire or gas release occurs in the area.

The Firewatcher must have completed a recognised course and be included on the authorised list displayed at the Permit desk in the control room.

REQUIREMENT:

A permit is normally required for non-routine and maintenance work. It is the work to be performed that governs the need for a permit, not the person(s) doing the work.

Permits are supported by supplementary certificates and instructions defining specific requirements

i.e. Isolation Certificates, Risk Assessments & Vessel Entry Certificates. These should be referenced and copies attached to the permit, where applicable.

VALIDITY:

Permits are valid for up to twelve hours and must be revalidated by the Issuing Authority. Permits can be revalidated up to thirteen times after first issue and can therefore run for a maximum of seven days.

Where the work must continue beyond the period of approval, the invalid (expired) permit shall be cancelled leaving all precautions and isolations in place and an application must be made for a new Permit.

A permit is valid only for the work and the work period specified and must be suspended and revalidated at each shift change.

Where the work scope changes the existing Permit may be either cancelled and a new Permit application generated or an additional Permit may be raised to control the work scope not covered by the original permit.

SHIFT AND PERSONAL CHANGES:

At crew change, the oncoming Site Manager and Issuing Authority shall countersign the copy 1 of all active Permits to acknowledge that they are aware of the current permit status.

RETENTION OF RECORDS

Completed Permits, Certificates, Registers and Logbooks are to be kept for a minimum period of one year.

PERMITS AND CERTIFICATES

Two types of Permit are used. Permits control a specific job and type of activity and should be treated with an equal level of care and attention to detail. The Permit to work Form is given at the end of this Section.

Hot Work Permit:

A Hot Work Permit is required for work involving the use of a flame or other source of ignition e.g. Electrical Welding, Flame cutting, Grinding and use of non-certified electrical equipment (power tools etc).

Cold Work Permit:

A Cold Work Permit is required for work not involving hot work, but is potentially hazardous e.g. Pressure testing plant & equipment, disconnection or opening up of any pipeline or vessel, chemical cleaning, erection/dismantling of scaffold, any non-routine activity or any activity which requires specific control measures to be taken to ensure safety.

Entry Certificate: (Supplied by the Client)

An Entry Certificate must be issued when it is necessary for personnel to enter vessels, tanks and enclosed void spaces. Adequate safety precautions must be taken to prevent anyone who enters these confined spaces from suffering harm or injury.

The purpose of the Certificate is to certify the conditions inside the confined space and stipulate the level of precautions while work is being carried out. The Entry certificates do not permit any work to be carried out. The appropriate Permit to Work must be raised before any task can be undertaken.

Isolation Certificate:

To make equipment safe under a Permit to Work Procedure, potentially hazardous plant, equipment and systems need to be isolated (Electrical and/or Mechanical/Process). Where Isolations are required an Isolation Certificate must be completed. The Isolation Certificate must be cross- referenced to the initial permit, and subsequent permits that utilise the same isolations. The Issuing Authority subsequently registers all Isolation Certificates in the control room.

ADMINISTRATION AND PERMIT PROCESS:

Application and Approval:

The Originator raises an application for a Permit, using a Hot work or Cold work Permit form. He includes a description of the work, the location, and the equipment description and tag number.

In consultation with the Issuing Authority (Site Supervisor) he identifies potential hazards and all precautions. Risk assessment data and or Job Safety Analyses can be obtained from the Safety Officer. A specific risk assessment may be required and this should be noted on the permit.

The Originator prints his name on the Permit form and that of the Performing Authority; he then submits it to the Authorising Authority (Site Manager) for approval.

The Installation Manager reviews the Permit application and ensures that all potential hazards have been identified and precautions specified.

Where necessary the Site Manager may specify additional precautions or even reject the application and request further information. Where required the Site Manager will ask for a Risk Assessment to be carried out and define whom should be involved in this assessment.

Once satisfied that all the hazards have been identified, the risks assessed and the risk control measures included on, or with, the permit the Site Manager will sign, time and date the permit. He passes it to the Site Supervisor. It has now been authorised.

The work cannot commence until the permit is issued.

Preparation and Commencement:

The Issuing Authority is responsible for ensuring that all specified precautions are defined, implemented and maintained in place throughout the period that the work shall take place.

The Issuing Authority shall ensure all potential hazards are identified and suitable precautions put in place. He is responsible for the specification of process isolations.

A Permit shall only be issued when all defined isolations are fully implemented and the responsible Isolators have completed the applicable Isolation Certificates. All requirements to inhibit the Safety Systems must be registered in the control room log and be specified on the Permit with all the necessary additional precautions implemented (e.g. run out fire hoses etc.).

When all specified precautions have been implemented the Issuing Authority must verify this in person and ensure that it is safe for the work to proceed.

The Issuing Authority cross-references all ongoing Permits that are affected by (or affect) the work, adding Permits numbers in the Preparation box, 'Other affected work' section.

When the work site precautions have been verified and it is safe to commence the work, the Issuing Authority issues the Permit to the Performing Authority printing name, time, date and adding his signature in the Issue box, Issuing Authority section.

Before a Hot Work Permit or Entry Permit is issued, an initial gas test must be made at the work site. The Gas Tester must complete the initial gas test details in the Preparation box, Initial Gas Test section, printing date, time and adding signature.

Where emergency procedures are indicated on the Permit, the Issuing Authority shall ensure these are read by the Performing Authority and attached to Copy 2 of the permit.

After reading the conditions and precautions of the permit the Performing Authority accepts responsibility for the detailed work and confirms that he shall notify the Issuing Authority upon completion or suspension of the work by printing the date and time and adding his signature in the Acceptance box.

The Issuing Authority ensures the permit is registered in the Permit Register held in the control room. The Permit copies are distributed as follows:

Copy 1 – Retained by the Issuing Authority and placed in the active tray. Copy 2 – Displayed at the work site by the Performing Authority.

The Issuing Authority retains the Isolation Certificates in the Site Main Office. Where repeat gas tests are required during the performance of the work the Repeat Gas Test Log is maintained with Copy 1 at the Site Office.

If the Performing Authority is not the person carrying out the work scope then he should explain the permit conditions to all personnel prior to commencing work. He must ensure that all signatures are added to the reverse side of Copy 2 of the permit.

Should any person working on the permit consider that conditions are such that it is unsafe to continue they should immediately stop work, make the work site safe and inform the Performing Authority or the Issuing Authority.

The Issuing Authority may withdraw a permit at any time should the specified precautions and conditions be breached, become invalid or operational safety be compromised.

Suspension:

At the end of (or during) the shift, the Performing Authority must ensure that the work site is left safe and tidy and all personnel and tools have been withdrawn.

Copy 2 of the permit is given to the Issuing Authority and work status information communicated.

The Performing Authority and Issuing Authority confirm suspension, printing date and time and adding signatures in the Suspend/Revalidate box.

The Issuing Authority ensures all copies of the permit are placed in the Suspended tray in the control room. All applicable Isolations and Isolation Certificates remain in place during the suspension of the permit.

Where the Suspend / Revalidate box has no further space for signatures, the permit expiry date has not been reached and the work is to continue the Issuing Authority prints the date and time and adds his signature to the permit Continuation box. A new permit is raised, duplicating the original precautions and conditions ensuring all cross-references are made on supporting certificates.

Revalidation:

Where work has been suspended and is to be recommenced by the following shift, the Issuing Authority shall ensure that the Permit and specified precautions and conditions are still valid. Where appropriate this shall involve a work site visit by the Issuing Authority or suitable delegate. Isolation security must also be verified.

To reactivate a suspended permit the Performing Authority and Issuing Authority confirm revalidation, printing date and time and adding their signatures in the Suspend / Revalidate box.

Work Delayed and Permit Invalid:

Where the work cannot be resumed before the permit expiry, the Performing Authority must ensure that the site is left safe and all personnel are withdrawn.

Copy 2 of the Permit is given to the Issuing Authority by the Performing Authority and work status information communicated. The Performing Authority confirms that the work has been delayed, all men have been withdrawn, and all plant and equipment affected by the work has been left in a safe condition. He then prints the date and time, ticking the 'Delayed' box and adding signature in the Clearance box.

The Issuing Authority then has the site checked, prints date and time and adds his signature in the Cancellation box.

Where normal operations may not be resumed due to Isolations remaining the Issuing Authority identifies the Isolation Certificate & Register as 'Long Term'. The permit is also ticked in the 'LT Isol' section and initialled.

Any new permit raised to complete the work must identify the Isolation's status, specified precautions and conditions, and all new requirements.

Completion:

After the work defined on the permit is complete, the Performing Authority must ensure that the work site is thoroughly cleared, is safe and tidy, that equipment is removed, and the workforce withdrawn. Copy 2 of the Permit is given to the Issuing Authority by the Performing Authority and work status information communicated.

The Performing Authority confirms that the work has been completed, all men have been withdrawn, and all plant and equipment affected by the work has been left in a safe condition. He then prints the date and time, ticking the 'Completed' box and adding signature in the Clearance box.

The Issuing Authority must then check the site, print date and time and add his signature in the Cancellation box.

When the Cancellation box is signed and normal operations may be resumed, the Isolation Certificate is checked to review Isolation and Permit cross-reference status. When approved by the Issuing Authority, de-isolation may take place. Individual de-isolations are recorded on the Isolation Certificate and signed off.

The permit register is updated to indicate the cancelled status.

EMERGENCY ACTIONS:

Whenever the General Alarm sounds (except for announced testing activities), all permits are automatically suspended. The work site should be made safe before personnel proceed to their muster points.

Work must not recommence until personnel are instructed to do so by the Issuing Authority. Occasionally, a situation may occur where any delay in carrying out emergency work could create a risk to life.

In such cases only, the Issuing Authority may give verbal approval for work to start without a permit being prepared. Where practicable the Issuing Authority must endeavour to obtain the agreement of the Site Manager for such work.

ACTIVE MONITORING:

Any procedures written are only as good as the personnel completing the recognised assignments. In order to prevent misinterpretation or failures of the procedures it is the duty of Safety Officer, the Issuing Authority and the Site Manager to regularly audit and monitor the system. Monitoring can involve direct observation and supervision, routine inspections and spot checks.

PERMIT TO WORK FORM

SECTION 1	ID No:	Job No:	Permit To Work is required for:	Start Time:	Finish Time:

☐ Vessel Work	☐ Training/Yard Project Work	☐ Pressure Tests	☐ Sub-contractor Work	☐ Working at heights
☐ Electrical Work	☐ Commisioning New Units	☐ Hot Work	☐ Confined Spaces	☐ Others

Location: …….. Area: ……

Orginator: …….. Department: ……

SECTION 2 Description of work or task and risks involved (a Risk Assessment or TRAC may be attached):

SECTION 3 A range of PPE to be used and precautions to be taken are listed below (please tick the boxes that are required to control the risks involved)

PPE (Personal Protective Equipment) – Please tick where use is intended (write in additional PPE at bottom of column)

☐ Hard hat/Helmet	☐ Coveralls	☐ Boots/Wellies	☐ Gloves	☐ Respirator (P2) etc
☐ Face shield/Visor	☐ Chemical coveralls	☐ Safety Harness	☐ Glasses/Goggles	☐ Breathing Apparatus
☐ Ear Plugs/Muffs	☐ Gauntlets	☐ Welding Helmet	☐ Dust Mask	

PRECAUTIONS - Please tick where the precaution is intended to be taken (write in additional precautions at bottom of column)

☐ Procedures / Work Instructions	☐ Lifting Operations Plan	☐ COSHH Assessments
☐ Trained/Competent Personnel Involved	☐ Communication Aids	☐ Isolate Underground Services
☐ Read Risk Assessment	☐ Purging Of Pressure (pre & post) **add details below**	☐ Electrically Isolated
☐ Toolbox Talk / TRAC	☐ Flush with water	☐ Vehicle Isolation (battery/diesel)
☐ Clear & Planned Escape Route	☐ Ventilation	☐ Electrically Earthed
☐ Read Plans (piping, wiring, comms etc)	☐ Drained and Liquid/Gas Free	☐ Non-sparking Tools
☐ Emergency Response Procedure	☐ Atmospheric Tests (**add details below**)	☐ Anti-static Footwear
☐ Tannoy Announcement	☐ Understand Atmospheric Test Freq.	☐ Stand-by Fire Fighting Equipment
☐ First Aid Kit (available near site)	☐ 1 Stand-by Rescuer (dedicated)	☐ Fire Blankets
☐ Torch / Light	☐ Lifeline	☐ Fire Watch
☐ Warning Notices & Access Barriers	☐ Lifeline Winching Equipment	☐ Evacuation Of Work Areas
☐ Check Equipment Is Working	☐ Reviving Apparatus	

Atmospheric Testing (tick as applicable)

Test	Permitted If	Results/Comments
☐ Oxygen	>19.5 (<20.9 = BA)	
☐ H_2S	<10ppm	
☐ Hydrocarbon	<1% LEL (>25% re-purge)	
☐ CO	25% re-purge	
☐ Other		

Gas Detector No: | Date Of Calibration: | Time Of Test:

Pressure Testing (tick as applicable)

Test Medium	Details/Comments
☐ Water	
☐ Hydraulic Oil	
☐ Nitrogen	
☐ Other (specify)	

Test Duration: | Max Pressure:

SECTION 4 **Requisition** (Supervisor): I require approval of this Work Permit based on information above

JOB SUPERVISOR (TRAINED/COMPETENT PERSON):

Name (PRINT): _____

Signature: _____

Date: Time:

SECTION 5 **Authorisation**: I have checked Control Measures & consider it safe to perform tasks

AUTHORISED PERSON:

Name (PRINT): _____

Signature: _____

Date: Time: Tel No:

SECTION 6 The following is a record of approval by the "AUTHORISED PERSON" to allow an extension of the Work Permit where it is handled by two different shifts (could be a different Supervisor)

EXTENTION LOG

Date:	Start Time:	Finish Time:	Signed:	Date:	Start Time:	Finish Time:	Signed:

SECTION 7 CANCELLATION: Work detailed above has been completed & controls featured above are no longer necessary

JOB SUPERVISOR (TRAINED/COMPETENT PERSON):				AUTHORISED PERSON:			
Date:	Finish Time:	Name:	Signed:	Date:	Finish Time:	Name:	Signed:

HSE TRAINING

Purpose:

The purpose of this procedure is to control the provision of training for Pukka Company personnel or for their clients.

Responsibility:

It is the responsibility of the Field Operations Manager, supported by department staff and the HSE Manager/Officers to provide training to Pukka Company and client's staff. Relevant Department Heads are responsible for providing on-the-job training and for identifying and making arrangements for additional training. HSE Department/Representative and Relevant Department Heads have the responsibility to provide training either formally or informally at base or work location, in house or externally to suit the employee's individual needs.

The HSE representative and the Human Resources Department are responsible for the safe retention and the update of training records of employees. All training records will be retained in the personnel training files.

Procedures:

All Courses:

The Field Operations Manager supported by departmental staff, HSE Representatives provides relevant high quality training to all attendees.

All attendees shall receive comprehensive course manuals covering all aspects of the course, including quality Environment and occupational Health and Safety.

The content of each course shall take full account of all safety regulations, including current oil industry legislation, environmental legislation and Pukka Company.

When appropriate, course certificates shall be issued and staff/ attendees shall be qualified by examination.

In-House:

All new employees shall receive an introduction to the HSE Management System

To ensure that all personnel is aware of the (potential) HSE effect of their work activities and the importance of continuous improvement adequate training and guidance on HSE issues will be given by means of basic HSE courses.

Job compositions must meet customer's specified and implied requirements.

All personnel should have received on site a safety briefing prior to commencing operations. The Supervisor has been briefed fully in all aspects of the planned operations.

Employees with relevant HSE tasks are competent by means of education, training courses and /or experience.

Types of Courses and Details:

Full information on the types and details of courses presented by Pukka Company can be found by referring to the work location Training Needs Analysis. The Training Needs Analysis Form is given in Section 11.5. Training courses as a minimum shall be developed for the following

- Crane Operations
- Fork lift Operations
- Site Induction
- Site Rules and Regulations
- Basic Health and Safety Awareness
- Risk Assessment Training
- Manual Handling Training
- Hazardous Substances Training
- Occupation Health and Hygiene Training
- Emergency Response Training
- Defensive Driving / Commentary Drives

PERSONAL PROTECTIVE EQUIPMENT (PPE)

The selection of appropriate PPE is determined by worksite risk assessments and COSHH assessments.

General

All persons engaged in operations where they are exposed to risk of injury or disease shall use suitable protective clothing and equipment. Such clothing and equipment shall be determined following appropriate risk assessments and will include but not be limited to:

- Safety helmets
- Safety boots
- Eye protection, welding masks, goggles(as required by pre task)
- Ear defenders
- Respirators
- Gloves
- Overalls and protective covering
- Safety lines and harnesses

Working Dress:

At the work site all persons shall wear overalls together with wet weather clothing if appropriate, safety helmet and safety footwear.

Working clothes should be clean and properly fastened with cuffs (where fitted) secured or sleeves rolled up to prevent loose clothing becoming caught in moving or rotating machinery.

Clothes contaminated with oil, chemicals or toxic substances may be a fire hazard or lead to skin disease and should be laundered or disposed of.

Long hair should be clean and tied up for safety. Rings, chains or other jewellery should not be worn at work.

Some sites due to exposure of H2S may require a Clean Shaving Policy

Restricted Articles:

Personnel shall not take dangerous items on to Pukka Company without explicit approval of the Field Manager. Such items include, but are not limited to:

- Alcohol
- Drugs, with the exception of drugs prescribed by a qualified doctor, and approved by Pukka Company Doctor
- Medical Consultant as not impairing the person's ability to work safely
- Firearms, knives or other offensive weapons
- Cigarette lighters or matches shall not be taken into any hazardous areas.
- Personal jewellery (e.g. rings, bracelets, necklaces) shall not be worn in the workplace if there is a danger that they may be trapped in rotating or moving machinery.

Personal Protective Equipment:

General Requirements:

Personal Protective Equipment (PPE) is defined as equipment designed to be worn by personnel to protect themselves against work related hazards that may endanger their health or safety.

The hazard posed in any particular work activity shall be assessed, and adequate PPE selected in accordance with the following criteria:

- Gives protection against risk(s) without in itself leading to any increased risk.
- Is suitable for the personnel, including correct fitting.
- Is compatible with the work activity.
- Complies with a recognised national or international standard of design or construction defined in each of the following sections pertaining to PPE.
- Is compatible with the work activity.

All employees, both Pukka Company and Contractor, shall be provided with the necessary PPE, as defined above, for their particular work activity. They shall also be provided with the necessary instruction and training in its correct use.

All employees shall be held responsible for proper care and use of any PPE supplied to them. Employers shall replace, free of charge to the employee, any PPE which becomes deficient in any way through normal work usage or wear and tear, such that at all times the worker has adequate protection. Normal wear and tear shall include the period of effective use specified by the manufacture and requirements of basic hygiene standards.

Supervisors of every worksite shall be responsible for ensuring that all personnel on site are trained in the use of, provided with, and wearing all PPE required for the particular activity and environment of the work. Personnel not properly equipped, for whatever reason, shall not start or continue working.

Supervisors are accountable for ensuring the safety of their workers and must be familiar with the requirements specified below:

- Every supervisor shall ensure, as far as it is reasonably practicable for him to do so, the health and safety of:
- Workers engaged in work under his supervision;
- Those workers not engaged in the work of that supervisor but present at the worksite at which that work is being carried out.
- Every Worker shall:
- Take reasonable care to protect the health and safety of himself and of other workers present while he is working and
- Co-operate with his supervisor for the purposes of protecting the health and safety of himself, and other workers present at the work site.

A worker shall not use personal protective equipment that is not in a condition to perform the function for which it was designed.

Safety Helmets:

Safety helmets must be worn by all personnel when outside the living quarters, control rooms, offices, laboratories and workshops (except when approaching and boarding a helicopter if required)

Where a danger of injury to a worker's head exists or may exist, then his site supervisor shall ensure that the worker wears a safety helmet that conforms to:

- British Standard BS 5240: Part 1 : 1987, or
- ANSI Z89.1 1986.

Metal safety helmets shall not be worn because they are excellent conductors of electricity, do not resist penetration, and (in the case of aluminium) are ignition hazards.

Chin straps must be fitted and used when working in exposed positions, high winds where the wearing of industrial protective headgear is impractical during a work process,

- The supervisor shall ensure that during the work process adequate alternative means of protecting the worker's head are in place.
- The worker may be permitted by the supervisor to conduct the work without wearing the protective headgear provided that he reverts to wearing it, if the danger persists, immediately after completing that work process.

Safety Boots:

Safety boots of approved design with a covered steel toe cap and non-skid, oil resistant soles must be worn when working outside the living quarters or office areas. Footwear with studs nails or exposed steel parts shall not be worn.

Rubber "Wellington" boots with protective toe caps shall be worn when using chemicals.

Eye Protection:

In the Field process areas and where there is a danger of injury to or irritation of a worker's eyes, the supervisor shall ensure that the worker is equipped with properly fitting eye protective equipment that is appropriate for the hazard.

Assistance for determining appropriate eye protective equipment can be obtained from British Standard BS 7028:1988 "Selection, use and maintenance of eye protection for industrial and other uses.

Workers shall use the eye protective equipment provided by their supervisor.
All spectacle type eye protection shall be manufactured in accordance with BS 2092 "Eye protectors for industrial and non-industrial use", or American National Standard for Occupational and Educational Eye and Face Protection, Z87.1-1968.

The necessity for wearing eye protection for any work activity shall be indicated at the worksite by prominent signs in appropriate Language. Visual representation of the type of protection needed shall also be displayed.

In general, eye and face protection worn frequently shall be issued on a personal basis. Exceptions to this would be in the case of fixed grinding, drilling or other rotating machines used by multiple users in a workshop. In such cases, it is recommended to leave suitable eye protection adjacent to the machine, in addition to any eye protection issued on a personal basis to workers in the workshop. Safety sunglasses should be worn in strong sun glare to reduce eyestrain and fatigue.
Sunglasses shall be manufactured in accordance with BS 2724:1987.

Optically corrective eye protection shall be provided to Pukka Company personnel, following medical assessment and approval when the employee wears spectacles or contact lenses in case lenses have to be removed while working for normal working activities.
All goggle and face screen type eye protection shall be manufactured in accordance with BS 2092 "Eye protectors for industrial and non-industrial use" or American National Standard for Occupational and Educational Eye and Face Protection, Z87.1-1968.
Where there is a hazard to a worker's eyes that may occur during welding processes, his supervisor shall ensure that the worker is equipped with properly fitting eye and face protective equipment that conforms to:

- BS 1542 "Specification for equipment for eye, face and neck protection against non-ionising radiation arising during welding and similar operations", or
- BS 679 "Specification for filters, cover lenses and backing lenses for use during welding and similar operations".

A worker shall not perform electric arc welding when another worker may be exposed to radiation from the arc unless the other worker is wearing suitable eye protection or is protected by a screen. Face and neck coverings that may restrict a worker's vision shall not be used in exposed operations. Only face coverings that do not obstruct or restrict a worker's vision may be used. Face coverings shall be securely fastened and of a construction that does not present a hazard to the worker.

Hearing Protection (Ear Defenders)

Approved hearing protection shall be worn at drill sites or in process areas where noise levels of 80 dB(A) or above are present.

Where sound levels exceed 85 dB(A), supervisors shall ensure that the worker is equipped with properly fitting hearing protective equipment that is appropriate for the hazard.

Assistance for determining the appropriate type of hearing protective equipment can be obtained from British Standard BS EN 458 : 1994 "Hearing Protectors - Recommendations for selection, use, care and maintenance - Guidance document".

Hearing protective equipment shall conform to:

- BS EN 352: 1992 "Hearing protectors - Safety requirements and testing Part 1 Ear Muffs, or
- BS EN 352/2: 1992 "Hearing protectors - Safety requirements and testing Part 2 Ear Plugs.

Respiratory Protective Equipment (RPE) Dust Masks:

Dust masks are designed to provide protection against large particulate materials of low health hazard. They are not subject to specifications regarding standards of performance.

Air Purifying Respirators (Filter Masks)

Filter masks for use in the Field by Pukka Company personnel and contractors shall meet BS 2091 "Specification for Respirators for Protection against Harmful Dusts, Gases and Scheduled Agricultural Chemicals".

Filter masks shall not be used for protection in areas where H_2S is present in the atmosphere.

Self-Contained Breathing Apparatus (SCBA)

Where airborne contaminants exceed levels safe for air purifying respirators (filter masks), or

where there is an atmosphere deficient of oxygen or where the atmosphere is immediately dangerous to life or health, an SCBA or Supplied Air Breathing Apparatus shall be provided.

Self-contained breathing apparatus is used by Export in the Field and this conforms to BS 4667 Part 2 "Open Circuit Breathing Apparatus".

Supplied Air Breathing Apparatus (SABA)

Supplied Air Breathing Apparatus is defined as an apparatus that provides a supply of air to the user via a hose or airline.

Supplied Air Breathing Apparatus for use in the Field shall conform to BS 4667 Part 3 "Fresh Air Hose and Compressed Air Line Breathing Apparatus

In situations where a contractor's respiratory protective equipment is required to be compatible with Pukka Company equipment, any modifications or adaptations shall be constructed so as not to void the Original Equipment Manufacturer's approvals.

Emergency Escape Breathing Apparatus (Escape Set)

Emergency Escape Breathing Apparatus (Escape Set) for use in the Field must conform to British Standard BS 4667 Part 4 "Specification for Open Circuit Escape Breathing Apparatus".

Qualifications of Maintenance Personnel:

Personnel designated as Respiratory Protective Equipment (RPE) maintenance personnel shall be trained and certified by the manufacturer or his appointed agent in the maintenance and servicing of the equipment that they are expected to maintain. No attempt should be made to replace components or make adjustment or make repairs beyond the manufacturer's recommendations.

Records of maintenance for all RPE shall be maintained and be available for audit or inspection on request.

Air Purity (Quality)

Air being supplied to the wearer shall not contain impurities in excess of the following limits:

Carbon Monoxide	5 parts per million (5.5 mg/m)
Carbon Dioxide	500 parts per million (900 mg/m)
Oil Mist	0.5 mg/m
Odour	The air must be free from all odour and contamination by dust, dirt or metallic particles. The air should not contain any other toxic or irritating constituents

Records of test dates and test results shall be available for audit or inspection upon request.

Fitness of SCBA or SABA Users:

From a health perspective and to assure safety, it is important that the wearer is capable of using SCBA/SABA properly, which requires:

Good facial fit of the face mask to the face. The standard of fit shall be demonstrated by qualitative or quantitative test procedures. Difficulty is sometimes encountered in fitting masks to workers with small faces, those who wear dentures or have skin problems that may interfere with the mask to face seal. Hair may also interfere with the mask to face seal.

The Site Medic shall determine medical fitness of SCBA/SABA users.

Hair:

Hair (facial or head) in contact with the seal of RPE will impair the efficiency of that seal and thus constitute an avoidable hazard to the safety of the wearer. Personnel who may be required to wear RPE shall therefore maintain the area of the seal free from hair.

Training of Users:

Personnel as users of RPE shall be trained in the usage of that RPE. Proof of training is required.

Gloves:

Gloves shall be worn to provide hand protection appropriate to the hazard or potential hazard. Rubber or plastic gloves shall be worn when handling caustic chemicals or other skin irritants.

Leather or leather palmed gloves shall be worn when working with hot equipment where regular gloves are inadequate.

Gauntlet gloves shall be worn where additional protection of the forearms is required.

Overalls and Protective Covering:

Overalls and other protective covering as appropriate shall be worn for work outside the accommodation or office areas.

Appropriate rubber or plastic clothing shall be worn when working with caustic or corrosive substances.

Clothing made from nylon or similar material should not be worn as they build up a static charge, are highly flammable and melt with heat.

Safety Lines and Safety Harness:

A safety line and harness shall be worn when working:

- At heights over 2 meters or other places where there is a danger from falling (except where other means of protection against falls has been provided).

- In enclosed spaces where air may be contaminated or oxygen deficient or where rescue could be difficult in the event of injury.

- Where there is a risk of falling harnesses must be used in conjunction with an inertia real safety line.

- If the client has a mandatory requirement

CONTROL OF CONTRACTORS ON PUKKA COMPANY PREMISES

PURPOSE:

The purpose of this HSE Procedure is to provide clear guidance on the acceptable health, safety and environmental standards required to be met by the Pukka Company or any of its associated organisations. The following procedural requirements shall be implemented at all times while the Contractor is engaged in activities on sites owned, managed or controlled by the Pukka Company.

SCOPE

This Procedure applies to Contractors who are required to undertake any activity while working on any properties or sites owned or managed by the Pukka Company or any work-site managed or controlled by the Pukka Company operations.

DEFINITIONS:

Pukka Company:

Pukka Company shall mean the Pukka Company or any Company that forms a part of the Pukka Company.

Pukka Company Employee:

Any person having a contract of employment with, or contract for the provision of a service to, any business unit associated with any operation of the Pukka Company.

Contractor:

Contractor or subcontractor shall mean any firm, company, or person, carrying outwork on premises owned by or under the control of Pukka Company.

Responsible Person (RP):

Responsible Person (RP) shall refer to the person nominated by the Company who is responsible for liaising with the Contractor and to whom the Contractor reports. If that person is not available the Contractor will report to a suitable deputy or alternative

RESPONSIBILITIES:

Responsible Person:

It is the responsibility of the RP to ensure that the Contractor engaged to carry out the activities associated with any specific Purchase Requisition, or Instruction, has been provided with and fully understands the requirements of the Instructions.

Contractors:

It is the responsibility of the Contractor to ensure that all their employees and sub-contractors fully understand requirements of this Procedure. Personnel assigned to work on Pukka Company premises or on sites governed by this Procedure and associated instructions shall be made fully aware of their resource requirements and responsibilities before entering onto site, and before commencing operations

HSE Department:

The HSE Department is responsible for the registration of Safety Critical Contractors onto the Approved Permit to Work Contractors Register.

During the approval process competence and training systems shall be evaluated for suitability by the HSE Department.

The HSE Department is responsible for ensuring the requirements of Risk Assessment and TRAC (Toolbox Risk Assessment Card) have been satisfied prior to giving authorisation to begin work on an Pukka Company sites.

REGULATIONS:

General Application of the Instructions:

This Procedure shall be regarded as stating the minimum standards acceptable to Pukka Company. Additional local rules and conditions may apply in order to address Area or local situations.

Such rules and conditions will be in addition to and not instead of the requirements of this Procedure.

The Contractor shall not carry out any practice or process that after risk assessment is likely to cause a health hazard or danger to persons or property. Pukka Company requires the Pukka Company Site Rules and any applicable Procedure to be taken into account by Contractors during the planning, and all subsequent stages, of the work.

The Contractor shall in all matters arising in the performance of the Contract conform at his own expense with all HSE legislative requirements and Pukka Company Site Rules. This shall include but not be limited to any relevant legal requirement applicable to the Areas within the Kurdistan Region such as Country Law and local bye-laws etc. that is applicable to the site or premises concerned.

Contractors must inform the RP concerned prior to commencing any work on Pukka Company premises. This requirement applies to:

Any work which involves the use of any process, material, or method which may affect the Health or Safety of Pukka Company Employees or others; or;

Any activity which may lead to environmental damage due to spillage or discharge to drains or sewers, to atmosphere, or by any other unplanned or unauthorised discharge.

The requirements include, in particular, arrangement for the notification of the presence or storage of, or work involving the use of, chemicals, asbestos, toxic substances, explosives, or highly flammable substances at any location within Pukka Company premises.

Any such situations must be advised in accordance with Permit to Work requirements.

General Safety Requirements:

Contractors must ensure that:

- The local Pukka Company Supervisors are informed of the commencement and duration of any noisy operation in the areas of intended work-site;
- That pneumatic hammers, drills, etc., are fitted with approved muff silencers and that the work area is effectively screened to minimise noise propagation;
- All engine driven equipment compressors, generators, etc., are placed in positions where operation causes minimum noise and fume interference with local work areas;
- When welding operations are being carried out within Pukka Company premises adequate screens must be provided and maintained in effective positions to prevent persons being exposed to harmful rays.
- Contractor's employees must at all times carry out their work with due consideration of the safety and health of themselves and of others in the vicinity; and,
- When work has been completed all equipment must be removed and the site left in a clean, tidy and safe condition, failure to do so may result in refusal to close-out Work Permit and delay payment.

Work At Height:

In the case of operations in which it is required to work above floor level Contractors must ensure that:

- Work must not commence over or in proximity to working areas, gangways or roads in use by Pukka Group employees until precautions have been taken to ensure the health & safety of all persons and property;
- All scaffolding, or other access equipment, must be secure and safe;
- Materials and equipment must not be dropped, thrown down from or thrown up to scaffolds, trestles, or any position above ground level;
- Before leaving work all loose tools and materials must be secured or brought to ground, and any suspended loads must be lowered to the ground;
- Toe-boards, hand rails, walkways and other parts of scaffolding or access equipment must not be removed except to allow the passage of materials and, in such circumstances, must be replaced immediately afterwards. Otherwise they must remain in place until final dismantling takes place;
- Before movement of mobile scaffolding takes place all persons involved must descend to the ground.

Damaged ladders, stepladders and trestles or any other access equipment must be removed from the site immediately. Pukka Group reserves the right to remove such items from the works-site and to destroy the items if the Contractor fails to take the necessary action (Pukka Company will accept no responsibility for the Contractor's loss of such defective items).

Roof Working:

Many roofs are made of fragile materials. On such roofs access is forbidden unless crawling boards are used. It is forbidden to stand or walk directly on any fragile roof. Where practicable, properly constructed working platforms will be provided by the Contractor (HSE to confirm compliance)

Special precautions may be required during roof working in proximity to vents discharging to atmosphere.

In all cases of roof working the provisions of Permit to Work shall be applied.

Excavation:

A Permit to Work will cover all excavation operations. Before any excavation commences the Contractor's nominee shall enter into a discussion with the RP regarding any underground services in the area. Excavations must be effectively fenced off or covered at all times

During the hours of darkness suitable warning lamps, provided by the Contractor, must be placed in effective positions to indicate the extent of the excavation and the limits of the fencing.

Similarly debris or material which cannot be removed immediately must be placed in such a manner that it does not obstruct roadways, passageways or gangways. Areas surrounding the excavation or other sites must be maintained in a tidy condition with no loose materials lying around.

Mud, or other substances, which can create nuisance, slips or hazards, must not be allowed to remain on roadways, passageways or gangways.

Electrical Equipment:

When working on electrical equipment the Contractor's employees shall observe the applicable Electricity Regulations and/or Codes of Practice for isolation and protection of systems to ensure safety.

No live electrical equipment or circuit shall be left exposed and personal must be competent

The positioning of Warning Notices alone will not be considered adequate to ensure safety where live electrical equipment is concerned.

Lifting Equipment and Lifting Operations:

The statutory provisions in respect of lifting operations and lifting equipment must be fully complied with in respect of any operation in which lifting operations are planned. Before commencing any lifting operation on Pukka Company premises and / or Clients premises

Contractors must ensure that appropriate inspection and test certificates for all associated machines, and equipment, are available to the site Supervisor before any lifting operation commences;

Contractors, in association with the Site Supervisor, must agree a lifting operations plan to ensure the lifting process is planned and under control during execution;

Contractors shall ensure that lifting operations are adequately planned, supervised and conducted by competent persons.

Dangerous Substances and Asbestos:

Special precautions are necessary in areas where poisonous substances (e.g. mercury), and other dangerous substances, or dust fumes, gas or vapours may be present. The initial risk shall be identified through a COSHH Assessment by the Contractor.

If the work entails intrusive structural activities, or the removal or disturbance of roofing structures, or insulation (either thermal or acoustic) the Contractor must first ascertain whether this contains asbestos material. If the material does contain asbestos material the proposed methods of work must be discussed with the RP and the HSE Department prior to work commencing and at all times the Regulations concerning work with asbestos must be complied with.

In all cases when the presence of dangerous substances is evident, or suspected, the provisions of the Contractors Permit to Work shall be applied.

Contractors Materials, Equipment and Systems of Work:

Contractors must ensure that all plant and equipment used on Pukka Company premises by the Contractor has first been inspected by a competent person and is in good condition immediately prior to the work being commenced.

The plant and equipment and manner in which it is used must conform in every respect with all relevant requirements of any statutes, regulations or codes of practice, which are from time to time in force. For example, where scaffolding is erected, guard rails, toe boards and safe means of access must be embodied. Where plant and machinery is to be used, secure fencing / guarding of all dangerous parts is required.

Competent persons shall operate plant and equipment.

Provision of Personal Protective Equipment (PPE):

Contractors shall provide their employees with all necessary protective clothing and equipment including eye protection and take sufficient steps to ensure its use on Pukka Company premises. It is the responsibility of the Contractor to ensure that their personnel adhere to the Pukka Company House Rules and PPE requirements.

Provision of A Safe System Of Work:

A written Safe System of Work must be provided by the Contractor for all identified hazardous operations. A copy of the Safe System of Work must be supplied to Pukka Company by the Contractor in accordance with the provisions of Contractor Permit to Work system.

SERVICES:

Use of Services:

Contractors must not make use of Pukka Company electricity, gas, water or compressed air supplies for the purpose of supplying power to portable tools or for temporary lighting, or for any other purpose whatever, unless it is first agreed and arranged by the S/S concerned. Formal agreement will be demonstrated by the details on the Contractor Permit to Work and confirmation by the associated Supervisor(s).

Authority to Excavate:

In view of the existence of cables (electric and communications), drains, water and gas mains etc., no excavation work may be commenced unless authorised by the S/S concerned. Formal agreement will be demonstrated by the details on the Contractor Permit to Work

Removal of Waste:

In all cases the Contractor is responsible for the daily removal of all waste material spoil, rubble and general rubbish arising from work on the site, unless otherwise specified in writing.

General Fire Precautions:

GENERAL FIRE PRECAUTIONS will be given to the Contractor Employees by the Safety Officer, the Contractor Employees will be expected to read and understand the GENERAL FIRE PRECAUTIONS and sign in as required for their scope of work.

When working on Pukka Company premises, Contractors must ensure that their employees are aware of FIRE ALARM and EVACUATION procedures.

Contractor's Supervisors and Pukka Company Site Supervisor must ensure that this information is available before work commences

During operations Contractors must ensure that no emergency exits or access roads or gangways necessary to allow access to firefighting equipment are blocked. Contractors must also ensure that no firefighting equipment, sounder or call point is rendered inaccessible or put out of action.

When carrying out work care must be taken to prevent damage to HEAT or SMOKE DETECTORS. Paint must not be applied to these items and care shall be taken to avoid using heat, or producing smoke, which is likely to activate any detection device.

The accumulation of combustible materials and / or flammable liquids, etc. must be avoided. Storage of any such items must be approved by the Site Supervisor. The burning of rubbish is prohibited.

In certain areas flameproof equipment must be used. Work within any such area will be undertaken under a Contractor Permit to Work. The Site Supervisor will discuss, and approve, methods of working in such areas before commencement of work.

Smoking:

Smoking is prohibited at all Pukka Company premises except in designated smoking areas. All smoking areas shall be clearly communicated.

Use of Equipment Producing Open Flames:

Generally use of equipment producing an open flame is strictly controlled and is limited to authorised areas.

A Contractor planning to use burning, cutting, heating or welding equipment that produces an open flame must give prior notification of the plan to the Site Supervisor and obtain authority to proceed. This authority will normally be in the form of Contractor Permit to Work.

USE OF COMPRESSED GASSES:

All compressed gasses must be stored in the open air. Fuel gas and oxygen cylinders must be stored separately and full and empty cylinders must not be mixed.

At all times cylinders containing compressed gasses must be stored upright and must be secured to prevent rolling or falling over. Arrangements for the storage and use of compressed gasses must be agreed with the S/S prior to the gas being delivered to the work-site.

LPG APPLIANCES:

It is forbidden to use any LPG (Liquid Petroleum Gas) heater on Pukka Company premises unless it is fitted with an efficient flame failure device. (Site Supervisor to confirm compliance)

Such heaters must not be operated unattended and must not be left operating overnight unless work is continuing with Contractor's employees in constant attendance.

Before using any LPG equipment on Pukka Company premises and permission must be obtained from the Site Supervisor, authority for this will be recorded in the form of a completed Contractor Permit to Work.

MANUAL HANDLING

INTRODUCTION:

- The purpose of this procedure is to describe the processes that Pukka Company uses to assess, plan and control manual handling lifting operations.
- Investigation into the cause of reported accidents has proved that one of the main components contributing to the injuries received was poor manual handling techniques used by personnel when engaged in handling activities.
- The Safety Audit Procedure will identify general hazards.
- Supporting this procedure is Manual Handling Assessments that identify specific risks from manual handling. This procedure details how those specific risks are assessed.

SCOPE:

This HSE procedure applies to all organisations and divisions of Pukka Company.

RESPONSIBILITIES:

- Field Operations Managers are responsible for ensuring Manual Handling Assessments are provided for manual handling activities within the Areas. Field Operations Managers are also responsible for ensuring that a regular review is made of all Manual Handling Assessments (approximately annually).

- Manager, Supervisors and Supervisors are responsible for ensuring that suitable and sufficient manual handling assessments are conducted for all operational activities.

- All Manual Handling Assessments will be retained as for justification of the subsequent operational decision made by the Manager and Supervisors; Manual Handling Assessments are also used in the pre-job planning process.

- Operational requirements may prevent the decision to perform manual handling activities being approved / authorised by the relevant Manager / Supervisor prior to work commencement. If this is the case and the situation is likely to occur again in the future the

Manual Handling Assessment shall be returned to the Base for incorporation into the Manual Handling Assessment System.

- Suitable Manual Handling Training will be provided in line with the Pukka Company requirements; where applicable the Region HSEQ Department will support the relevant Manager, Supervisor with the compilation and approval of Manual Handling Assessments.

- All Pukka Company personnel are responsible and will be held accountable for being aware of Manual Handling Assessments that are applicable to their activities. All personnel are expected to ensure all Manual Handling Assessments Control Measures are in place prior to performing manual handling activities.

DEFINITIONS

Manual Handling:

The transporting or supporting of a load including the lifting, putting down, pushing, pulling, carrying or moving (e.g. twisting/turning/stooping) by hand or bodily force.

Manual Handling Assessment:

An assessment of the hazards from manual handling during an operation. It will consider, but not be limited to, the extent of the risk(s) involved, existing precautions, the task, the individual, the load and the environment.

Hazard:

A hazard is something with the potential to cause harm. Manual handling operations should be considered as hazardous.

Risk:

The likelihood that injury, damage or loss will be caused. It is this likelihood of the injury, damage or loss taking place that is being assessed.

PROCEDURE:

The detail required in the Manual Handling Assessment will be proportionate to the risks involved. A suitable and sufficient Manual Handling Assessment is necessary at all times. Where the risk of injury can be readily assessed as low or insignificant, this can be recorded on the Front Page of the Manual Handling Assessment without the need for a detailed assessment. Simple type manual handling activities where the risk of injury can be readily assessed as low or insignificant may be grouped together for the assessment process.

A detailed Manual Handling Assessment is necessary where there are several manual handling aspects to the operation or where the risk of injury is particularly high. Where the extent of the risks are not clear, or if there is any doubt over the risks, then a more detailed assessment shall be carried out.

The Manual Handling Risk Assessment shall be recorded on a Manual Handling Assessment Form. The process of Manual Handling Risk Assessment can be broken down into 5 stages:

- Identification of the hazards
- Analyse the probable effects/ consequences
- Assess the overall risk
- Accept/ Reject the risk
- Identify further action for rejected risks and re-assess

In order to ensure that the assessment is adequate, the personnel conducting the assessment should be suitably experienced in the task to be assessed and be trained in the process of manual handling assessment. This level of competence will normally be achieved by using a team of two or more persons to conduct the assessment.

PROCEDURE FOR COMPLETING ASSESSMENT:

Section 1 (Initial Assessment)

Section 1 is where the applicable assessment identification number is inserted, a description of the operation is detailed and an assessment of the potential for injury to those involved in the handling operation conducted.

Section 2 (Description of Operation Assessed)

Section 2 describes the operation to be assessed in more detail, this will include the location, personnel involved and the date. It will also include a sketch of the operation and or any additional information.

Section 3 (Detailed Analysis)

Section 3 is only completed should there be a potential risk of injury to those involved in the operation. A detailed assessment of the risks from the operation is conducted, any issues are identified and remedial or control measures (actions) proposed to manage the risk detailed here.

Section 4 (Overall Assessment of Injury)

Section 4 is where the overall assessment of the risk of injury, it is either low, medium or high risk.

Section 5 (Control Measures Identified)

Section 5 is where detailed control measures are identified, these must be communicated to and understood by all staff involved in the operation.

Section 6 (Authorisation and Review)

Section 6 is where the Manual Handling Risk Assessment is authorised by the assessor(s). It details the date which all control measures are required to be in place and also a scheduled date for re- assessment. It also contains the assessor(s)'s name and signature.

RECORDS AND REVIEW:

Field Operations Manager/Supervisor shall ensure that a register of all significant manual handling operations is prepared. This is achieved either by being identified during general risk assessment or by being an obvious manual handling operation.

Manual Handling Assessments shall be revised:

- Annually, or
- Where there are changes to equipment or in operation, or
- Where there have been changes in personnel, or
- When there has been a change in the manual handling operation, which would have materially affected the conclusion reached previously, or
- When an incident occurs leading to loss, damage or injury.

MANUAL HANDLING ASSESSMENT FORM

1 Initial Assessment	Assessment ID No:			
Describe the operation under consideration:	Is an assessment needed? Is there a potential risk of injury to those involved in the handling operation? Circle as appropriate			
	YES	If 'YES' continue with Assessment	NO	If 'NO' go to Section 5

2 Description of operation assessed	
Location of operation:	Sketch of operation or additional information:
Personnel involved:	
Date of assessment:	

3 Detail analysis – see over

4. Overall assessment of risk of injury. Circle the appropriate box	LOW	MED	HIGH

5. Control measures identified
The following control methods must be in place before the operation is started. 1. 2. 3. 4. 5. 6.

6. Authorisation and review:	
Date by which above measures must be in place:	
Scheduled date for reassessment	
Assessor's Name	Signature

CRANES AND LIFTING EQUIPMENT

Purpose:

This document identifies the process of defining and implementing actions to ensure that cranes and lifting equipment used on Pukka Company are fit for purpose and regularly tested and maintained.

Responsibilities:

It is the responsibility of the Field Operations Manager/ Supervisor that corrective or preventive action is taken to eliminate the causes of actual or potential Non-Conformities

Procedure

It is essential that all equipment, cranes, winches, slings, sheaves and shackles are fit for their intended use and that they are thoroughly examined and tested in accordance with the following.:-

Equipment	Before first being taken in to use	Yearly	Weekly by a responsible person	6 Monthly and colour coded
Cranes	X	X	X	X
Forklifts	X	X	X	X
Winches	X	X	X	X
Slings and shackles	X	X	X	X

All lifting equipment used shall comply with a recognised international standard BSI, DIN etc.

In addition to the above testing all mobile cranes shall be fitted with, audible slewing and reversing alarms, over hoist and over boom cut-outs, load radius indicator and load charts.

They shall also be fitted with an Automatic Safe Load Indicator and if it requires on site calibration then the crane operator shall be trained and competent to do the calibration.

Testing and Examination of Lifting Equipment:

Lifting equipment	Test and examination requirement
Rings, Chains, Hooks Shackles Swivels Hooks	After proof testing and every 6 months. When not in regular use examine only when necessary Also applies to Plate clamps and Eyebolts
Blocks	After proof testing and every 12 months Inspect in position every week
Wire ropes	On cranes Inspect in position every week Slings After proof load and every 6 months When not in regular use inspect only as necessary
Fibre rope slings	Every 6 months

All lifting equipment should be stored in clean conditions and not allowed to lie around the rig site, where they will pick up sand and other contaminants which will lead to rapid wear, internal damage and eventual failure.

Crane Testing:

Cranes shall be tested by an approved competent independent tester and shall be conducted so as to test all applicable lengths and configurations of jib and be in compliance with the "Guide the Testing of Cranes and Other Lifting Machines"(AOTC)

New Equipment:

New lifting equipment shall only be purchases from a reputable supplier and upon delivery be accompanied by a test certificate from the manufacturers stating the safe working load and test load if applicable. Prior to dispatch to a rig site the stores officer shall ensure that the particular item shall be examined by a competent person and a certificate provided for the item and it will be colour coded with the current colour code for the time.

Registration:

All lifting equipment will be registered and the register will be kept up to date. All new equipment will be registered prior to dispatch to site. The register shall contain the following details:

- Identification number
- Date first taken in to use
- Description
- Safe Working load
- Date of last test

- Test certificate number
- Inspecting authority
- Defects if any
- Colour code used
- Date next test due.

All original test certificates for cranes, forklifts and lifting gear shall be maintained in a central file, , in the Erbil/ Dohuk office. Copies will be sent to the rig for their records.

The register of lifting equipment shall be reviewed each month and any item due for test will be noted, its presence on the rig verified and an order placed with the lifting equipment testing company to carry out the test at the rig site or the stores in Muscat, whichever is appropriate.

Use of Cranes:

Mobile hydraulic cranes are commonly used around the rig site and are an extremely useful tool, however they need to be treated with respect. They should be used in accordance with BSI Code of Practice CP 3010 "Safe Use of Cranes" dated November 1972.

In general the following precautions should be taken. The crane driver should not operate the crane until the following daily checks have been carried out:

- Ensure that the machine is properly lubricated and the fuel, lubricating oil, coolant and hydraulic reservoirs are filled to their correct levels
- Filters have if necessary been checked and cleaned
- Visually check each component of the machine which is customarily used in lifting slewing or lowering a load.
- Inspect all wire ropes, sheaves, drums, and rigging equipment and attachments for damage that may affect their operating ability.
- Cranes should always be used on level ground with the outrigger extended.
- A Banksman shall be in attendance and he shall be present when:
- The crane is working in the vicinity of the rig
- The driver cannot clearly see the hook and load at all times
- The machine is being reversed or otherwise moved and the driver cannot see all parts the machine and its path of travel.
- The signalman / Banksman must:
- Position himself in full view of the driver and close enough for all hand signals to be seen Clearly In practice his position should give him a full view of the load and crane.

- Be fully conversant with the various hand signals
- Keep all personnel clear of the cranes operating radius
- Direct the load so that it does not travel over anyone
- Be in contact with the driver at all times
- The load being lifted shall not exceed the safe working load for the particular configuration of the crane

Slinging:

Before and when making a lift ensure that:

- The crane is rigged with sufficient parts of rope to make the lift.
- The load has been correctly slung and well secured to prevent movement
- Tag lines are used to control the load.
- The load is free before lifting and that all sling legs are taking the load.
- The jib head if directly over the load and that the hoist rope is vertical
- Ensure that all people are clear when the load is being lifted and lowered and while slings are being withdrawn from below a load. They can catch under the load and suddenly fly free.
- No-one shall ride the load for any reason.
- Persons sling a load should keep their hands clear of the pinch points as the weight of the load is being taken and lifted.
- When landing loads ensure that they are landed on blocks to prevent damage to slings.
- When attaching slings to a load avoid severe bending on the rope by placing packing at all sharp corners
- Only slings, ropes, shackles or wire rope which has been tested and colour coded shall be used for lifting.

Tubulars:

When lifting tubular items where possible a specially designed lifting cap shall be used or if this is not possible they shall be lifted by slings using a Double Wrap Basket Hitch. When laying down any material which has been lifted it shall be set down on suitable boards which will allow the slings to be removed from below it.

Cable Grips:

It is on occasions necessary to make a bight in a wire rope using cable grips. Attached is the correct method of fitting cable grips to a rope. There shall be a minimum of 3 cable grips per loop

1.

Turn back specified amount of rope from thimble or loop. Apply first clip one base width from dead end of rope. Apply U-Bolt over dead end of wire rope – live end rests in saddle (Never saddle a dead horse!) Tighten nuts evenly, alternate from one nut to the other until reaching the recommended torque.

2.


Figure 2

Apply the second clip as near the loop or thimble as possible. Tighten nuts evenly, alternating until reaching the recommended torque. When more than two clips are required, apply the second clip as near the loop or thimble as possible, turn nuts on second clip firmly, but do not tighten. Proceed to Step 3.

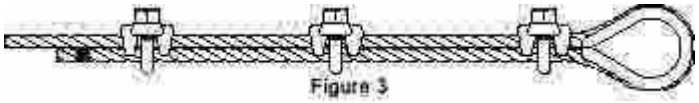


Figure 3

3.

As three or more clips are required, space additional clips equally between first two - take up rope slack - tighten nuts on each U-Bolt evenly, alternating from one nut to the other until reaching recommended torque.

INCIDENT REPORTING AND INVESTIGATION

Purpose:

This Section identifies the process of reporting and investigation of actual and potential HSE incidents and hazards within the operations of Pukka Company

Responsibilities:

The Field Operations Manager/ Supervisor is responsible for ensuring an effective system is maintained for the reporting and investigation of HSE incidents and hazards.
All personnel are responsible for ensuring this procedure is effectively implemented.

Procedure:

Responsibility for reporting:

All HSE incidents and hazards occurring within Pukka Company control are to be reported in accordance with this procedure. All employees, contractors and alliance partners are encouraged to report hazards and incidents to their line management.

Accidents, Incidents and hazards are defined as:

Incident – A general term to define an unplanned event or chain of events not necessarily resulting in loss or in harm to people, damage to property or the environment, loss of process.
Accident – A term to define an unplanned event or chain of events that results in harm to people (injury), damage to property or the environment, loss of process.
Pukka Company uses a potential severity rating for all incidents that forms the basis for prioritisation and investigation. Incident potential is high, medium or low and is described in section 4.3.2 of this procedure.

A Hazard is anything with the potential to cause harm to people or the environment.
Pukka Company uses one report for incident reporting. The incident form report is used company-wide for all low, medium and high potential incidents.

All injuries as a result of Pukka Company operations must be reported on Pukka Company forms, even if customer or third party reports are being raised.

Reporting of Hazards:

If it is not possible to make a hazardous condition safe, work in the hazardous area must be stopped and the hazard reported to line management.
All employees are empowered to stop work in this situation.

Management should be contacted immediately and are responsible for ensuring the hazard is effectively controlled prior to allowing work to recommence in the affected area.

The Field Operations Manager/ Supervisor are responsible for ensuring a communication system for completed incident reports exists for each area.

Where other Hazard reporting systems are implemented at a customer site, the customer system should be adopted. Hazards reported at these sites should be communicated in accordance with customer systems.

On locations where STOP cards, or their equivalent, are used, these may also be used to report hazards in accordance with local arrangements.

Incident Reporting:

Incident reporting and investigation is in accordance with the potential risk of the incident, regardless of actual outcome. All personnel have access to the Risk Assessment/ Incident Potential Matrix, which is the tool, used by Pukka Company to assess the potential severity of any incident.

The person reporting the incident is responsible for assessing the potential of the incident. Assistance is available from line management or the HSE departments.

The risk rating is based on the worst probable outcome of the incident in the same manner as used within the risk assessment procedure. Incidents are classed as high, medium and low potential in accordance with the Risk Assessment/ Incident Potential Matrix

Where the incident potential is unclear, line management or the HSE Manager/Representative/Officers may be contacted for further advice.

All incident reports must be fully completed prior to being submitted to line management. Line management must advise the local HSE departments immediately upon receipt of incident details.

Management or HSE departments may upgrade Low Potential Incidents to Medium or High Potential Incidents and require a corresponding level of investigation to be conducted.

Reporting and investigation is in accordance with the following table:

Incident Potential	Reporting Requirement	Investigation Level
Low Potential	Advise Supervisor/Manager verbally as soon as practical. Low Potential Incident Report as soon as practical and within 24 hours to line manager/supervisor. Incident Report can also be used to report.	Local investigation and details reported on the Low Potential Incident Report. Further investigation/ reporting may be required at the discretion of line manager/ HSE.
Medium Potential	Line Management and local HSE to be informed immediately. Incident Report as soon as practical and within 4 hours to line manager.	Line Manager and local HSE personnel to conduct investigation. Learning points to be communicated locally and copied to Group HSE.
High Potential	Management, Region HSE and Directors to be informed immediately. Incident Report within 4 hours to line manager. Scope and timescale of investigation to be determined by Directors	Regional Management and Group HSE to oversee investigation. Learning points to be communicated company wide and where appropriate externally.

Incident Investigation:

Incident investigation is a line management responsibility. The level of management required to investigate the incident is dependent on the potential severity of the incident as defined in the table above.

Low Potential Incidents will normally require investigation by the line supervisor of the operation. Results of the investigation will be recorded on the Report. Following review of the accident by line management/ HSE Representative the incident may be upgraded to a medium or high potential incident and a higher level investigation may be required.

Medium Potential and High Potential Incidents will require more detailed investigation to determine the underlying causes of the incident and actions required to prevent future recurrence. The process described below is designed to assist investigators in the identification of incident causes and provide consistency of terminology for trend analysis.

The loss causation model depicted below is used to guide incident investigations. Categories for each of the steps in the model are detailed within the incident report.

The role of the incident investigation team is to ensure the correct classification of the incident and work back through each step in the loss causation model to determine the underlying causes. Once the underlying causes have been identified and agreed by the incident investigation team, actions to correct the failure will be defined by the incident investigation team.

Loss Causation Model:

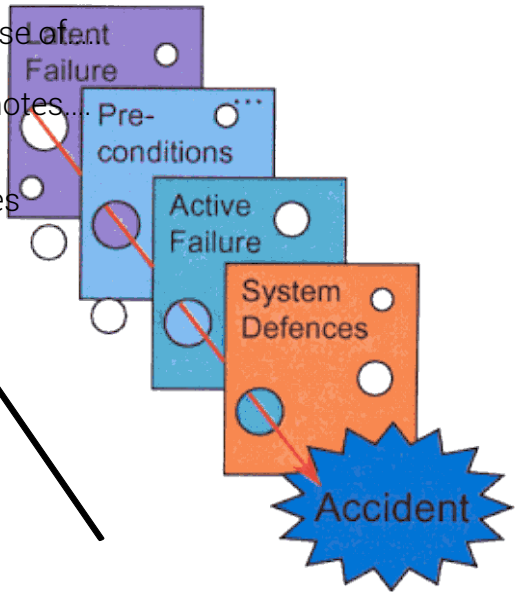
Is the underlying cause of…

That creates or promotes…

That creates breaches

Resulting in an…

Investigation Path



Categories of incident:

Incident causes are defined using the list of causes on the incident investigation form – contributing factors to incident from

Actions as a result of incident investigation:

Corrective Actions defined as a result of incident investigation will be documented and processed. The Corrective Actions Request Form is given at the end of this procedure.

For medium potential incidents, the Field Operations Manager/ Supervisor are responsible for ensuring effective incident investigation and that actions identified by the investigation are implemented and effective.

For high potential incidents, the Company Director is responsible for ensuring effective incident investigation and that actions identified by the investigation are implemented and effective.

Incident report files

The HSE Representatives are responsible for maintaining all accident and incident files. The files shall contain all relevant reports, e-mails and forms associated with the reporting and subsequent close out of each incident.

All details of accidents and incidents including exposure hours must be entered into the region database.

The statistics must be reported to the Company Director in accordance with the reporting deadlines published annually by the HSE Representative. The HSE Designated advisor is responsible for administering and maintaining the accident and incident database as a true, accurate and auditable record.

All high potential incident investigation files are to be copied to the Managing Director

AUDIT, INSPECTION AND MONITORING:

HSE audits are scheduled and carried out on a regular basis to verify that HSE activities comply with the planned arrangements and to check the continued effectiveness of the HSEQC systems. HSE audits are also carried out to check supplier/sub-contractor performance whenever necessary.

The audits and follow-up actions are controlled by established procedures, and results are documented and brought to the attention of those responsible for the area audited in each case.

Deficiencies found in these audits are documented and corrective actions are planned, taken, checked and recorded.

The effectiveness of corrective actions is the subject of review procedures and further audits.

Audit Procedure:

Purpose:

The HSE Audit is performed to:

Ensure that the Pukka Company HSE management system is effective in achieving and maintaining the levels.

Eliminate weaknesses in the Company's operation and therefore improve, health, safety, & environmental, operation.

Responsibility:

The HSE Supervisor is responsible for the planning and implementation of the Company's Internal and external Audit Programme.

The HSE Supervisor or nominee shall plan and implement Internal and external Audit Procedures, prepare Audit Reports and recommend improvements and corrective action as necessary. The Audit Report shall be the main item on the agenda at the Management Review Meeting.

Planning the Audit:

- Departmental operation of all inspection and maintenance records shall be audited and reviewed over each 6 month period.
- All QHSE Documentation, Manuals, Procedures and Work-instructions shall be reviewed over each 24 month period.
- The audits shall be planned by compiling a list of all areas and items to be reviewed and spreading the work evenly over then periods.
- Audits shall be planned on basis of the status and importance of the activity.

Organisation of the Audit:

- The HSE Supervisor or nominee shall use a Internal or external Audit Checklist containing mandatory items. He will add any further items, which may be cause of concern.

- The Field Manager/ Supervisor will monitor the implementation of the Internal and external Audit Programme.

Action required for each risk category is as follows:

LOW RISK	Risk may be acceptable, however review to see if risk can be reduced further.
MEDIUM RISK	Task should only proceed with appropriate line supervisor management authorisation after consultation with appropriate specialist personnel and the work party. Where practicable, the task should be redefined to take account of the hazards involved or the risk should be reduced further prior to the task commencing.
HIGH RISK	Task must not proceed. Task must be redefined or further control measures put in place to reduce risk. The controls should be reassessed for adequacy prior to task commencement.

All actions required to reduce workplace risks to 'Low Risk' must be implemented prior to work commencing. Any outstanding actions must be recorded on the Planned Inspection Checklist with defined responsibility and timescale. Any items that must be completed prior to work commencing must be clearly documented and communicated to the work party.

Workplace risks must be communicated to the work party during a pre-job Toolbox Talk. Any actions required to control risk prior to work commencing must be verified as having been completed prior to work commencing.

Inspection checklists will be reviewed by line management to ensure implementation, effectiveness and to identify any trends in required actions that may require management intervention.

Distribution of the Audit Report:

Copies of the Department Internal and external Audit Report shall be distributed to:

- Field Operations Manager
- Company Director
- Location Supervisor
- Auditee
- HSE Representative

Action Resulting from Internal and external Audits:

By an internal audit the relevant Manager/supervisor is responsible for instigating corrective actions required to close out any non-conformities found.

The Field Manager is responsible for the review of these corrective actions during the HSEQC Management Review. With an external audit it may be necessary to agree a Corrective Action Program and agree response dates.

Audit of Procedures, Instructions and HSE Manual:

- The HSE Manual, Procedures and Work-instructions shall be audited for:
- Effectiveness and Adequacy
- Updating for latest techniques, equipment etc.
- Amendment considered necessary from experience in application

All proposals for changes shall be put to the HSE Management Team for approval during the Management Review.

Audit Reports:

The Audit Report form is given at the end of this procedure. These reports will be retained in accordance with Pukka Company policy.

Proactive Monitoring:

Proactive monitoring is checking that the systems and procedures used to prevent harm are implemented and effective prior to any harm occurring.

The Proactive monitoring processes used by Pukka Company Are;
:

- STOP Tours (or equivalent)
- Site Inspections / Audits
- Equipment Inspections
- Critical Process Inspections
- Equipment Inspections

STOP Tours are observations of personnel in the workplace to reinforce correct behaviours being demonstrated by personnel and correct any behaviour that may cause harm. Specially trained personnel conduct STOP Tours.

Site Inspections are routine inspections of the physical conditions of the workplace to identify any substandard conditions in the workplace and plan any improvement action required.

Critical Process Inspections are routine inspections of safety critical systems such as emergency shutdown systems, oil interceptors or fire alarms to ensure systems operate as intended.

Equipment Inspections are completed prior to use of critical equipment such as lifting equipment to ensure acceptable working condition.

Improvements made as a result of the Proactive Monitoring process will be reviewed to determine if any change to the HSE Management System is required. Where any need for change is identified, a Corrective Action Request will be raised

Where any measurement equipment is used to perform inspections (for example noise meters) such equipment will be calibrated and subject to control in accordance with documented procedures to prevent inaccurate readings.

Reactive Monitoring:

Reactive monitoring is the recording of failures of the HSE Management System that have occurred and have caused harm or have had the potential to cause harm to people or the environment or damage to equipment.

Reactive monitoring includes reporting injuries, occupational health effects, near miss incidents with the potential to cause harm and unsafe conditions

All personnel are required to take immediate action to prevent any further potential harm then report the incident to their line manager.

All such failures are reported on an Incident Report form

All reported incidents are investigated by management at a level appropriate to the potential severity of the incident.

QUALITY MANUAL

Document Owner	*Pukka Company Construction & Trading*		
Document Approver:	*QA/QC Engineer, HSE Manager*		
Revision No	*01*	*Issue Date*	*10/04/2012*
Amendment Summary	*Issued for QA/QC of Projects & Tenders*		

1.0 Project Quality Policy & Objectives

1.1 Quality Policy

World Bridge Company (hereinafter "Contractor") pursues world's best Engineering & Construction company that meets customers' expectations and requirements based on top technologies, quality and reliability. To observe the 'Customer Charter', the company established and implements the following quality policy based on 'Quality management'.

1. The company shall understand the customer requirements, meet customer requirements and make efforts to surpass customer expectations.
2. The head of each organization shall maintain consistency in the objectives and directions of quality, and create and maintain an internal environment so that every member can participate in achieving objectives.
3. All Project personnel shall concentrate their effort to achieve a complete construction.
4. To achieve company objectives effectively and efficiently, all resources and activities related to work performance shall be managed in a standardized process for effective management, and interrelated processes integrated into a single system.
5. Decisions shall be made utilizing factual approach based on the analysis of data and information.
6. The company shall form an interdependent relationship with suppliers, and make efforts to promote ability to create mutually beneficial values.
7. Fulfill the requirements given by the IS0 9001 Standard and contract requirements.

1.2 Quality Objectives

Regarding the quality management services, the Contractor has the following objectives:

- Minimize claims and Owner complaints.
- Improve and/or comply with contractual terms with regard to work completion dates. With respect to the operations efficiency:
- Minimize non-conformities and reprocesses.
- Improve the ability to achieve processes results. With respect to the relations with suppliers and subcontractors.
- Minimize delays and rejections of contracted products and services

2.0 Scope

2.1 Scope

This Project Quality Manual describes the quality management system aimed at achieving the quality policy and objectives of the Contractor and at meeting the requirements stipulated in ISO 9001:2000.
Accordingly, this manual is applicable to the Gara-1 Koshka-1 Civil Works Construction (hereinafter "The project") to all Departments & Sub-Contractor performing quality-related works during the process of managing all construction works, and to suppliers, if needed. The Total project manager will has the primary responsibility for the project quality and project quality Manual as delegated by the Contractor.

3.0 Terms and Definitions Each

Department (group):

The term "Each Department (group)" used in the Project Quality Manual of the Contractor means the general term for the technical organizations of the head office, projects, offices, and overseas branches or corporations.

Customer satisfaction:

Customers' recognition as to what level customer requirements have been met.

Suppliers:

Suppliers that deliver materials and equipment to the Contractor, suppliers that provide construction and design services, and the design providers

Service:

Results of at least one activity essentially carried out between suppliers and customers. In general, it is an intangible product.

System:

An aggregate of interrelated or interacting elements.

Audit:

A systematic and independent documented process aimed at collecting and objectively evaluating evidences to determine the degree that meets the audit criteria.

Requirements:

Expressive demand or expectation which in general is implied or compulsory.

Procedure:

A system specified to implement activities or processes.

Products:

Results of process including the following items.

- Plant projects: Steel plants, industrial plants, environment and energy facilities, etc.
- Civil and environmental projects : highways, tunnels, bridges, ports, site preparation, dredging, sewage treatment plants, waste disposal plants, light electric railways
- Construction projects: business facilities, housing, distribution facilities, and educational, research, medical and cultural facilities.

Knowledge Management (KM):

All knowledge management activities carried out to create the desired added values according to specific purposes utilizing the intellectual assets held by corporations, organizations or individuals

Quality:

Degree of meeting requirements by an aggregate of inherent characteristics.

* Characteristics (Identifying features)

- Physical Mechanical, electric, chemical and biological features
- Sensory : Characteristics related to olfactory sense, tactual sense, taste, eyesight and auditory sense
- Behavioral : Etiquette, honesty and faithfulness
- Ergonomic : Physiological features or characteristics related to human life and safety

Project Management Manual (PMM) :

Documents that specify the quality, safety, Environment management system of an organization.

Project Quality Manual (PQM):

Documents that specify the quality management system of the Project.

Quality management system:

A management system that commands and manages organizations relating to quality.

Process:

An aggregate of interrelated or interacting activities that change inputs into outputs.

Effectiveness:

Degree of achieving the results after realizing the planned activities.

Efficiency:

Relations between the accomplished results and the resources used.

(Note) The terms and definitions shall be governed by the provisions of ISO 9000: 2000/KS A 9000: 2001, and the quality management system- Basic matters and terms

4.0 Quality Management System

4.1 Quality Management System Concept

The Contractor shall establish, document, implement and maintain a Quality Management System in accordance with the requirement of ISO 9001:2000 standard, and continually improve the effectiveness of the quality management system. To ensure customer satisfaction, the Contractor shall standardize all processes required for the Quality Management System ranging from the checking of customer requirements to sales activities, design, purchasing, performance of work and even after sales services; establish standards and methods with respect to the operation and management of each process, and shall ensure the required human and physical resources, infrastructures and work environment. In addition, to prove the conformity of products and continually improve the effectiveness of the Quality Management System, the Company shall monitor customer satisfaction and process, and products, conduct internal audits and take corrective and preventive actions.

4.1.1 Process approach

The Contractor's Quality Management System shall adopt a process approach to meet customer requirements, promote customer satisfaction, and to develop, implement and improve the effectiveness of the Quality Management System.

4.1.1.1 Process

Process means an activity carried out by an organization to check numerous linked activities in order to demonstrate its function effectively, and to utilize resources so that inputs can be converted into outputs (An aggregate of interrelated or interacting activities that convert inputs into outputs.). Often, the outputs coming from one process can readily become the inputs of the next process.

4.1.1.2 Process approach

A process approach means an act of applying a system composed of processes within an organization, including the checking of process, interaction and its management. It stresses:

1) Understanding and meeting the requirements (Of customers and other interested parties)
2) Considering the standardization of processes in respect to added values (to create better values).
3) Acquisition of the process results and effectiveness.
4) Continuous improvement of processes based on objective measurement.

4.1.2 General

4.1.2.1 All processes ranging from the sales activities to design, purchasing, construction and after sales services with respect to the products and services provided by the Contractor to customers shall be standardized into processes and identified. The processes shall apply to overall organizations. In connection with this, the relevant organization shall:

4.1.2.2 Determine the sequence of processes according to the order of work, importance and the workload considering the interactions between processes.

4.1.2.3 Determine the standards and the methods of process to manage and operate processes effectively.

4.1.2.4 Ensure the utility of the information and the resources required to operate and

monitor processes.

4.1.2.5 Establish and periodically implement the standards and the methods of monitoring, measuring and analyzing processes.

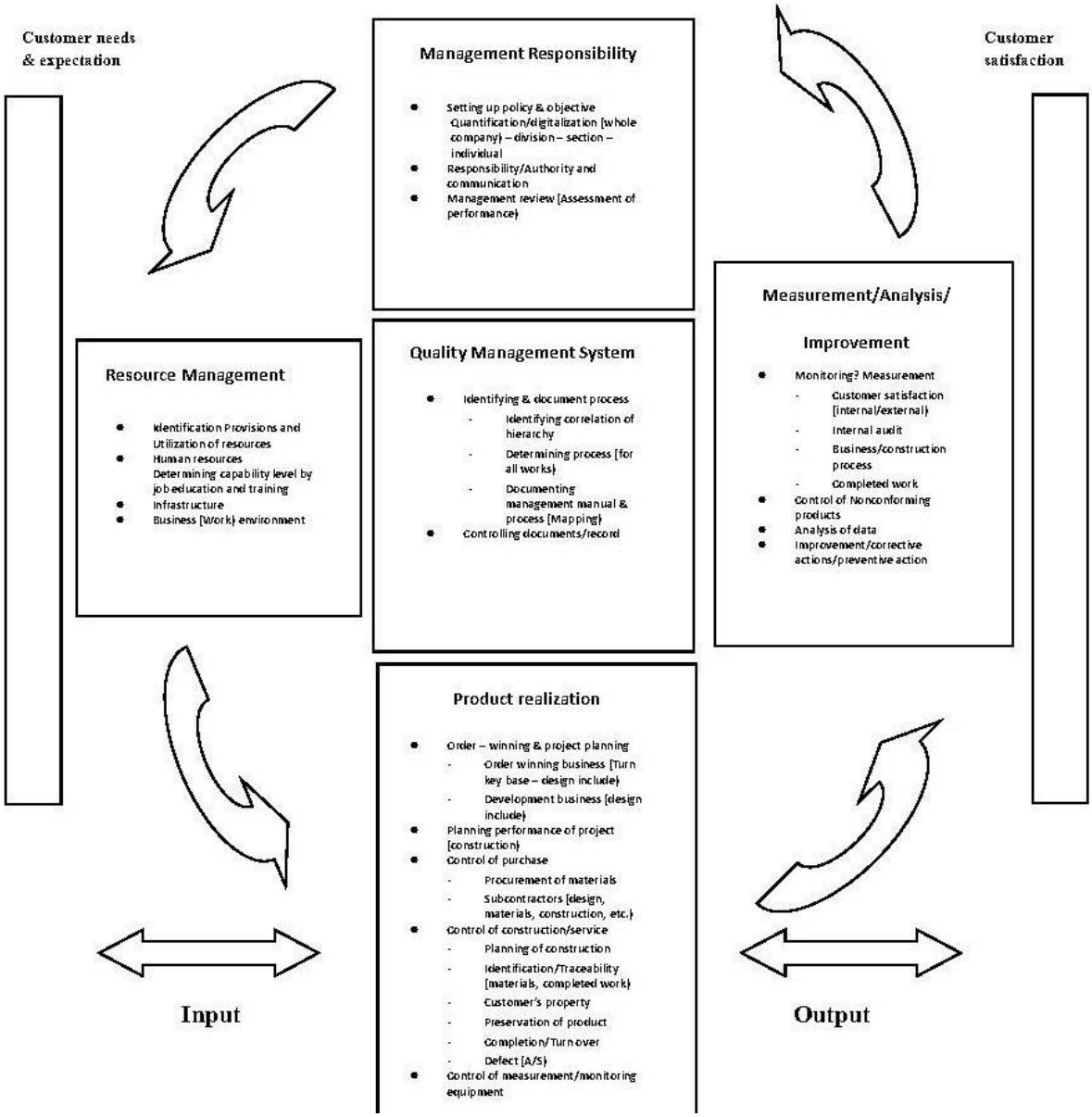
4.1.2.6 Take appropriate actions to continually improve the planned results and the process.

4.1.2.7 Ensure that the process required by the Quality Management System includes management activities, provision of resources, product realization and measurement, and that the process affecting the conformity of products is managed even when work is outsourced.

4.1.3 Maintenance

This Project Quality Manual shall be prepared and maintained by the project Department in accordance with the requirements of ISO 9001:2000.

4.1.4.1 Basic system for Quality Management



4.2 Documentation of Quality Management System

4.2.1 Quality Management System document structure

4.2.1.1 Project Quality Management System

The composition and the system of the Contractor's project Quality Management System shall be documented stepwise as follows.

Level 1: Project Management Manuals (PMM)

The Project Management Manuals shall include the basic policy and the requirements of the Quality Management System in accordance with ISO 9001 and other related laws and regulations.

Level II: Project Operation Process (POP)

This process specifies detailed work of each Department related to the Quality Management System.

Level III: Project Work Instruction

The Project work instructions are applied to the project site work of each Department.

4.2.2 Control of documents

4.2.2.1 Definition of Documents

Documents are composed of records, specifications, procedures, drawings, reports and standards aimed at maintaining communications with respect to information and the evidences for conformity, and at sharing knowledge. The document media can be paper, magnet, electronic or optical computer disks, photos, samples or the combination thereof.

4.2.2.2 Document classification

The documents of the Contractor shall be classified as follows according to the method of control:

1) Project Standard documents

Project Standard documents include the standards and guidelines used in performing business and shall be composed of the Project Management Manual, Project operation processes and Project work instructions. The Project Management Manual shall be prepared, revised, distributed or otherwise managed by Project Quality Manager, and the Total Project manager shall maintain the Project operation processes & instructions.

2) Project documents

Project documents mean the drawings, specifications, technical statements, technical reports, service reports, research reports, technical manuals and work standards including the documents forming technical basis and standards and the administrative documents generated during the performance of the project. As a general rule, the project documents relating to the progress of the project are dispatched, received, distributed and maintained by DDCC (Drawing & Document Control center). Upon completion of the project, documents subject to maintenance shall be sorted out and transferred to the archive. The project documents not using DDCC shall be managed by the PAM (Project Administration Manager) or CAM

(Construction Administration Manager) of the relevant project teams.

3) Drawings

Drawings show civil, architectural, electric and mechanical structures or information on design and construction works. As a general rule, the drawings generated during the process of implementing projects shall be dispatched, received, distributed and/or maintained together with the project documents by DDCC the drawings of the projects that do not use DDCC or the drawings generated from functional Departments shall be maintained by each relevant organization.

4) Data provided by suppliers

These Data's include the Operating Manual, Design Data and the Inspection Records prepared by the suppliers of equipment and materials. They are maintained by the Project Departments

4.2.2.3 Preparation and issuance of documents

Documents shall be prepared according to the established procedures and standards and shall bear document titles and the document numbers to facilitate identification .The adequacy of the documents shall be reviewed prior to approval and issuance by the persons and the Dept's carrying the review functions and abilities.

4.2.2.4 Revision of documents and re-approval

1) Unless otherwise specifically provided for, changing or amending

The approved documents shall be re-inspected and re- approved by the team or the person who had originally reviewed and approved the documents.

2) The revised documents shall be approved, distributed and managed according to the same procedure applicable to the original documents. However, minor changes such as the editing errors may be made without going through the said procedure.

4.2.2.5 Marking document revisions

1) The document revision shall be identified by means of underlines or sidelines, changed letter styles, cloud marks or by attaching a comparison sheet between the documents prior to and after revision. The documents shall bear revision numbers for effective management.

2) In case it is desired to maintain the documents prior to revision for certain purposes, such documents shall be managed in such a way that they can be distinguished from valid copies.

4.2.2.6 Dispatching, receiving and distributing documents

1) To ensure that the updated documents are delivered to relevant persons on a timely basis, documents shall be dispatched, received or distributed by means of Internet, e-mail or document files. A document register shall be maintained in accordance with related processes.

2) Documents shall be distributed in a way that they can be utilized at places where valid copies are used.

4.2.2.7 Storage of documents

1) Documents shall be stored according to related processes in a way that they are easily read and identified.
2) As much as possible, documents shall be kept in the form of electronic media (such as CD, EDMS, etc). In the case of electronic media, the storage position of the controlled copy shall be designated so that the latest copies can be distinguished positively. Back-up shall also be considered.
3) Those documents generated in the system (G-EDMS: PJT document control system, data control system) shall be stored in the system itself in accordance with in-house operation criteria.

4.2.2.8 Retention and abolishment of documents

1) Documents shall be stored in accordance with the 'Document Classification and Retention Period' standards. The functional Department documents shall be maintained by the Department for up to 5 years and transferred to the archive thereafter. Project documents shall be transferred to the archive for further retention after the project is completed.

2) Of the documents that have passed the retention period, those managed by the functional Departments and the project Department shall be self-abolished. The documents stored in the archive shall be abolished, paying attention to security, at the beginning of every year by the heads of functional Departments depending on the document retention period.
3) In case it is necessary to keep documents to be abolished for special purposes, documents shall be managed in such a way that they can be distinguished from valid copies.

4.2.3 Control of quality records

4.2.3.1 Definition of records

Records mean the documents that specify the accomplished results or form the evidence of the activities carried out. They can be used to document traceability and provide evidence for verification, and the preventive and corrective actions taken. In general, records need not be revised.

4.2.3.2 Classification of quality records

1) Resources Management
Education/training records
2) Product Realization Contract review reports, project implementation plans, design standards and input data control records, design review and verification, design conformity confirmation records, design change control records, supplier evaluation records, product identification and tracking management records, customer asset management records, and the records related to monitoring and measuring equipment.
3) Measurement, analysis and improvement
Internal audits records, product test and inspection standards, inspection records, nonconforming product management and follow-up action records, records pertaining to corrective actions taken, and records related to preventive actions taken.

4.2.3.3 General

1) Quality records shall be maintained in such a way that they are easy to read and can easily be identified and retrieved. Matters related to the identification, retention, protection, retrieval, retention period and the disposal of records shall be governed by the document control procedures.
2) Quality records are evidences and shall not be entered in pencils to prevent changes or alterations, and no correction fluids shall be used. If any part needs correction, the name of the person making correction, date of correction and the signature of the approver and the date of approval shall be clearly indicated.

3) The quality records submitted by the equipment suppliers and the suppliers shall be managed in accordance with the provisions of paragraph 4.2.3.

4) Quality records shall, as much as possible, be managed in the form of electronic documents.

4.2.3.4 Identification and collection

1) Quality records shall at least bear the date of issue, revision numbers, document titles of related items/materials or business, and the retention period.
2) Quality records shall be collected and distinguished from other documents by means of the sealing stamps, signatures, stickers or other methods.

4.2.3.5 Indexing, filing and inspection

1) Quality records shall be managed in a designated place, and a list of records shall be prepared and managed.

2) Quality records subject to preservation shall be indexed and filed according to related procedures.

3) In case records are stored in media such as computer diskettes or tape, appropriate protective and reading systems shall be made available.

4) If a customer or his/her representative desires to inspect quality records in accordance with contract, the quality records shall be made available for inspection.

4.2.3.6 Storage, retention and abolishment

1) Quality records shall be stored and preserved in a place with appropriate environment to prevent loss, damage and/or deterioration.

2) The quality records for the completed project shall be transferred to the archive for effective management under the responsibility of PM/SM (Project manager).

3) The quality records with the expired retention period shall be abolished after discussing with related teams.

5.0 Responsibility and Authority

Responsibility and Authority will follow Configuring Project Organization.

6.0 Resource Management

6.1 Provision of resources

The Contractor shall recognize, determine and acquire the resources required to implement, maintain and improve the Quality Management System continually, increase customer satisfaction and to achieve quality objectives.

1) Acquisition, placement and the ability of human resources
2) Infrastructure including offices, facilities, construction equipment, measuring equipment, facilities and computer S/W.
3) Work environment and safety facilities
4) Acquisition of material and information such as design documents, standards, laws and regulations and technical manuals
5) Suppliers
6) Raw materials, half-finished products, and final products
7) Estimation and acquisition of required budgets 8) Intellectual property rights including patents, new technologies, and new construction methods

6.2 Human resources

6.2.1 General

6.2.1.1 Persons having the rights to issue work instructions and to take personnel action shall identify the required ability of the persons performing work that can affect quality, and shall establish the competence standards.

6.2.1.2 In case persons cannot meet the competence standards, the responsible person shall provide related training or otherwise take appropriate actions.

6.1.2.3 The effectiveness of the actions taken, such as the direct evaluation of personnel and the identifying of the results of the Quality Management System (Training conducted and the trends of quality and productivity), shall be evaluated.

6.1.2.4 All members of the Contractor shall be aware of the relevance and the importance of their activities, and shall be aware of how they can contribute to the achieving of quality objectives.

6.1.2.5 Appropriate records shall be maintained regarding the educational background, training, proficiency and experience.

6.2.2 Competence

6.2.2.1 The competence standards of the persons performing work related to quality shall be governed by the relevant work process, contracts signed with the owner, construction specifications, related standards and criteria, and other requirements.

6.2.2.2 Data related to the educational background, training records and experience shall be registered and managed in the in-house personnel management system or site education management system.

6.2.3 Training

Training programs shall be established after identifying the training needs. The training programs shall be implemented and the results shall be assessed.
1) Project and technical training In-service training, OJT, external seminars on technical training, training on engineer qualifications, licensing training, training on measurement and equipment management, and the internal auditor training

6.3 Infrastructure

The Contractor shall determine, acquire and maintain the following infrastructure required to achieve the conformity of the product requirements.

6.3.1 Facilities and equipment

The Contractor shall identify and secure the facilities and equipment required to perform work, and shall manage and maintain the facilities in such a way that they can be used effectively.

1) Laboratory
2) Computers, networks and Information systems
3) Transportation service and communication networks
4) Warehouse
5) Workshop
6) Dining room

6.3.2 Knowledge and information management

To enhance work efficiency, improve knowledge levels and to share information, the Contractor shall build and maintain an in-house information system, and access shall be appropriately controlled through security systems.

6.4 Work environment

The Contractor shall determine and maintain work environment required to achieve the conformity of product requirements according to related processes.

6.4.1 Field work environment

The site manager shall establish and manage the work environment standards for the safety and health of field workers.

6.4.2 Construction-work environment
Prior to starting work, the construction manager(CE/CAE) shall determine and check the work environment standards, such as the temperature, humidity, vibration and dust, and shall maintain related records.

6.4.3 Forecasting change in work environment the project manager shall forecast changes in work environment, such as vendors becoming insolvent during the process of project, work during winter, occurrence of civil petitions, reduced or delayed construction period and other unpredicted incidents that are expected to occur during the process of project implementation. The project manager shall establish an action plan and reflect it in the project implementation plan.

7.0 Product Realization

7.1 Planning of product realization

7.1.1 The project Organization shall plan and develop processes required for design, purchase, construction work, test operation and after sales service, the process of realizing the products and services of the Contractor. The product realization shall be planned according to standard processes and guidelines, and shall be consistent with the Quality Management System.

7.2 Customer-related process

7.2.1 Determination of requirements related to products and services The following matters related to products and services shall be identified and determined to supply products and services required by customers.

1) Requirements specified by customers (Contracts, design documents, specifications and others)
2) Requirements not stated by the customer but necessary for specified or intended use, where known.
3) Statutory and regulatory requirements related to the product.
4) Any additional requirements determined by the Contractor.

7.2.2 Review and management of customer requirements

7.2.2.1 The Contractor shall examine the following items prior to making determination to supply its products and services to customers.

1) Ensuring that requirements of products and services shall be determined.
2) Settlement in case the bid documents already submitted and the estimate sheets are different from each other.
3) Ability to meet customer requirements (Manpower, technologies, period and capitals)
4) Other requirements (Prior inspections, repairs under warranty, etc.)

7.2.2.2 The Contractor shall maintain records related to the review of customer requirements, and the follow-up actions taken.

7.2.2.3 In case customers do not present requirements in writing, relevant Departments and the Department related to the project shall confirm the requirements prior to accepting orders.

7.2.2.4 In case customer requirements are changed (design change, range of project implementation, amounts, period and others), relevant Departments and the Department related to the project shall correct related documents and shall be aware of the changed requirements.

7.2.3 Customer communication

7.2.3.1 The business Departments and the Department related to the project requiring communication with customers shall determine the following in respect to customer communication.

1) Manager: Organizations (Departments and teams) and manager's work
2) Communication means: Official letters, telephone, fax, Internet, verbal communications (Specify point of contact and the method of contact)
3) Matters to be informed: Design changes, customer requirements, customer complaints, and emergency measures.

7.2.3.2 Customer feedback on complaints

1) During sales stages: Sales-related manager, and sales manager
2) During project implementation: Project manager
3) After completion: Customer-related Department manager and business supporting team manager of each Department

7.3 Design and development

7.3.1 Responsibilities

7.3.1.1 Project manager (PM)

1) Integrated management of design technologies
2) Adjustment of technical matters between designs sectors (Interface)
3) Design product approval and accumulation of technologies
4) Design input, output, review, verification, validation and change management.

7.3.1.2 Design-related team manager

1) Management of design in the applicable fields
2) Review and approval of design documents

3) Management of design documents
4) Development of design technologies

7.3.2 Design and development

1) The project manager (PM) shall include and manage the design management plan in the project implementation plan.
2) In case there are external design teams, they shall also be included in the allocation of jobs to ensure effective communications and to clarify responsibility.
3) The project design management plan shall be updated, as appropriate, as the design and development progresses.

7.3.2.1 Design plan shall be prepared considering the following matters.

1) Statement of the design and verification stages
2) Establishment of schedules (Detailed schedules by stage if general schedules are needed)
3) Clarification of the work allotted between functional teams participating in design.
4) Identification of the roles of the related coordinating Departments and the determination of the communication means
5) Review and approval of design plan, and ensuring that only valid copies are used.

7.3.3 Design inputs

7.3.3.1 The conformity of the design input materials shall be reviewed when design is registered, and the results shall be recorded in the design input materials control ledger.

7.3.3.2 The following matters shall be considered for design inputs.

1) Results of contract review
2) Related laws and regulations, standards and specifications (Specify the year of application, if necessary)
3) Results of market surveys
4) Customer complaints and claims
5) Information related to the project and the results of survey
6) Statutory regulation and requirements related to safety and environment.
7) Information deduced from similar design 8) other essential requirements

7.3.4 Design outputs

7.3.4.1 The design outputs shall be provided in a form that enables verification against the design requirements and the confirmation of effectiveness, and shall be approved prior to release.

7.3.4.2 The design outputs shall be handled as follows:

1) Design outputs shall meet the design input requirements.
2) Design outputs shall specify or cite the acceptance criteria.
3) The design characteristics important for the product safety and the demonstration of appropriate functions shall be clearly presented.

4) Design outputs including drawings, specifications, statements and reports shall be reviewed according to related procedure prior to distribution.
5) Provision of appropriate information regarding purchase, construction and service provision.

7.3.5 Design review

7.3.5.1 At suitable stages, design review shall be performed in accordance with the design plan for the following purposes.
1) Evaluating the ability of the results of design and development to meet the requirements.
2) Identifying any problems and proposing necessary actions.

7.3.5.2 Design review shall be planned and performed in each design stage based on officially documented review of the design results.

7.3.5.3 Persons participating in design review shall include those representing the related functions in each review stage.

7.3.5.4 Design review shall be performed as follows using varied methods according to the established procedure, and related records shall be maintained.

1) Design review between fields to examine the design interface between technical sectors.

2) Regular or special meetings held with customers and suppliers to review customer requirements and design directions.
3) System design review aimed at reviewing the design conformity.

7.3.6 Design validation

7.3.6.1 Design validation shall be performed to ensure that the outputs have met input requirements. Records of the results of the verification and any follow-up actions shall be maintained and managed.

7.3.6.2 Design verification methods are as follows:
1) Design verification based on substitute calculation
2) Comparison with the proven similar design
3) Testing and proving (including model houses)

7.3.7 Design Validation

7.3.7.1 Design validation shall be performed during the validating stage of the design planning to assure that the results of the project meet the requirements for the specified application or intended use. The results of validation and the required actions shall be recorded and managed.

7.3.7.2 Design validation may be performed in the following methods:

1) Test operation
2) Final inspection

7.3.7.3 The following items shall be considered when validating design:

1) Validation of engineering design prior to starting construction, installation or application.
2) Validation of software outputs prior to installing or using.

7.3.8 Control of design change

7.3.8.1 Design changes or corrections shall be identified, as applicable, according to the same process used at the time of initial preparation.

7.3.8.2 Unless otherwise specifically designated by the head of the team concerned with the relevant design, design changes or corrections shall be reviewed using the same method used at the time of initial preparation, including the evaluation of the effects of correction affecting related design and the delivered products, and shall be approved prior to implementation.

7.3.8.3 The design changes or the corrected parts shall be identified in an appropriate manner.

7.3.8.4 The approved design changes and corrections shall be distributed to related organizations in a manner that is same as that used for the original copy.

Records relating to the results of reviewing design change and the necessary measures taken shall be maintained and managed as quality records.

7.4 Purchasing

7.4.1 Responsibilities

7.4.1.1 Head of procurement department the head of procurement department shall have responsibility and authority to contract and purchase equipment and materials meeting the requirements of purchase, and shall maintain purchase documents, materials and equipment design, and the list of suppliers.

7.4.1.2 Project manager shall have responsibility to:

1) Manage purchase schedule, request for purchase, distribute purchase documents and to purchase services related to the project.
2) Approve requests for purchase, and to review and approve materials provided by suppliers.

7.4.1.3 Head of registration and management Department shall the head of registration and management Department shall have responsibility to establish standards related to the surveys of suppliers, registration, selection, evaluation and cancellation, and to prepare and manage the list of suppliers and documents related the registration of suppliers.

7.4.1.4 Head of production control Department shall:

1) Conduct plant Inspection covering equipment and materials, and manage plant inspection agents.
2) Save materials related to inspection in the database.

7.4.1.5 Site manager (SM) is responsible for the purchase of materials at site and the management of the work of suppliers.

7.4.2 Purchasing process

7.4.2.1 Preparation of purchase data the purchase documents shall ensure the adequacy of specified purchase requirements prior to communication to the supplier and consider the following items to describe the ordered products accurately.

1) Models, kinds, forms, grade and other accurate identifications of the ordered products
2) Approval of products, procedures, process equipment and personnel, or specifications, drawings, process requirements,inspection instructions (Including test and inspection plans), including qualification requirements, titles of other related technical data, clear identification markings and appropriate publications.
3) Title of the standard, standard number and the date of issue (revision) required by products.
4) In case test production and evaluation are needed: Size of samples, test methods and other matters related to the implementation of tests.
5) Time of inspection, inspection methods and acceptance criteria in case a witnessed inspection is conducted.
6) Items to which standards and tolerance are strictly applied.
7) Method of making favorable decisions at an inspection and the disposition procedure in case of rejection
8) Matters related to product liability, where applicable.
9) Management system requirements

7.4.2.2 Review and approval of purchase data the adequacy of purchase documents shall be reviewed and approved according to related process prior to distribution.

7.4.2.3 Purchase request and contracts Purchase requests and contracts shall be classified into equipment and materials, construction materials, and services. The purchase contracts shall be concluded after selecting suppliers in accordance with related process.

7.4.3 Evaluation and registration of suppliers

7.4.3.1 Suppliers shall be evaluated as follows based on their technologies and quality assurance ability.

1) Evaluation of the past record of supplying same or similar products.
2) Evaluation of current quality ability based on objective materials.
3) At-site inspection of the suppliers‟ technologies andquality assurance ability.
4) Evaluation of sample products or results of tests conducted on similar products.

7.4.3.2 Suppliers shall be reevaluated periodically according to related process. The head of procurement Department shall prepare, maintain and manage the list of suppliers selected according to related process.

7.4.3.3 Records all records related to the evaluation of suppliers shall be maintained and managed as quality records.

7.4.4 Verification of purchased products

7.4.4.1 The project manager shall establish the inspection and test plan for ensuring that purchased product meets specified purchase requirements, and shall conduct acceptance inspections, plant inspections, in-process inspections or final inspections according to the established plan after the purchased products are delivered. The inspection and test plan shall specify the time of inspection, inspection methods, acceptance criteria and other required matters.

7.4.4.2 The project manager and the head of Production Control Department are responsible to inspect the process of manufacturing materials and equipment at the site of suppliers based on the inspection and test procedures stipulated in the purchase documents.

7.4.4.3 In case customers or their representatives desire to conduct inspection at the suppliers‟ premises, verification methods and/or product delivery methods shall be stated in the purchase documents.

7.5 Construction and service provision

7.5.1 Control of construction and service provision

7.5.1.1 The site manager (SM) has the same responsibility to plan and manage the project quality activities related to construction and services, and to ensure the project is being implemented according to the specified requirements.

7.5.1.2 General

1) Construction works and services directly affecting quality shall be performed and provided according to the following requirements.
   (1) Preparation of relevant work standards (procedures, drawings, etc.) that specify work methods, and performance of work based on prior review and work standards.
   (2) Selection and approval of equipment suitable for relevant work, and the use of equipment under appropriate work environment (time, temperature and pressure)
   (3) Use of monitoring devices and measuring devices required for the relevant work.
   (4) Monitoring and measuring of work affecting the product characteristics.
   (5) Maintenance of work standards (drawings or specifications) for the relevant work.

(6) Proper management of the equipment used to ensure reliability.
(7) Issuance of products and materials according to related procedures, delivery of completed works, and follow-up actions after delivery.

2) The site manager or the head of relevant Department shall handle service request received from customers according to the approved process or regulations (Contract requirements, service assurances, etc.).
3) After service is completed, the site manager or the head of relevant Department shall check for abnormalities and the causes of defects, if any; reflect the actions taken and future measures in the relevant process or the Quality Management System, and inform related teams of the results for continued improvement.

7.5.2 Identification and traceability

7.5.2.1 Responsibilities

1) Project manager (SM) shall be responsible to establish related process in case it is necessary to identify and/or trace items and/or materials, or the construction works during the process ofwork.
2) Product quality manager (PQM) shall be responsible to confirm the status of identification and traceability required for the items and/or materials used in the construction work and for the completed works.

7.5.2.2 General

1) If it is necessary to identify items and/or materials being purchased, identification requirements shall be reflected in the purchase documents, and a necessary procedure shall be prepared and maintained to ensure identification and traceability required during work are being properly implemented.
2) If it is necessary to identify items during the stage of design or construction, items and materials used or construction works shall be identified in an appropriate manner according to the relevant process.
3) If traceability is required to ensure construction quality, items and materials being used, and the construction work shall maintain traceability at a level required according to relevant processes.
4) Records relating to identifications required to trace items and materials or construction works shall be maintained as quality records.
5) The results of inspections and tests shall be identified by appropriate means such as the markings that indicate conformity or nonconformities, stamps, tags, labels, cards, or inspection records.
6) As for the products manufactured by suppliers, only the products that pass inspections and tests shall be delivered, used or installed.
7) Products that have been rejected during inspection or the products for which decision has been reserved shall bear appropriate markings that indicate the results of inspections, and shall be separated from satisfactory products if possible, or shall be returned.
8) Items found to be nonconforming products during the process of site fabrication or installation shall be isolated from the relevant process or otherwise clearly marked.

7.5.2.3 Identification control

1) Identification numbers

(1) The identification numbers of the materials and equipment shall be properly managed according to the construction material management and the material and equipment management processes.

(2) The identification numbers shall be determined when specifications and design drawings are prepared, and shall not be erased during the process of manufacture, storage, packing, handling and transportation.

2) Identification methods

(1) The identification markings shall use physical methods as much as possible; however, if it is difficult to put markings directly on products, such products may be managed separately in a suitable manner.

(2) Identification markings shall meet the following requirements. They shall: - Be read easily. - Not affect quality. - Be marked separately for items that can be separated. - Not be erased by surface treatment or painting. - Not be eroded.

7.5.2.4 Management of traceability

If the products" traceability significantly affects quality, or if traceability is required by the contract conditions, standards or laws, the product tracing processes shall be established, documented and maintained.

7.5.2.5 Records

If traceability is required, products shall be marked accordingly, and the result of markings for traceability shall be documented and maintained as quality records.

7.5.3 Customer property

The project manager shall manage customer property as follows.

7.5.3.1 Customer property shall be checked for defects. If no defects are discovered, the customer property shall be managed, handled and used for construction work in accordance with the specified requirements, methods or processes. Customer property shall be returned after use, if requested.

7.5.3.2 If any customer property is lost, damaged or otherwise found to be unsuitable for use or if any problem occurs during use, related details shall be recorded and reported to the customer.

7.5.3.3 Records related to the reports submitted to customers in respect to the occurrence of problems on the customer property shall be maintained and managed as quality records.

7.5.4 Preservation of product

7.5.4.1 Products and the product parts shall be identified, handled, packed, stored, protected and delivered according to related processes.

7.5.4.2 The methods of identifying, handling, packing, storing and protecting products to prevent damage or quality deterioration shall be documented and implemented.

7.5.4.3 Storage facilities such as the open yard or warehouses shall be arranged to store the received items and materials.

7.5.4.4 Products and materials shall be brought in or out of the storage facilities under the control of the manager.

7.5.4.5 The items and materials in storage shall be inspected periodically to determine if the expiry date has passed and/or quality has deteriorated.

7.5.4.6 To ensure product quality during the process identification, handling and storage until they are delivered to the customer, products shall be properly managed by means of filling, packing or marking to a required level.

7.5.4.7 The installed products shall be properly packaged for protection, or otherwise appropriate measures shall be taken to prevent damage or quality deterioration until they are delivered to customers following the final inspections and tests.

7.5.4.8 Where necessary, manuals or operation guidelines shall be provided to customers so that they can satisfactorily use, install or protect the products.

7.6 Control of monitoring and measuring devices

7.6.1 Responsibilities

7.6.1.1 Project manager (PM/SM) shall:

1) Identify monitoring and measuring devices to be used for the project.
2) Establish and implement the measuring equipment calibration or verification plans.
3) Identify and store, and maintain suitable condition of, monitoring devices and measuring devices.
4) Where necessary, verify the computer software prior to initial use or during use to prove the required performance or function in case they are used for design work.

7.6.1.2 Quality Manager

Shall be responsible to maintain documented system to ensure that the inspection, measuring and test equipment used at site or at laboratory (integrated laboratory or the laboratory installed at site) are being appropriately calibrated on a periodic basis.

7.6.2 General

7.6.2.1 Products shall be monitored and/or measured using the equipment appropriate for the work subject to monitoring and measuring.

7.6.2.2 The measuring equipment used to determine if the items, materials and/or construction works meet the stated requirements shall be calibrated or verified in the following cases:

1) Prior to the term of validity for the calibration or verification of the measuring equipment
2) When the accuracy (precision) of the measuring equipment is doubtful.
3) Prior to using the measuring equipment

7.6.2.3 If the computer software intended for design work are used for the purpose of monitoring and measurement, possibility of changes in the self-developed programs used by suppliers shall be periodically managed to ensure soundness. Prior to using, or even while using the programs, it shall be verified whether or not the programs are suitable for the intended work, where necessary.

7.6.3 Control of monitoring and measuring devices (equipment)

7.6.3.1 The monitoring and measuring system manager shall consider the following to control the monitoring devices and measuring devices to be used.

1) Identifying and selecting appropriate monitoring and measuring devices required for the monitoring and measuring work.
2) Identification of the monitoring devices and measuring devices to be used for work, and the maintenance of traceability.
3) Creation of peripheral environment conditions appropriate for the use of monitoring devices and measuring devices.

7.6.3.2 The monitoring and measuring system manager shall consider the following to manage the measuring devices to be used.

1) The measuring equipment shall be calibrated for each specified cycle by the authorized institutions. In case self-verification is carried out, the calibration standard measuring equipment calibrated based on national or international standards shall be used for verification and adjustment. The basis used for calibration or verification shall be recorded, and readjusted or reverified as necessary.
2) The calibration status of the measuring equipment shall be marked on the measuring equipment or on the measuring equipment box, and the calibration status verified based on the approved identification records.
3) Records relating to the calibration of measuring equipment shall be maintained.
4) In case measuring equipment deviating the calibration standards are discovered, the adequacy of the results of prior measurement shall be evaluated and recorded, and appropriate measures shall be taken.
5) The measuring equipment shall be protected from damage or deterioration during handling, maintenance and storage so that the accuracy (precision) and the conformity of the measuring equipment can be maintained.
6) The measuring equipment shall be safeguarded from adjustments that would invalidate the measurement results.

7.6.3.3 Documents related to the verification of the measuring equipment and the computer software, and the documents related to the inspection/calibration of the measuring equipment shall be maintained as quality records.

8.0 Measurement, Analysis and Improvement

8.1 General

8.1.1 Quality Management System

The head of the quality management Department shall ensure the conformity of the Quality Management System and continually improve its effectiveness, and shall determine, plan and implement the objects of the monitoring and measurement activities with respect to the company Quality Management System in order to prove the conformity of the products and services provided by the Contractor.

1) Process monitoring
2) Customer satisfaction level and customer complaints
3) Status of nonconforming items occurred
4) Items pointed out at internal quality audits, quality guidance and inspections
5) Other activities related to quality work

8.1.2 The statistical techniques shall be used where applicable during the stage of planning, implementation and results, and the applicable techniques may include the following techniques or similar methods.

1) Pareto chart
2) Causes and effects diagram
3) Check sheet
4) Graph
5) Control chart
6) Histogram
7) Scatter diagram
8) Other similar methods

8.1.3 Monitoring and measuring of products and services

To ensure the conformity of products, the project manager shall determine, plan and implement the objects of the monitoring and measurement activities with respect to the relevant work.

8.2 Monitoring and measurement

8.2.1 Customer satisfaction

8.2.1.1 Subjects and methods of customer satisfaction surveys

1) Customer satisfaction level surveys shall be conducted on customers in the major business sector of the company.
2) Customer satisfaction level may be surveyed periodically or at any time. The surveys may be conducted by external institutions or internally by the Contractor in the form of questionnaires, telephone conversation, consultations, visit surveys or the project's self-surveys depending on the characteristics of the customers to be

surveyed.

8.2.1.2 Survey and analysis of customer satisfaction level

1) To check the customer satisfaction level covering the relevant business or projects, the head of relevant Department shall define customers, identify customer requirements and determine the survey methods, and shall establish items and details related to the customer satisfaction level for each customer to be surveyed.
2) The customer satisfaction level survey items shall be established by reviewing the following items, and the items shall be adjusted considering the characteristics to be surveyed.
   (1) Quality of the service provided, and the customer satisfaction level covering products
   (2) Degree of meeting customer requirements and expectations
   (3) Ability to cope with the change in the construction market and environment, and competitiveness as compared with other construction companies.
   (4) Changes in product and in work process
3) The head of relevant Department shall take appropriate actions based on the results of the customer satisfaction level surveys.
4) The head of relevant Department may, where necessary, disclose the results of the customer satisfaction level survey and analysis in writing or through the use of in-house electronic media.
5) The head of the quality management Department shall, during the internal quality audits, confirm the appropriateness of the actions taken based on the results of the customer satisfaction level analysis, and determine if the results can be applied to work and if continued improvement should be carried out.
6) The results of the customer satisfaction level surveys and the actions taken shall be reflected during the management review.

8.2.2 Internal quality audit

8.2.2.1 Establishment of audit plan

1) The head of the quality management Department shall establish annual audit plan covering the projects of the Department subject to audit, estimated time and the range of audits based on the condition and the importance of the quality audits.
2) The head of the Department being audited and the project manager shall provide project schedule, work priorities and other information required for the establishment of audit schedules to the head or the representative of the quality management Department.
3) The head of the quality management Department shall periodically examine the audit schedule so that all items of the quality system requirements can be audited, and shall, where necessary, supplement or revise the audit schedule.

8.2.2.2 Preparations for audit

1) Selecting audit teams
   (1) The head of the quality management Department shall organize audit teams consisting of senior auditor and auditors.
   (2) The senior auditor and auditors shall receive appropriate training according to the related procedures to obtain qualifications; however, they shall not carry direct responsibility with respect to the business being audited.
   (3) For special fields or items, related experts or skilled technicians may participate in the audits as the senior auditor, normal auditor or audit consultants.
2) Establishment of audit plan
   (1) The senior auditor shall establish an audit plan which includes the minimum range of audit, application requirements and detailed schedule covering relevant teams and business, and obtain approval from the manager.
   (2) Auditors shall review the documents related to audit, prepare checklists if needed, and shall obtain approval from the head of the quality management Department via review by the senior auditor.
   (3) The head of the quality management Department shall notify the audit schedule to the teams to be examined prior to beginning audit.

8.2.2.3 Audits

1) The senior auditor shall, at the pre-audit meetings prior to beginning audit, discuss in writing or verbally the audit schedule and the appointment of the manager in charge of receiving audit with the teams to be audited.
2) Auditors shall conduct audits according to the planned schedule and the checklists. All items reviewed and confirmed during the audit shall be recorded and included in the audit reports.
3) The senior auditor shall evaluate the results of audit conducted by the auditors, and discuss the results of audit, different opinions, appointment of the person in charge of takingcorrective actions, and the schedule, at the post-audit meetings held between the audit teams and the teams being audited.
4) The senior auditor shall take appropriate actions regarding the discrepancies pointed out during the quality audit according to related process & instruction.

8.2.2.4 Report on results and evaluation

1) The senior auditor shall prepare an audit report containing the range of audit, auditors, teams and managers being examined and consolidated evaluation.
2) The report on results of audit shall be sent to the audited team after obtaining approval from the head of the quality management Department.
3) If deemed necessary to prevent the recurrence of serious quality problems, the head of the quality management Department shall send reports to the president.
4) The Department head or the project manager of the organization being audited shall take appropriate corrective and preventive actions for the items pointed out during audit, and report the results to the head of the quality management Department.
5) The head of the quality management Department shall evaluate the replies sent by

the audited teams, and confirm the corrective and preventive actions taken.

6) The executive in charge of quality management Department shall evaluate the effectiveness of the Quality Management System based on the audit reports.

8.2.3 Process monitoring and measuring

8.2.3.1 The head (Manager) of the Department managing business process, or the head of the

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5) The head of the quality management Department shall evaluate the replies sent by the audited teams, and confirm the corrective and preventive actions taken.
6) The executive in charge of quality management Department shall evaluate the effectiveness of the Quality Management System based on the audit reports.

8.2.3 Process monitoring and measuring

8.2.3.1 The head (Manager) of the Department managing business process, or the head of the quality management Department in charge of the company business process shall establish and implement a monitoring and measuring plan for the relevant business process or the process for each unit of important business. On the other hand, the Project manager (PM/SM) shall take measurement in the measurable process.

8.2.3.2 The monitoring and measuring activities shall also include the evidence of process

abilities required to achieve the planned the quality objectives,

8.2.3.3 If the results of achieving the planned quality objectives are insufficient or otherwise problems are discovered, the head of relevant Department and the project manager shall take corrective actions on a timely basis for the relevant process so that the products‟ conformity can be assured.

8.2.3.4 The head of the quality management Department shall manage the monitoring and the measuring of the process of the Company-wide Quality Management System, and shall determine if the corrective actions are being properly taken by the relevant Department.

8.2.4 Product monitoring and measuring

8.2.4.1 Responsibilities

1) Project manager (PM) shall be responsible to reflect and implement the monitoring and measuring methods during the stage of planning the product realization and process to determine if the product requirements have been met.
2) Site manager(SM) shall be responsible to conduct field inspection or tests according to the installation specifications, or check the works performed by the suppliers.
3) Head of production control Department Shall be responsible to confirm suppliers‟ manufacture of the materials and equipment through witnessed inspections to determine if the materials and equipment are being manufactured according to the inspection and test requirements stipulated in the purchase documents.
4) Quality Manager shall be responsible to conduct civil work quality tests and to review, approve and submit test reports.

8.2.4.2 General

1) If necessary, the equipment and material manufacturing inspections and tests shall be carried out directly or through the witnessed inspection at the plant in order to confirm quality.
2) The construction inspections and tests shall be directly conducted. However, if the construction work is subcontracted, witnessed inspections shall be carried out.
3) Inspectors shall have received related training, and shall be familiar with the related specifications, processes or instructions.
4) Inspection reports on meeting acceptance criteria and other evidentiary documents shall be maintained in records. The records shall specify the authority related to the acceptance or rejection of products, re-inspections and/or rework.
5) The release of products and the provision of service shall not continue until all specified activities are satisfactorily completed, unless specially approved by the customer.
6) All inspections and tests shall be conducted according to the approved documents, and the results shall be documented including the following information.
   (1) Parties subject to inspections and tests
   (2) Date and time of inspections and tests

(3) Inspectors/testers
(4) Types of inspections and tests
(5) Results of inspections and tests, or whether the results were successful.
(6) Materials related to the nonconforming items

8.2.4.3 Establishment of inspections and test plans

1) Prior to conducting inspections, an inspection plan containing information on the characteristics of the products or business subject to inspection, inspection methods, and the acceptance criteria shall be established.
2) If the sampling inspection methods are used, samples shall be taken according to related processes.
3) The process witness point and the hold point shall be established to carry out inspections.
4) The head of the Production Control Department shall plan witnessed inspection for the manufacture of the materials and equipment, and the project manager (PM/SM) shall establish inspection and test plans.
   (1) An inspection and test plan (ITP) shall be established to check the quality of the materials and equipment manufactured. The construction quality shall be included in the civil work quality inspection and test plans.

8.2.4.4 Acceptance inspections and tests

1) The site manager(SM) shall ensure that all materials and equipment are used at site after they pass acceptance inspections. In case any nonconforming items are discovered, they shall be clearly identified, recorded and traced so that they can be returned or replaced immediately.

2) In case products pass shop inspections, the site manager (SM) shall take over the products after checking only the quantities and whether any damage occurred during transportation.
3) The standard market construction materials affecting quality to a minor level, or bulk materials shall be used in the process after conducting only visual inspections without establishing any separate inspection plans.
4) The results of acceptance inspection shall be maintained in records.
5) A civil engineering quality plan shall be established for civil engineering materials, and screening tests shall be carried out where needed to select and use only the accepted materials.

8.2.4.5 In-process inspections and tests

1) If necessary, Inspections and tests carried out during the process of manufacturing materials and equipment shall be conducted at the shop in the form of witnessed inspections.
2) In-process inspections shall be carried out for each type of work in accordance with the construction inspection plans and the civil engineering quality test plans.
   (1) The construction inspection plan shall include checklists to confirm the items to be inspected.
   (2) The civil engineering quality tests shall be carried out at the laboratory.
   (3) If necessary, special tests such as the non-destructive tests shall be subcontracted. However, test reports shall be collected, reviewed and maintained in files.

3) If necessary, the inspection witness points shall be discussed and agreed with the owner (or supervisor), and the witness points shall be notified to the owner (or supervisor) when inspection and tests are ready.

8.2.4.6 Final inspections and tests

1) The final inspection and tests on equipment and materials and the construction works may be conducted using many methods in various stages. In general, however, such inspections and tests shall be conducted after undergoing completion inspection and test operation.
2) The inspection of the unit materials and equipment shall be considered completed when the Contractor has attended the final tests conducted by the relevant suppliers and delivery is approved by the Contractor.
3) During the final inspection, records related to the nonconforming items discovered during the previous inspection shall be reviewed to check the settlement and the results of action taken.
4) During the final inspection, items related to the completion of the relevant items, markings, calibration, adjustments, protection from damage and other required characteristics shall be inspected.
5) As for the quality records, conformity and the integrity shall be examined.
6) The results of inspection carried out on items shall be documented and approved by the authorized persons.
7) In case any item is modified, repaired or replaced after the final inspection, such item shall be re-inspected or retested.

8.3 Control of nonconforming products

8.3.1 Responsibilities

8.3.1.1 Project manager (PM/SM)

Project manager (PM/SM) shall establish detailed control standards for the nonconforming items in accordance with the specified processes. Identify and control the nonconforming items in case onconformity occurs on materials, equipment, design and construction. and shall confirm and approve the final decision on nonconforming items to prevent the careless use and/or installation or nonconforming items.

8.3.2 General

1) Nonconforming products shall be handled and managed according to the established procedures.
2) Nonconforming products shall not be transferred to the next process or delivered to customers until they are corrected.
3) Nonconforming products shall be inspected and evaluated by organizations possessing related technologies.
4) If nonconforming products are discovered after they are delivered to customers or during use, the effects or the potential effects of the nonconforming items shall be evaluated, and appropriate action plans shall be established and implemented.
5) If nonconforming products are discovered, such products shall be marked separately to facilitate identification.
6) Nonconforming items shall be documented and shall be sent to related teams.

7) The team responsible for the handling of nonconforming items shall, if required or possible, isolate the nonconforming items until the nonconforming items are corrected.

8) The responsible person shall review the situation to determine the actions to be taken against the nonconforming items.

8.3.3 Classification of nonconforming products

8.3.3.1 Use-as-is (Concession)

This is an action taken on nonconforming items in case they are considered not adversely affecting the quality of products, meeting the scientifically allowed functional requirements including performance, durability, conformity and safety. In this case, technical justification shall be specified in documents.

8.3.3.2 Repair

A process where the products, even though not meeting the original requirements, are reinstated into a state allowed by the standard conditions.

8.3.3.3 Rework

A process where a product is reworked so that the product can meet the original requirements.

8.3.3.4 Scrap

An action to be taken when a product cannot be economically and physically corrected or reworked to meet the requirements stipulated in the standards or specifications because the product does not conform to the original purposes.

8.3.4 Disposition of nonconforming products

8.3.4.1 If any nonconforming items are discovered during the inspection of equipment and materials, a report on nonconforming items shall be issued and the nonconforming items disposed of according to the established processes.

8.3.4.2 In case nonconforming design is discovered during the process of construction, a field design change request shall be issued and the request shall be handled according to the established processes.

8.3.4.3 If nonconforming items are discovered during the process of construction, they shall be classified into the materials and equipment nonconformities and the construction nonconformities for the purpose of issuing reports, and the nonconformities shall be disposed of according to the nonconformity control processes.

8.3.4.4 Unless otherwise special acceptance criteria are presented, the corrected or reworked products shall be re-inspected based on the original acceptance criteria and control processes.

8.3.4.6 If required in the contract, the use-as-is products or the repair of the products not meeting the specified requirements shall be reported to the owner or its representative for approval.

8.3.4.7 The nonconforming item reports shall be periodically reviewed and classified by types and shall be used as the analysis data of the quality trends used to check the nonconformity trends and repeated defects or as the basis of the need for corrective actions.

8.3.5 Records

Documents related to nonconforming items shall be maintained and managed as quality records.

8.4 Analysis of data

8.4.1 The head of the quality management Department and the head of relevant Department shall collect and analyze the appropriate data to prove the conformity and the effectiveness of the Quality Management System, and to provide following information to determine if the effectiveness of the Quality Management System can be continually improved.

1) Customer satisfaction
2) Conformity to product requirements
3) Occurrence and handling of nonconforming items
4) Occurrence and handling of defects
5) Internal quality audits and quality guidance/inspections.
6) Corrective and preventive measures
7) Suppliers‟ quality activity levels and ability
8) Other matters related to quality activities

8.4.2 The results of analysis shall be used to determine the following:

1) Trends
2) Results of operation
3) Customer satisfaction/dissatisfaction
4) Effectiveness/efficiency
5) Contribution level of suppliers
6) Quality, financial and economic values

8.5 Improvements

8.5.1 Continued improvements

8.5.1.1 To improve the effectiveness of the Quality Management System continually, the head of the quality management Department and the head of relevant Department shall review and utilize the following matters.

1) Project Quality policy
2) Continuous upgrading of the quality objectives
3) Results of reviewing process effectiveness
4) Results of internal quality audit

5) Results of the analysis of data
6) Results of corrective and preventive measures taken
7) Results of management review

8.5.1.2 The head of the quality management Department and the head of relevant project Department shall identify the objects of improvements for reflection when establishing the quality objectives or detailed implementation plan.

8.5.1.3 The head of the quality management Department and the head of relevant project Department shall improve related items according to the improvement program, and if the schedule and details are changed during the process of improvement, the improvement program may also be changed.

8.5.1.4 The head of the quality management Department and the head of relevant project. Department shall confirm and evaluate the results of improvement for each item subject to improvement, and shall change the improvement program or otherwise establish appropriate measures in case the results are insufficient.

8.5.2 Corrective action

8.5.2.1 The head of the quality management Department and the head of relevant project Department shall establish regulations and procedures containing the following items for the relevant parties to take corrective actions, remove the causes of nonconformities and to prevent the recurrence of nonconformities.

1) Review of nonconforming items (Including customer complaints)
2) Deciding causes of nonconformities
3) Evaluation of the need for action to ensure that nonconformities will not recur.
4) Determination and implementation of necessary actions
5) Records related to the results of action taken
6) Review of corrective actions taken

8.5.2.2 Corrective actions shall be determined by evaluating the importance of the following problems.

1) Size and seriousness of the problem
2) Importance and the urgency of the problem
3) Technical degree of difficulty
4) Required budgets, manpower and support
5) Loss expenses resulting from nonconformities
6) Influences on reliability, safety and customer satisfaction level

8.5.2.3 Items requiring corrective action shall include the following:

1) Nonconforming materials and products
2) Nonconforming construction and process
3) Customer complaints (Defects, civil petitions and others)
4) Nonconforming Quality Management System (Discrepancies noted during internal audits)
5) Supplier-related problems
6) Inspections and test results

7) Management review results and improvement areas

8.5.2.4 Corrective actions shall be taken based on the following sequence and procedures.

1) Nonconformities of products, process and the Quality Management System, and the identification of customer complaints.
2) Check the causes of nonconformities and record the results of survey
3) Determine corrective actions required to remove the causes of nonconformities.
4) Take corrective actions.
5) Confirm the effectiveness of the corrective actions taken. If the effectiveness is found to be inadequate, take corrective actions again or otherwise take appropriate follow-up actions.

8.5.2.5 If any change occurs in the business procedures or method as a result of taking corrective actions, such change shall be reflected in the company standard procedures and guidelines to prevent recurrence.

8.5.3 Preventive measures

8.5.3.1 The head of the quality management Department and the head of relevant project Department shall establish regulations and processes reflecting the following to remove the causes of potential nonconformities and prevent the occurrence of nonconformities.

1) Determination of potential nonconformities and the causes
2) Evaluation of the need for measures to prevent the occurrence of nonconformities.
3) Determination and implementation of necessary measures
4) Records related to the actions taken
5) Review of the preventive measures taken

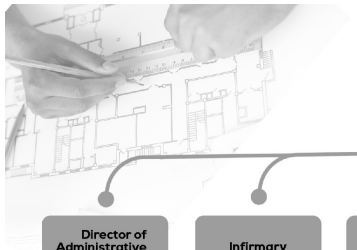
8.5.3.2 The following shall be considered when identifying the causes of potential nonconformities.

1) Occurrence of customer complaints and trends
2) Information on customer satisfaction/dissatisfaction. Matters related to repairs under warranty
3) Results of internal quality audits and quality guidance/inspections
4) Major quality problems discovered based on the analysis of the trends of nonconformities.
5) Equipment and material vendor evaluation reports
6) Supplier evaluation reports

8.5.3.3 Preventive measures shall be taken according to the following sequence and procedures.

1) Check potential nonconformities of products and process.
2) Evaluate the need for corrective actions to prevent the occurrence of nonconformities.
3) Check the causes of potential nonconformities on products, process and the Quality Management System, and record results.
4) Determine preventive measures required to remove the causes of potential nonconformities.
5) Take necessary preventive measures.
6) Take appropriate actions to ensure the preventive measures are being effectively implemented, and the results reflected during management review.

8.5.4 Records Documents related to corrective and preventive measures shall be maintained as quality records.



Dilan Lateef Polus
Branch Manager

Director of Administrative Service
- -Purchasing Department
- -Logistics Warehouse
- -Computer Specialist
- -Translator
- -Secretary
- -Office Boy
- -Cleaner
- -Driver
- -Waste Metarial Collector

Infirmary
- -Doctor
- -Nurse
- -Ambulance

Camp Area Manager
- -Electrician
- -Plumper
- -Cleaner
- -Social Facilities

Finance Manager
- -Accountant
- -Financial Data Op.
- -Work Permits

Hamdi Erdem Ablak
Technical Director

- QA / QC Company
- Insulation Company
- Concrete Company
- Kiln Brick Company

Director of Workshops
- -Metal Working Shop
- -Paint Workshop

Agency for Safety & Health at Work
- -A Class of Occupational Safety Specialist
- -C Class of Occupational Safety Specialist

Import & Export Company

Construction Plant, Equipment & Transportation Company

Security Company

Digita
- -Planning Engineer
- -Civil Engineer
- -Quantity Engineer
- -Data Entry Op.

PROJECT MANAGER

Mechanical Supervisor
- **Mechanical Designer**
  Mechanical Draftsman
- **Mechanical Engineer Part 1**
  Machine Technician
- **Mechanical Engineer Part 2**
  Machine Technician
- **Mechanical Engineer Part 3**
  Machine Technician
- **Hydrolic Engineer**

Raw Mat. Machinery Company

Domestic Manufacturing

Machinery Company

Construction Supervisor
- **Civil Engineer Industriel Structure 1**
  Construction Technician
- **Civil Engineer Industriel Structure 2**
  Construction Technician
- **Civil Engineer Administrative Buildings**
  Construction Technician
- **Architech**
- **Landscape Architech**
- **Survey Engineer**
  Mapping Technician
- **Payment Accountant**

Industriel Structure Company

Administrative Buildings Subcontractor

Landscape Company

Electrical Supervisor
- **Elc Electronics Engineer**
  Electrical Technician
- **Process Engineer**
  PLC Operator
  Control System Operator

Main Electric Subcontractor

Domestic Electric Subcontractor

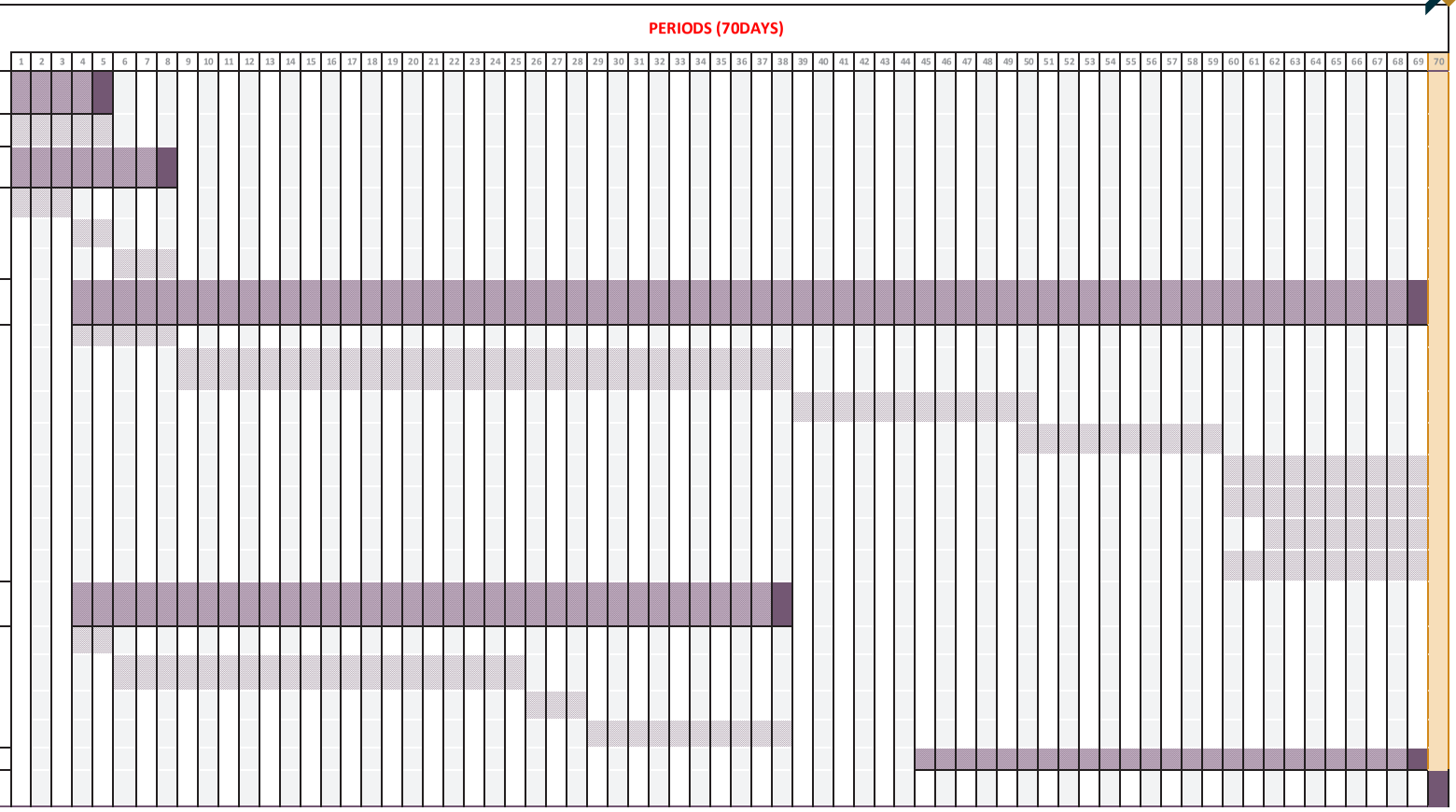
PERSONNEL CHART

PUKKA Construction

PUKKA

Proposed Time Schedule for Site Construction

	ACTIVITY	PLAN START	PLAN DURATION
A	**Mobilization**		5
A1	Mobilization	1	5
B	**Surveying and Desing Work**		8
B1	Setup Control Point	1	3
B2	Survey and Design work for Access Road	4	2
B3	Survey and Design work for Rig site	6	3
C	**Drilling Site and Material Storage Area (120m x 200m)**		55
C1	Surface Preparation	4	5
C2	Sub-Grade Operations (Cut, Fill & Subgrade)	9	30
C3	Sub-Base Layer Operations	39	12
C4	Concrete Cellar Operations	50	10
C5	Construction Of Mud Pit	60	10
C6	Construction Of Water Reservoir	60	10
C7	Construction Of Flare Pit	62	8
C8	Construction Of Culver Operations	60	10
D	**Access and Egress Roads (600m long and 7m wide)**		35
D1	Road Surface Preparation	4	2
D2	Sub-Grade Operations (Cut, Fill & Subgrade)	6	20
D3	Sub-Base Layer Operations	26	3
D4	Construction Of Culver Operations	29	10
E	**Water Line & Water Distribution**	45	25
F	**Handing Over & Demoblization**	70	1



PUKKA

PUKKA History:

The history of construction for the PUKKA Company begins with Hamdi ABLAK's contracting work in the 1960s. Hamdi ABLAK started to tend tenders with the company. By making infrastructure projects, bridges, health centres and schools, it has become one of the leading contractors in Corum-Turkiye.

2nd generation Erol ABLAK, continued his father's career when he graduated from Civil Engineering in 1983. He started her business life with the activities of Balıkesir-Susurluk Sugar Factory and Balıkesir-Bigadic Irrigation Facilities. He has realized many public housing projects and corporate auctions in her professional life. He still continues his career as an expert in public opinion in Balıkesir-Burhaniye.

3rd generation Hamdi Erdem ABLAK, took over the business in 2003 from Erol Ablak. Continuous improvement in the direction of change and development in the sector, has opened the first building test laboratory in the Balıkesir region. He took on the regional representation of corporate firms and started to provide services in many fields. After completing the renovation work at Ayvalık Vakıfbank Training and Recreation Facilities in 2008, he started his first overseas work in 2009 by establishing ERA Engineering Company in Pristina-Kosovo. Between 2009 and 2011, he successfully delivered the works of various public institutions in Turkey and abroad.

In 2011, they successfully delivered the PUK Party Headquarters Building in Iraq. In order to maintain stability in the region, they decided to partner with Civil Engineer Dilan Lateef Polus. In 2013, they established PUKKA CONSTRUCTION.

Pukka Construction has taken all the necessary legal permits to operate in the oil operation areas in the region. Genel Energy, Petoil, serves the largest oil companies in the region. It has been working in oil fields for 5 years with its team of experts on oil and pipeline equipment and industrial structures.

Pukka Company has completed all the financial, human resources and technical infrastructure necessary to be one of the strongest companies under today's competitive conditions. PUKKA Company further strengthened relations with government agencies and private institutions at home and abroad. The company is taking firm steps towards achieving its growth targets with its young and strong technical staff.

Perhaps a life-time may not be enough to make dreams come true, but every step-in dream brings future generations to dreams.

As PUKKA, we serve in the construction, oil and energy sectors, which are the locomotive sectors of the regional economy. Today, information age requirements are being felt very intensely. Managing technology and time has become a very important element. The fact that the companies serving in the sectors keep up with the change has been an inevitable fact for their sustainability policies. In this respect, it is not possible for companies to maintain and develop their assets only by working and producing. The competitive element and the cartelization in the sectors bring about difference and continuous change.

These changes in the global market are well understood and adopted by our company. Therefore, our company is not based on document-based quality understanding; is based on unconditional employer satisfaction by creating a whole with products, markets and human factors.