



**OBODOFEI**  
**Integrated Services Limited**

## SECTION A: GENERAL

### 1. Company Ownership and Management

- a. **Company Name:** Obodofei Integrated Services Limited (RC: 96829)
  - i. Contact Name: Engr. Funmilayo P. Ocheche-Alabi  
Ken Embelede
  - ii. Correspondence Address: 13, Lord Lugard Street, Asokoro Abuja.
  - iii. Telephone numbers: 08063944230, 08033813543, 09130195541(office direct line)
  - iv. Email: [info@obodofeild.com](mailto:info@obodofeild.com)
  - v. Website: [www.obodofeild.com](http://www.obodofeild.com)
- b. **Production line of company:** construction, energy, pipeline protection, metal fabrication, vessel supply and maintenance
- c. **Certificate of incorporation: Attachment 1**
- d. **Articles and Memorandum of Association: Attachment 2**
- e. **Date of Incorporation of company/Incorporation status:** 27<sup>th</sup> July 2011/Active
- f. **Registration address/location of company:**
  - i. Along Glory Land Hospital Drive, New Commissioner's Quarter, Opp Isaac Boro Expressway, Opolo, Yenagoa, Bayelsa State.
  - ii. 13, Lord Lugard Street, Asokoro Abuja.
- g. **Shareholding of the company:**
  - i. Business objective: Attached (**in the Business Plan**)
  - ii. Shareholders and shareholder's Equity (**Attachment 3**)
  - iii. Strategic role of equity partner in project development, plant operation, financing etc.
- h. **Directors:**
  - i. Name: Pius Andabai Wareyai
    - Contact details: 08138522003, info@obodofei.com



- Chief Executive Officer
- ii. Name: Ken Embelede
  - Contact details: 08033813543, info@obodofei.com
  - Executive Director (Operations)
- iii. Name: Engr. (Mrs.) Funmilayo Ocheche-Alabi
  - Contact details: 08063944230, funmyalabi@gmail.com
  - Executive Director (Projects)
- iv. Name: Irene T. Digitemie Opuene
  - Contact details: 08065836667, ituguemi@gmail.com
  - Director (Corporate Affairs)
- v. Prof. Steve Bassey
  - Contact details: 08136982664
  - Executive Director, Police and Admin
- vi. Name: Arch. Adebayo Noah Ojisua
  - Contact details: 08033155951, beyus2003ng@yahoo.com
  - Director
- vii. Prof. Benjamin Okaba
  - Contact details:
  - Board Adviser

**i. Senior management/officers:**

- i. Name: Easterday Imomotimi J.
  - Contact details: 09045111372, info@obodofeiltd.com
  - Finance
- ii. Name: Musaddiq Hassan
  - Contact details: 08112853367, info@obodofeiltd.com
  - Information Technology
- iii. Name: Ebiye Yankson Odu
  - Contact details: 08064886634



- Operations (Power)
- iv. Name: Engr. Kpuduwei Funakpo B.J
  - Contact details: 08134685061, info@obodofeiltd.com
  - Operations (Gas)
- v. Name: Smart Goodness Bruce
  - Contact details: 08074004320, info@obodofeiltd.com
  - HSE
- vi. Name: Ayemi Tamaraudoubra Patricia
  - Contact details: 09069465616, info@obodofeiltd.com
  - Administration
- j. Engineering Team
  - i. Tukuru Cyril Isaac
    - B.Eng Chemical Engineering
    - Department process engineer
  - ii. Rufus Evelyn
    - B.Eng Petroleum engineering
    - Department process Engineer
  - iii. Monday A Justice
    - B.Eng Chemical Engineering
    - Department process engineer
- k. Particulars of Auditor
 

Company Name: Paul L. Okpalo & CO (CHARTERED ACCOUNTANT)

Office Address: Heritage Bank building, Imgbi junction, Yenagoa, Bayelsa State.

Address: [Paulokpaloo@gmail.com](mailto:Paulokpaloo@gmail.com)

Phone Number: 08069305762
- l. Bankers:
  - i. Povidus Bank



- ii. First Bank
- m. Please give details of any changes of ownership of your company that have taken place in the last five (5) calendar years. (**Attachment 4**)

## 2. Financial Information

- a. Five (5) year record of Audited balance sheet (showing current liabilities, liquidities and gearing), Profit and Loss Accounts and Cash Flow Statements: (**Attachment 5**)
- b. Company Tax Clearance (latest 3 years): (**In process**)
- c. Bankers and Bank Reference/Investor Commitment (Bank Comfort letter/Proof of fund): (**Attachment 6**)
- d. Project funding arrangements (Debt, Equity or both): Equity & Debt
- e. Evidence of VAT Registration and Payment: in progress
- f. Federal/State government support (if any): Yes (Revenue Mobilization)

## 3. Assets, Liabilities & Debts: Evidence of assets owned:

- a. Copy of titled documents of properties (where applicable): on lease
- b. Full disclosure of debt profile: No Debt
- c. Current Liability Liquidity and Gearing:

## 4. Legal

- a. Has your company been involved in any litigation in the past five (5) calendar years (whether as claimant, defendant or third party)? If yes, please provide details: **No**
- b. Has your company been involved in any arbitration, expert determination or other non-judicial dispute resolution procedures in the last five (5) calendar years? If yes, please provide details: **No**
- c. Is your company aware of any claims, demands, actions, suits or enquiries from any party (including any governmental authority) or proceedings



- pending or threatened** against it or any of its affiliates)? If yes, please provide details: **No**
- d. Is your company aware of any outstanding material notices, judgments, orders, decrees, arbitral awards of a court, tribunal, arbitrator or governmental authority involving it, which would have an adverse effect upon its ability to perform its obligations under any future contract? If yes, please provide details: **No**
- e. Has your company ever been subject to allegations of breach of contract or law? If yes, please provide details: **No**
- f. Please confirm that neither your company, nor any of its affiliates is insolvent and has not stopped, or threatened to stop, paying its debts as they fall due: **not applicable**
- g. Please confirm that no order has been made and no resolution has been passed for the winding up of your company and/or any of its affiliates and, so far as your company is aware, no petition has been presented or threatened for the purpose of your company and/or any of its affiliates: **None what so ever**
- h. Please confirm that no administration order has been made and, so far as your company is aware, no petition for such an order has been presented or threatened in respect of your company and/or any of its affiliates, and no receiver or similar officer has been appointed in respect of your company and/or any of its affiliates or all or any of its or their assets: **None what so ever**
- i. Please provide an evidence of your financial capability and also any current credit lines available: **(Attachment 6)**
- j. **Please provide details of all necessary insurance covers and evidence of payment of insurance premiums:** In Progress



## SECTION B: GAS SUPPLY

### 1. Gas Off-take Arrangement

- a. Gas Requirement:
- b. Daily Volume: 300-500 mmscfd
- c. Annual Quantity: 109,500 mmscf – 182,500 mmscf
- d. Gross Heating Values (Minimum/Max MMBtu/d):
- e. Delivery Pressures
- f. Delivery Dates: November 2024
- g. Delivery Locations: Polako, Yenagoa LGA, Bayelsa State.
- h. Anticipated Demand/Supply Swing, Limitations/restrictions, Peaks

### 2. Permits and Licensing

Obtaining the necessary permits and licenses for Obodofei gas processing plant is a critical step to ensure legal compliance and operational safety. The following are the permits, licenses, and other relevant documents That we are currently processing.

- a. Environmental Permits, including Environment Impact Assessment study approved by the Federal and State Ministry of Housing and Environment: **in process**
- b. NUPRC permit/ License: **in process**
- c. Gas Use License: **In process**
- d. Construction/operating permits: **In process**
- e. Local Government Approvals: **In process**

### 3. Technical Due Diligence

#### a. General Information

- i. Proposed Facility:



Here is a list of the key equipment and facilities required for processing 300-500 mmscfd natural gas for LPG and CNG production, with capacity expandable to 800 mmscfd:

- **Inlet Facilities:**

- Inlet slug catcher
- Inlet separation and metering facilities
- Feed gas compressor with spare

- **Absorption Unit:**

- Absorber column (12 ft diameter)
- Regenerator column (10 ft diameter)
- Lean/rich amine heat exchangers (2x50% capacity)
- Absorber overhead gas cooler
- Amine circulation pumps (2x100% capacity)
- Amine reclaimer with filters
- Amine storage tanks
- LPG absorber section in absorber column

- **Dehydration Unit:**

- Triethylene glycol (TEG) contactor tower
- TEG regenerator
- Glycol pumps (2x100% capacity)
- Glycol filters, storage tank

- **NGL Fractionation:**

- Demethanizer column
- Deethanizer column
- Propane/butane splitters
- NGL product storage tanks

- **CNG Compression:**

- 5-stage reciprocating compressors (2x50% capacity)





- Discharge coolers
  - CNG storage vessels
  - **Utilities:**
    - Fuel gas system
    - Flare system
    - Power supply and distribution
    - Cooling water system
    - Instrument air system
  - **Spares Inventory:**
    - Column internals, gaskets, trays/packing
    - Compressor cylinders, seals, valves
    - Pump seals, bearings
    - Motor spares
    - Instrumentation
- ii. Location: Polako, Yenagoa LGA Bayelsa State
  - iii. Land Acquisition Status: In process
  - iv. Delivery condition (pressure, temperature, etc.):
  - v. Plant Stream Days Per Annum:
  - vi. Evidence of Technical Partners:

## **b. Project Delivery Timescales**

### **i. Licensing and Permits (3-6 months)**

- Apply for operational permits from NUPRC - 2 months
- Secure environmental permits from FEPA - 2 months
- Obtain construction permits from state and local agencies - 1-2 months
- Apply for any required tax waivers and import clearances - 1-2 months



- ii. Front End Engineering Design (FEED) Study (2-3 months)**
  - Develop process flow diagrams, heat, and material balances - 3 weeks
  - Determine equipment sizing and prepare P&IDs - 4 weeks
  - Develop utility flow diagrams, plant layout - 2 weeks
  - Carry out FEED cost estimate, economic analysis - 2 weeks
  - Finalize FEED study report and recommend project sanction - 2 weeks
- iii. Detailed Engineering Design (4-5 months)**
  - Specify major equipment like columns, vessels, exchangers - 6-8 weeks
  - Detailed piping and instrumentation diagrams - 8-10 weeks
  - Electrical system design - 4 weeks
  - Control system philosophy and architecture - 4 weeks
  - Civil, structural, infrastructure design - 6-8 weeks
  - Prepare engineering design package handover - 2 weeks
- iv. Procurement (5-6 months)**
  - Inquire major equipment like columns, vessels - 8 weeks
  - Evaluate bids, award contracts, follow-up - 8 weeks
  - Procure bulk material like pipe, steel, instruments - 12 weeks
  - Order electrical equipment, insulation, utilities - 8 weeks
  - Expedite orders, inspect material, and deliver to site - 4 weeks
- v. Construction Phase (9-12 months)**
  - Civil and structural works (4-6 months)
    - o Site clearing and preparation
    - o piling and foundations for equipment
    - o Structural steel erection
    - o Concrete works



- Buildings, control room, electrical substation
- Roads, drainage, fencing
- Mechanical Installation (4-6 months)
  - Receive and inspect equipment
  - Install columns, vessels, heat exchangers
  - Install piping and valves
  - Install utility equipment like boilers, compressors
- Electrical and Instrumentation (2-3 months)
  - Cable trays and lighting
  - Install transformers, distribution panels
  - Install field instruments, JBs
  - Terminate field cabling
- Insulation and Finalization (1-2 months)
  - Insulate equipment, piping
  - Painting and protective coatings
  - General cleaning and finishing

**vi. Commissioning and Startup Phase (3-6 months)**

- Pre-commissioning (1-2 months)
  - Hydrotest piping sections
  - Flush and clean systems
  - Check electrical, instruments
  - Calibrate and loop check instruments
- Commissioning (1-2 months)
  - Introduce feed stock
  - Perform leak tests
  - Lube oil flushing
  - Dry-out column internals
  - Cool-down process



- Startup and acceptance (1-2 months)
  - o Energize and start utility systems
  - o Introduce feed in stages
  - o Lightoff furnaces and boilers
  - o Startup units individually
  - o Performance testing
  - o Acceptance and handover

### **c. Technical Evaluation**

#### **Overview of Technology to be Used**

Here is an overview of the key technologies and processes that would be utilized in the proposed gas processing plant:

##### **i. Feed Handling and Separation**

- Slug catchers, scrubbers, filters - For inlet separation and cleaning
  - o Inlet slug catchers will be horizontal drum type separators, sized for 10-15 minutes retention time. This allows liquid slugs to settle out.
  - o Separator vessels will be two-phase or three-phase depending on required separation. Vessels will have internal demisting pads to minimize liquid carryover.
- Plate-fin heat exchangers - For gas cooling and condensate removal
  - o Plate-fin heat exchangers will be of aluminum construction . Extended surface fins provide good heat transfer rates.
- Separator drums - For bulk liquid separation
  - o Scrubber vessels will use structured high-surface area packing to remove contaminants and particulates from the feed gas.

##### **ii. Acid Gas Removal**



- Amine absorption process - Using MDEA solvent to absorb H<sub>2</sub>S and CO<sub>2</sub>
  - The absorption columns will use high-performance structured packing like Mellapak or Flexipak. This provides good mass transfer and lower pressure drop.
  - Lean amine circulation pumps will be seal-less magnetic drive centrifugal types suitable for MDEA service.
  - The amine reclaimer will use a short-residence time flash drum design to prevent amine degradation.
  - Heat exchangers will be plate-and-frame type made from stainless steel material for amine service.
- Packed absorption columns - Provide gas-liquid contact surface area
- Flash regeneration - To strip acid gases from rich amine

### iii. Dehydration

- Glycol absorption process - Using TEG solvent to absorb water vapor
  - The TEG contractor will have a Murphree efficiency of around 80-85% for bulk water removal.
  - Glycol flash separator vessels will have demister pads to minimize TEG carryover.
  - TEG regenerator reboiler will be a kettle type heat exchanger with an integral natural gas burner.
  - Lean glycol filters will be deep-bed back-washable filters rated for 5-micron particulate removal.
- Packed glycol contractor - Provides gas-liquid contact
- Reboiler regeneration - To reconcentrate rich glycol

### iv. NGL Recovery



- Refrigerated absorption section - In absorber column for NGL extraction
- Turbo-expander process - For cryogenic NGL separation
- Fractionation distillation columns - To split NGL components like propane, butane
- Refrigerant compressors and chillers - For low temperature gas cooling

**v. CNG Compression**

- Reciprocating gas compressors - multi-stage to achieve high discharge pressures
- Interstage cooling - Using heat exchangers for temperature control
- CNG storage vessels - For temporary storage before distribution

**d. Technology Ownership**

The plant will be designed using standard engineering practices. Equipment will be sourced competitively from approved vendors without restrictions. We shall be using Absorption-based gas processing plant design which does not need any proprietary or patented processes requiring special licensing for the core gas separation technologies. The key process units like:

- Amine treating for acid gas removal
- Glycol dehydration
- NGL absorption
- Fractionation for LPG production
- Feed compression and separation

are all well-established, commonly used processes in the industry without proprietary restrictions. The plant will be designed and engineered using standard, open-source process flow diagrams and simulation tools as needed. We will engineer a generic amine reclaimer.



## **e. Health, Security Safety and Environment**

### **1. INTRODUCTION**

This document outlines the Obodofei Integrated Services Limited strategy for Managing HSE on all our projects. Specific HSE plan will be developed on project by project bases.

### **2. POLICY STATEMENTS**

OISL's Policy Statements on Health, Safety and Environment (HSE), Safety Declaration, Environmental Policy, Security Policy, Health Policy, Drug, Alcohol and Firearms Policy, Personal Protective Equipment (PPE) Policy and Night Driving/Night Sailing Policy are included in Appendix I of this procedure.

### **3. PURPOSE OF THE HSE PLAN**

This Health, Safety and Environment Plan has been established in order to cover the OISL HSE Plan in the course of the execution of our projects from the Mobilization Phase, through the Execution Phase. It has been put together to define the HSE Policy and the Procedures, which shall apply to all the works during project.

It provides a framework for the formal identification and assessment of hazards as well as the steps that will be taken to control the hazards, and in case of failure, provides recovery measures. It sets out clear HSE Objectives for the realization of the Project.

### **4. HSE STANDARDS**

This HSE Plan has been based on the following laws and regulations, standards and codes of practice relating to HSE.

### **5. International standards**

- UK Health and Safety at Work Act 1974.



- Occupational Safety & Health Administration (OSHA) Standards.
- ANSI Standards.

## **6. Legislation**

- Guidelines and Standards for Environmental Pollution Control in (1990).
- Injured Workers Compensation System (1987).
- Occupational Health and Safety Regulations.
- Factories Act (1987).
- Mineral Oils and Safety Regulations (Safety) 1963.

## **7. Client's Specifications**

Policies and Procedures.

Supervisors and other employees shall be made aware of the provisions of this HSE Plan through HSE information dissemination methods like HSE Meetings, Inductions, Newsletters, Poster Campaigns; information displayed on HSE Information Boards, and HSE Training.

## **8. HSE TARGETS AND OBJECTIVES**

The HSE Targets and Objectives set out in the Sub-contractor policies shall apply to all the phases of the work, namely Mobilization Phase, Execution Phase. They have been set to provide sufficient challenges for the Sub-contractor and sub-sub-contractors to act in a positive manner for the achievement of the Client's HSE Policies.

They shall act as a tool to measure HSE Performance by periodically comparing actual performance against set targets and objectives. They shall be cascaded down the organization during HSE Induction Training, through newsletters, and during HSE Meetings. They shall be reviewed regularly during HSE Review Meetings relative to the phases of the work.





## 9. HSE MANAGEMENT STRUCTURE AND RESPONSIBILITIES

### HSE Organization: Personnel responsible for Implementation of HSE objectives

#### 10. Description of Execution Phase HSE Responsibilities

The purpose of this section is to outline the crew organization and to outline their specific HSE responsibilities. Health, Safety, and Environmental objectives is as important as time, cost, and quality. Accountability for HSE success and failure Company's HSE expectations are conveyed to line management in depth. These responsibilities will be transmitted to the key individuals listed below and documented as soon as the individuals are identified for the project.

The responsibilities of each key individual are subject to change and anytime and will be reviewed on a project basis and updated accordingly by the HSSE Manager, and Project Manager Specific line responsibilities are as shown below:

#### 11. *Project HSSE Manager*

Responsibility for informing management on the status of implementation of the Health, Safety, Security & Environmental policies is vested in the HSSE Manager, who is responsible to the Project Manager .The responsibilities of the Project HSSE Manager are as follows and can be reviewed:

- a. Reviews and advises company on HSSE related policies and implementation thereof.
- b. Reviews HSSE performance of company and advises management of areas of unacceptable performance and develops action plans to improve HSSE performance.



- c. Develops and evaluates HSSE training program and advises management on the acceptability of current programs and evaluates the need for modification of existing programs or implementation of new programs.
- d. Is responsible for the selection, evaluation, and training of HSSE officers, who are selected to represent the HSSE program in the field.
- e. Evaluates HSSE facilities and advises management of current status and evaluates the need for modification or improvement of existing facilities.
- f. Evaluates procedures and advises management on their acceptability and their potential impact on HSSE related issues.
- g. Liaises with high level contacts within client organizations on HSSE issues.
- h. Liaises with governmental contacts on HSSE issues .
- i. Stays current on HSSE related legislation and advises management on potential impacts.

## **12. *Project QA/QC Manager***

Responsibility for informing management on the status of implementation of the Quality policies is vested in the Project QA/QC Manager, who is responsible to the Project Manager. The responsibilities of the Project QA/QC Manager are as follows and will be reviewed on an annual basis:

- a. Reviews and advises company on QA/QC related policies and implementation thereof.
- b. Reviews QA/QC performance of company and advises management of areas of unacceptable performance and develops action plans to improve QA/QC performance.
- c. Develops and evaluates QA/QC training program and advises management on the acceptability of current programs and evaluates the need for modification of existing programs or implementation of new programs.
- d. Is responsible for the selection, evaluation, and training of QA/QC officers, whom are selected to represent the QA/QC program in the field.



- e. Evaluates facilities and advises management of current status and evaluates the need for modification or improvement of existing facilities.
- f. Evaluates procedures and advises management on their acceptability and their potential impact on QA/QC related issues.
- g. Liaises with high level contacts within client organizations on QA/QC issues.
- h. Liaises with governmental contacts on QA/QC issues.
- i. Stays current on QA/QC related legislation and advises management on potential impacts.

### **13. *Project Work Manager***

Responsibility for the administration of the Health, Safety, Security & Environmental Plan for the project is vested in the Project Manager, who is responsible to the General Manager. The responsibilities of the Project Manager are as follows and will be reviewed on an annual basis:

- a. Administrates all phases of the established Health, Safety, Security & Environmental Plan on his project and is responsible for obtaining results.
- b. He is responsible for ensuring his line supervisors have a clear understanding of each of their responsibilities and specific duties.
- c. Makes a thorough review of all accident investigations and signs them prior to distribution.
- d. Holds one formal HSSE Meeting each week with his line supervisors.
- e. Reviews weekly the project's HSSE performance and takes action as may be necessary.
- f. In the event of a recordable accident, he conducts an investigation according to the requirements.
- g. Maintains effective and prompt line of communication of safety matters through all lines of supervision.



- h. Reviews and evaluates the individual HSSE performance of all members of supervision and provides guidance and training where needed to improve performance.
- i. Identifies Hazards.

#### **14. *Project Superintendent***

Responsibility for the safety performance in his assigned area is vested in the Project Superintendent, who is accountable to the Project Manager.

The responsibilities of the Project Superintendent are as follows and will be reviewed on an annual basis:

- a. Enforces all phases of the established HSSE Program as well as special controls issued by the Project Manager and is responsible for obtaining results.
- b. Participates with Project Manager and HSSE Officer in making a pre-job HSSE survey prior to the commencement of the job and whenever requested.
- c. Communicates safety information to his Supervisors and alerts them daily on potential dangers that may develop from their daily operations.
- d. Installs a workable housekeeping program, assigns duties to individual assistants and supervisors; makes daily check of work area; makes weekly housekeeping inspections (accompanied by a supervisor, if possible); keeps record of conditions found and corrective action taken; maintains safety signs and bulletin boards in clear and legible condition; checks condition of offices.
- e. Develops and maintains a workable inspection schedule for all equipment.
- f. Sees that supervisors are requiring all employees to make proper use of personal protective equipment such as safety lines, goggles, clothing, v



- entilation equipment, etc. Sees that safety equipment is recovered when employees quit or terminate.
- g. Makes spot checks covering housekeeping, unsafe conditions, condition of equipment and observance of safety rules.
  - h. Makes individual safety contacts with his supervisors.
  - i. Personally reviews all non-disabling injuries with injured and injured's supervisor and participates in the investigation of all recordable accidents, major equipment damages, or environmental spills.
  - j. Maintains an effective line of communication of HSSE matters to the men.
  - k. Instills in all personnel, by action, example, and training, a sincere attitude toward HSSE; develops a better understanding of efficiency in accident prevention.
  - l. Determines that adequate and suitable safety equipment is furnished and that it is properly used, cared for and maintained.
  - m. Assists with developing and communicating safe job procedures for unusual or hazardous operations.
  - n. Utilizes downtime because of bad weather, etc., for HSSE training and educational purposes, requiring supervisors to attend and participate.

Action : As listed

Completion : On going

#### **15. *Site HSSE Officer***

It is the responsibility of the HSSE Officer to provide field work management and supervision with the necessary service relative to safety activities and required advice for the promotion of an effective safety program. He is administratively responsible to the HSSE Manager and accountable to the Barge Captain/Barge Foreman with the functional activities relating to the He



alth, Safety, Security, and Environmental Plan. The responsibilities of the H SSE officer are as follows:

- a. Maintains current knowledge of published safety literature, safety regulations, and other communications and advises management of compliance and of conditions requiring attention.
- b. Makes thorough analysis of statistical data and inspections; delineates problem areas; and makes recommendation for solutions. Coordinates the efforts of the jobsite's Health, Safety, Security, & Environment Plan.
- c. Collaborates with the Project Superintendent and his staff in the development of required revisions to existing procedures, rules and regulations and submits proposed changes.
- d. Takes part in the review of all injuries and assists in investigating accidents.
- e. Collaborates with the Project Manager and his staff in the development and preparation of the weekly HSSE meeting agenda.
- f. Participates with the Engineer and the Project Superintendent in making a pre-job HSSE survey prior to the commencement of the job, whenever requested. This involves a visit to the site.
- g. Checks on the use of all types of personal protective equipment, evaluates their effectiveness and suggests improvements where indicated.
- h. Conducts independent audits to observe conformance with established Health, Safety, Security, & Environmental Plan and determines the effectiveness of individual elements of the plan.
- i. Establishes contact with subOISLs with the objective of maintaining good relations and coordination of accident prevention activities.
- j. Reviews all accident and investigative reports, providing instructions and guidance as needed to maintain flow of accurate, complete and prompt reporting of all types of accidents.



- k. It is the duty of the HSSE Officer to see that the best possible medical arrangements are made at the start of each job and to make sure all reports are prepared, distributed and maintained in a proper manner.
- l. The HSSE officer represents the HSSE manager in the field.

**16. *Site QA/QC Officer***

It is the responsibility of the QA/QC Officer to provide field work management and supervision with the necessary service relative to QA/QC activities and required advice for the promotion of an effective QA/QC program. He is administratively responsible to the QA/QC Manager and accountable Project Engineer for the functional activities relating to the Quality policy. The responsibilities of the QA/QC officer are as follows:

- a. Maintains current knowledge of published QA/QC literature, industry standards, and other communications and advises management of compliance and of conditions requiring attention.
- b. Makes thorough analysis of statistical data and inspection; delineates problem areas; and makes recommendation for solutions.
- c. Collaborates with the Barge Captain and his staff in ensuring the compliance with standards.
- d. The QA/QC officer represents the QA/QC manager in the field.
- e. Conducts independent audits to observe conformance with established procedures and guidelines.
- f. Establishes contact with subOISLs with the objective of maintaining good relations and ensuring compliance with set procedures.

**17. *Employee***

Each employee is expected, as a condition of employment for which he is paid, to work in a manner which will not cause damage to property, injury to himself or to those with whom he works. It is important to the concept of s



safety that each employee understands that responsibility for his safety is part of his job requirement. He will hold himself responsible for the following :

- a. Make every effort to understand his job.
- b. Anticipate every way in which a man might be injured on the job, and conduct his work to avoid accidents.
- c. Use the personal protective equipment provided.
- d. Be constantly alert to unsafe conditions and report them to his supervisor.
- e. Remember that practical jokes are out of place on the job.
- f. Report every injury no matter how small to his foreman.

If the employee fails to assume this responsibility, it is the same as if he intentionally performed inferior work. If he fails to follow the safety instructions of the supervisor or other levels of management, it is insubordination and he is subject to termination.

**18. *Focal Point for developing HSE objectives, tasks and targets for the project***

The overall focal point for the project will be a team comprising the project manager, HSSE manager, and superintendent. There will be additional teams which will have documented functions during various stages of the projects life. Some of the other teams will be as follows:

- Security Evaluation Team
- CA evaluation Team
- Safety evaluation Team





## **19. HEALTH PROGRAMME**

### **20. Mobilization, Work and Pre-Commissioning Phases**

Prior to Mobilization and subsequent commencement of Work activities the following Health aspects shall be considered.

#### **21. Medical Fitness Test**

Every member of the Project Team shall be medically certified fit prior to mobilization in line with the sub-contractor's Policy and Local Laws . A qualified and registered Doctor shall carry out this medical Certification in the sub-contractor's Retainer ship Clinic. Copies of the medical certificates shall be kept on site and presented to OISL / Client reps on request.

#### **22. Food Handlers' Certification**

OISL shall certify all food handlers in line with the Client 's and Government Health and Safety Regulations.

#### **23. Accommodation Facility**

For all community workers shall come from their homes to work. For all non- Bonny Residents accomodation shall be provided

#### **24. Sleeping Quarters**

The accommodation shall be constructed in such a manner as to provide adequate ventilation and protection against strong wind and adequately screened against insects. The accommodation area shall be adequately illuminated and ventilated. Beds shall be provided with a foam rubber mattress. Nutrition  
Workers shall be encouraged to partake of adequate nutrition.



**25. *Drinking Water***

There shall be an adequate supply of potable water for the workers. Regular tests, at least once a month, shall be performed on the water to ensure compliance with World Health Organization (WHO) Standards.

**26. *Eating Areas***

There shall be dedicated eating areas in the accommodation facility. These shall be kept clean always. All doors and windows shall be protected against rodents and insects and fitted with fly proofs. There shall be adequate ventilation and illumination. Food shall only be consumed in the eating areas in keeping with OISL's Hygiene Standards. Cooking of food in the sleeping areas shall not be allowed. Both the senior and junior messing areas shall be provided with refrigerator(s).

**27. *Toilet Facilities***

Toilet facilities shall be built into the accommodation facility. Dedicated personnel from the catering team shall keep the toilets clean always.

**28. *First Aid /Medical Provisions***

A First Aid Box shall be provided at the work sites, base office and shall be manned by a qualified Industrial Nurse. The First Aid Clinic manned by a qualified Industrial Nurse. This shall be accessible to project personnel.

Worksites shall be equipped with relevant drugs and facilities and replenished whenever necessary.

The First Aid Facilities shall be used for administering initial treatment to the patient/injured. Any patient requiring further treatment or Medical shall be transferred to the company's Retainership Clinic.

An average of one First Aider to fifteen workers shall be maintained. Training shall be ensured in order to maintain this ratio as the workforce inc



reases. Refresher courses shall be ensured. Each of the First Aiders shall wear an identification sticker on his/her hard hat.

### **29. Fire Protection**

Portable fire extinguishers shall be provided in the accommodation area and maintained in a serviceable condition throughout the duration of the project.

### **30. Garbage Disposal**

Fly-proof bins shall be provided at the accommodation area. All generated waste in the accommodation area shall be managed properly, through collection, segregation and disposal and in line with the Project Waste Management Plan .

### **31. General**

Lighting shall be provided via standby generators to ensure an adequate illumination of the accommodation area and the fabrication yards. Regular spraying with insecticide and/or fumigation of the accommodation area shall be ensured and when necessary, fumigation of the Onshore/Offshore Work sites shall be embarked upon.

### **32. Drug and Alcohol Abuse**

It shall be a termination offence for any of the OISL or Sub-contractor's employee to be under the influence of alcohol, or in possession of, or under the influence of any non-prescription drug, illegal or controlled substance while working on the Project. This rule shall apply on a 24-hours basis in keeping with OISL's Drug, Alcohol and Firearms Policy. Supervisors shall be empowered to conduct periodic checks to ensure compliance.



### **33. Hygiene and Housekeeping**

OISL shall apply all industrial health and hygiene standards in compliance with all relevant local and international rules and regulations.

### **34. Industrial Health and Hygiene Education Campaign**

To ensure that every member of the Project Team is aware of the health hazards, which their work exposes them to, OISL shall embark on an Industrial Health and Hygiene Education awareness campaign. These campaigns shall be in the form of Safety Meetings, Toolbox Meetings, Training, and Educational Posters.

## **1.0 SAFETY PROGRAMME**

### **1.1 Safety Supervision**

There shall be a HSE Advisor dedicated to the worksite. These HSE Advisors shall liaise on daily basis with the Superintendents to ensure proper Safety Supervision of personnel and the works.

### **1.2 Safety Motivation Programme**

Safety performance of staff or work teams will be closely monitored and they will be encouraged to achieve better performance through incentives, such as Safety Awards.

The type of awards and the frequency shall be determined by the HSE Committee. Incentive Programme shall be part of the agenda for HSE Review Meetings.



### **1.3 Fire Prevention Programme**

This Programme shall involve all Project workers and shall include training in fire prevention and what to do in case of fire, the relevant types of fire as well as the locations and use of portable fire extinguishers etc.

### **1.4 Swimming Certification Programme**

OISL shall ensure that all Project workers who will be involved in the offshore activities or any water-borne operations are capable of swimming to survival. Project workers employed from the Host Communities shall also be required to undergo swimming certification in keeping with the Client's specifications and relevant local laws and regulations.

### **1.5 Pre-Mobilization of Equipment**

The Client shall inspect all equipment required for the Project. This is to ensure that all pieces of equipment to be used are in good working condition. OISL shall also ensure that all pre-mobilized pieces of equipment are maintained in a serviceable condition throughout the duration of the work.

A list shall be kept on site for all pre-mobilized and approved equipment as well as their pre-mobilization certificates.

### **1.6 Pre-Mobilization of Personnel**

The Client shall pre-mobilize all Project personnel. It involves checks on the relevant certifications required by law for all categories of workers. A list of site personnel shall be kept on site.



## **1.7 Mobilization of Equipment**

This requires the transportation to site of all the equipment that passed the Pre-Mobilization Inspection. It involves Planning, Work Permit requirements (where applicable), and the implementation of the mobilization schedule in accordance with the Project Master Schedule.

## **1.8 Mobilization of Personnel**

This requires the transportation to site of personnel who passed the Pre-Mobilization requirements.

Note: All mobilization activity shall be subject to the Journey Management Plan. This is appended to the HSE Manual as Appendix 10. OISL shall mobilize to site only the personnel and equipment that passed the pre-mobilization requirements. A database shall be maintained on site for all mobilized site personnel which will contain information on their medical, swimming and professional competency certificate numbers, date of medical examination, swimming test, or competency test as well as their expiry dates.

## **1.9 Workmen's Compensation**

OISL shall insure all Project workers. In case of industrial accident requiring compensation, OISL shall follow the provisions of the 'Workmen's Compensation Decree 1987'.

## **1.10 Transitional Work Programme**

OISL shall implement a Transitional Work Programme for injured workers. This programme gives the injured worker an opportunity to



return to the workplace to perform meaningful, challenging, and productive tasks that will progressively support the mental and physical healing process, which can ultimately facilitate the return of the employee to his/her pre-injury/illness job.

The transitional work must be pre-approved by OISL's Medical Doctor.

### **1.11 Work Methods**

During project execution special activities shall require specific Method Statements for their execution. Prior to the commencement of such activities, Method Statements shall be prepared which will contain specific HSE Procedures and Hazard Analysis of each critical step of the activity. Supervisors shall ensure that Method Statements are available on site and that their workers are adequately instructed on the provisions of the Method Statements, especially the hazards associated with each critical activity. The contents of the Method Statement shall also be reviewed with the workers in the daily Toolbox Meetings.

### **1.12 Permit To Work System**

It is the responsibility of OISL's Works Supervisor to ensure that relevant work permits are obtained from the client for the performance of the works throughout the duration of the work.

### **1.13 Personal Protective Equipment**

OISL shall provide each worker with adequate Personal Protective Equipment applicable to the type of work the worker is invol



ved in. OISL shall indicate the appropriate Personal Protective Equipment (PPE) to be used by workers in the Method Statement for each activity. Supervisors shall carry out maintenance checks as well as the correct use of the PPE's by workers during the daily toolbox meetings and daily site inspections.

Personnel who are found without PPE or inoperative PPE will not be allowed to continue work until they have worn the PPE provided for them. If a worker/visitor is within a restricted area, without the required PPE, such worker/visitor will be removed from the area until proper PPE has been obtained. OISL's PPE Policy covers all workers including those employed from the Host Communities.

Flotation aids shall be provided for all the workers who shall be involved in water-borne operations in addition to the standard Personal Protective Equipment (PPE) required for their work.

#### **1.14 Worksite Safety**

In general, OISL shall comply with the Worksite Safety provisions developed on project-by-project bases.

### **2.0 ENVIRONMENTAL PROGRAMME**

OISL shall execute all phases of the Project with maximum consideration of the protection of the environment. In order to achieve this, OISL shall implement the following environmental programmes.

#### **2.1 Environmental Awareness/Communication Programme.**

OISL shall implement Environmental Awareness/Communication Programme in order to communicate environmental issues to the workers. This shall be achieved through Environmental Trai





ning, HSE Meetings, Poster campaigns, as well as Environmental Inductions which every worker must undergo. The environmental induction shall include the following:

- Instructions on the Host Communities shrines, both visible and invisible ones. Project personnel shall be advised not to destroy Host Community shrines. OISL shall include seasoned Community workers, who have a knowledge of the Host Community shrines, in every team in order to ensure that project personnel do not destroy any of these shrines.
- Instructions on the presence of Royal Pythons or Snakes regarded as gods and/or shrines by the Host Communities. OISL shall follow the same approach to ensure that project personnel do not destroy these Community deities.
- Instructions on Waste Management.
- Instructions on environmental protection through pollution control.

## **2.2 Waste Management Programme**

OISL shall implement a Waste Management Plan on the Project-by-project bases, which shall include the collection, segregation, handling (transportation to approved disposal sites) and final disposal. OISL shall maintain a tracking system for all generated wastes in keeping with applicable local laws. A proper Waste Management shall ensure pollution control.

## **2.3 Environmental Conservation Programme.**

OISL shall implement an Environmental Conservation Programme to include:

- Pollution Control.



- Wildlife Protection.
- Spills Control - oil spills, chemical spills and marine oil spills.

## **2.4 Environmental Impact Assessment (EIA)**

OISL shall maintain all plant and equipment in a serviceable condition in order to avoid oil spills from equipment in all phases of the project. Quartermasters and other boat drivers shall be properly inducted in order that they do not capsize the canoes or destroy the fishing nets of the Host Community fishermen during Project execution. During the Work phase, OISL shall execute all the work activities in such a manner as to cause minimum disturbance to the local communities, wildlife and vegetation in the area. All dredging activities shall be planned and executed in such a way as to minimize the effect on the marine environment. This shall be duly covered in the method statement for dredging activities.

In general OISL shall implement the recommendations of the EIA already carried out specifically for the Project.

## **2.5 Environmental Monitoring**

OISL shall continuously carry out environmental monitoring on the project. OISL shall provide facilities to follow up this environmental monitoring in order to compare the actual impact of project activities with baseline values of parameters monitored.

## **2.6 Site Restoration Programme**

Upon completion of the work activities, and as recommended in the EIA, OISL shall carry out a Site Restoration Programme in or



der to return the areas impacted upon by work activities, to as near as possible, to their original condition.

## **2.7 Environmental Management Plan/Programme**

An Environmental Management Plan/Programme specific to the project is included in the Project HSE Manual as Appendix 8.

## **3.0 HSE TRAINING**

For the success of OISL HSE, Environment Policies, the personal commitment of Project personnel in terms of expertise and motivation are essential. OISL Project staff, including Sub-contractors must be sufficiently aware, informed and trained to perform their daily activities in accordance with OISL's HSE Policies. It is Management's belief that staff who have acquired training in HSE Programmes as well as in their trade are invaluable assets to OISL as the application of experience gathered during training programmes help to minimize accidents.

### **3.1 HSE Induction Training Course**

The purpose of the HSE Induction Training Course is to inform new arrivals to site as well as those who have had prolonged absence from site on the specific site HSE requirements with particular attention to specific hazards to include the place they work, work methods, and the equipment with which the work is done.

Those concerned are:

- All OISL staff, be they on work sites or in administrative environments.
- New recruits, including temporary workers.



- Employees who change jobs or techniques.
- Employees who resume work after sick leave of at least 21 days.
- Sub-contractor personnel and visitors.

Staff transferred to new jobs shall be given special training on the safety regulations concerning the new job.

Under no circumstances shall an employee be assigned to a job for which he/she has not received sufficient training.

The responsibility for the HSE Induction Training lies with the HSE Manager and the direct Supervisor of the staff undergoing the training.

The Induction Training Course will cover the following subject areas:

- HSE Policies
- HSE targets, objectives and current performance.
- HSE Meetings.
- Security Awareness Training.
- Health Awareness Programme
- Environmental Awareness Training.
- PPE requirements.
- Accident /Incident Reporting.
- Unsafe Acts/Conditions Reports
- Worksite Safety.
- MEDEVAC procedure.

Anyone who has undergone this Induction Training Course shall be required to complete the Induction Training Form. The completed for



ms shall be kept in a file in the HSE Department for record purposes. In addition, he/she shall be given an induction sticker, which he/she shall post on his/her hard hat. The induction numbers of Project staff shall be included in the site team database.

### **3.2 HSE Training Programme**

A detailed Training Programme specific to the Project is included, shall include employees' names, course content, date for the course, or organizing consultant, and course venue. The Programme shall cut across the entire spectrum of the workforce including Supervisory and Management personnel as well as Sub-contractor personnel.

In addition to the training program, which shall be issued to Departmental Heads, advance notification shall be published prior to the day for the courses to enable Unit/Departmental Heads to plan their jobs to accommodate the training and at the same time meet up with their schedules.

A record of training attended by staff shall be kept on site.

## **4.0 HSE AUDITS/INSPECTIONS**

### **4.1 HSE Audits and Inspections**

HSE management shall form an integral part of the overall site operation and is a Line Management responsibility. Supervisors who assign duties to staff must advise them on Safety precautions and continuously Audit to ensure compliance. The Project HSE Manager will carry out general HSE Audits and Inspections. There will also be Safety Audits on equipment, which will be undertaken by trained professionals. All the observations made during the Audits will be document



ed and communicated through the Line Management and will be followed-up. Reports on the various Audits will form an integral part of the agenda in the HSE Review Meetings.

## **4.2 Regular HSE Audits**

A HSE Audit Plan specifying team members, team leader (to come management) and the audited facility is included in the Project HSE Manual . This includes joint OISL/Client Audits and OISL Internal Audits. The scope of the Audits shall include but shall not be limited to the following:

- Worksite compliance with HSE procedures.
- Accuracy and completeness of HSE Department records.
- Sub-contractor compliance with the HSE Plan requirements.
- Compliance with Legislation and Client's requirements.
- Adherence to transport and journey management requirements.
- Assessment of HSE performance against set targets.

A HSE Department personnel who also is a member of the audit team shall do the reporting of the audit findings and recommendations. An audit action database shall be maintained by the Project HSE Manager.

When required for a joint audit of facilities, the Client shall be informed officially.

OISL shall give the Client any available assistance whenever the Client requires to carry out audits, reviews or surveillance activities on any aspect of the work related to HSE.



### **4.3 Unsafe Acts Auditing/Hazard Management**

Workers shall be encouraged to take part in unsafe acts auditing. The UAA system will provide an early warning of deviations from HSE standards which require corrective action. On the UAA form, the individual worker shall specify the type of observation made, that is, whether the observation is an unsafe act, unsafe condition, a near-miss or an environmentally unacceptable condition etc.

The following measures shall be taken to ensure that this system is understood and followed by the workforce:

- Following the production of the UAA booklet, the Project HSE Manager shall make a presentation to the Managers and Supervisors on the usage of the booklet.
- The Managers and Supervisors will thereafter educate their workers.
- The UAA booklet will be issued to the employees.
- Supervisors will include UAA report reviews in their Toolbox Meetings.

A Hazard Management Register shall be maintained for all hazards identified requiring immediate correction and actions to prevent recurrence shall be stated. Any identified hazard corrected shall be closed out. The status of the identified hazards shall be audited weekly. A database of this register shall be maintained on site.



#### **4.4 Regular HSE Inspections**

HSE Inspections by HSE Advisors shall be carried out once a month on their respective worksites. The proforma shown in the Project HSE Manual shall be used.

Line Supervisors shall also carry out weekly HSE Inspections on site.  
Audit of Sub-contractor HSE

Sub-contractors will be required to carry out internal audits on their own. OISL will include audit of Sub-contractor facilities in the Project Audit Plan.

### **5.0 HSE STATISTICS**

#### **5.1 Weekly Safety Statistics Report**

The purpose of the Weekly Statistics Report is to provide Management with a tool for closely monitoring Safety Performance and is used as the basis for the HSE Review Meetings. The report allows Management to analyse incidents, to identify trends and to take the appropriate preventative actions. The Report ensures that Safety Performance is regularly monitored and assists in highlighting those areas where action is needed.

Frequency

- The Report is completed on a weekly basis.

Responsibility

- The Site HSE advisors are responsible for completing the Report.





- The Project HSE Manager is responsible for collating the completed Reports from the various sites, analyzing the results, highlighting areas of concern, suggesting remedial actions and for forwarding it to the Project Manager.
- The Project Manager is responsible for reviewing the Report, and for instigating any required remedial activities.

#### Distribution

The Project HSE Manager shall make the report available for the HSE Review Meetings. In addition to the copies kept on file at site, one copy shall be sent to the Company HSE Manager for any further action, and one copy shall be sent to the Client if required.

The Report, together with all back up information, is summarized for the Monthly Safety Reports.

#### How to Complete

Guidance on how to complete the proformas is included in the Project HSE Manual.

## **5.2 Monthly Safety Statistics Report**

The Monthly Safety Report Proforma shown in the Project HSE Manual shall be used to compile the Monthly Safety Statistics Report. It fulfils two main functions, both of which relate to accurately measuring Safety trends and performance, as follows:

- a) At Management Level, it summarizes the Weekly Reports. It is used as the basis for the review of Safety Performance in the Monthly HSE Review Meetings.



- b) At the Director's Level, the Monthly Report provides a coherent summary of the Safety Performance. The Report is reviewed at the Monthly Meetings.

#### Frequency

The Report is completed monthly.

#### Responsibility

- The Site HSE Advisors are responsible for completing the Report.
- The Project HSE Manager is responsible for collating the completed Reports from the various sites, analyzing the results, highlighting areas of concern, suggesting remedial actions and for forwarding it to the Project Manager.
- The Project Manager is responsible for reviewing the Report, and for instigating any required remedial activities.

#### Distribution

The Project HSE Manager shall make the Report available for the HSE Review Meetings. In addition to the copies kept on file at site, one copy shall be sent to the Company HSE Manager for any further action, and one copy shall be sent to the Client if required.

#### How to Complete

Guidance on how to complete the Monthly Report Proforma is included in the Project HSE Manual.



### **5.3 Monthly HSE Statistics Evaluation Report**

This covers other parameters monitored on other HSE components, namely Security, Health, Environment as well as Safety. The proform a shown in the Project HSE Manual shall be used to compile the Monthly HSE evaluation Report.

It is the responsibility of the Project HSE Manager to complete the Monthly HSE evaluation Report, analyse the results, highlight areas of concern and suggest remedial action(s) before sending a copy to the Project Manager who has the responsibility to review the report and instigate any required remedial action(s). This report shall also be discussed in the HSE Review meetings.

A copy shall be kept on site for record and audit purposes.

### **5.4 Graphical Trend Analysis**

On a monthly basis, graphical analysis shall be made for the various HSE parameters monitored on the Project (audits, drills, training, meetings, UAA reports, FAC, MTC, LTI, LTIF, etc) to help compare actual performance against set targets in order to find areas of weakness and instigate remedial actions.

### **5.5 Annual Statistics Summary**

This consists of a summary of OISL's monthly statistics from all Project sites and bases from January to December every year. It shall include a copy of all occupational injuries and illnesses for the calendar year. This shall be completed by the HSE Manager and posted on all notice boards. An annual graphical representation of OISL's Lost Time injury Frequency shall also be made and posted on notice boards.



## **5.6 HSE Information Board**

A HSE Information Board shall be maintained at all sites and conspicuously displayed to catch the attention of new arrivals and visitors to the site. It shall be updated daily and shall contain the information shown in the Project HSE Manual. It is the responsibility of the HSE Advisor to ensure that the HSE Information Board is regularly updated.

This board enables every visitor / new arrival to see at a glance HSE performance summary of the Project site. Employees shall be encouraged to take a look at the board on a daily basis in order to be able to know the summary of the Project's HSE Performance record.



## **6.0 ACCIDENT/INCIDENT REPORTING, INVESTIGATION AND FOLLOW-UP**

### **6.1 Reporting of Accidents / Incidents**

All accidents/incidents will be reported, investigated and recorded in the HSE Statistics pursuant to OISL's Accident/Incident Reporting, Investigation and Follow-up Procedure, refer to the Project HSE Manual. The aim is to continually improve the working environment in order to prevent injury and reduce illnesses to personnel and reduce expensive equipment damage or losses. The protection of the environment is equally considered to be of paramount importance.

OISL shall immediately report verbally any accident to the Client's Site Representative. A preliminary written report shall follow within twenty-four (24) hours of all accidents, of whatever nature, involving death or Injury to OISL or Sub-contractor personnel or others and/or damage to property and equipment, together with any dangerous occurrences.

The Client's Project Manager is also to be informed. In the event of an accident involving death or serious injury to OISL's or Sub-contractor's personnel or any other persons, OISL shall thereafter, and without delay, secure the accident site and ensure no piece of equipment is moved or disturbed until permission is given by the Client's Site Representative. All accidents involving death must be reported immediately to the nearest Police Station.

### **6.2 Accident/Incident Notification and Reporting Structure**

**e**

OISL's Site HSE Manager shall confirm the notification with a full report in writing to the Client's and OISL's Representatives, in conjunc



tion with the Accident/Incident notification report proforma shown in the Project HSE Manual, giving the following Information where applicable:

- a) Name of OISL or Sub-contractor.
- b) Address of exact location of works or place where accident or incident or dangerous occurrence happened.
- c) Date and time of accident or incident.
- d) Enquiry (Investigation) team.
- e) Sequence of events.
- f) Details of injured person(s).
  - Name of injured person.
    - His/her occupation and how long in the job.
    - His/her date of birth.
- g) Details of Equipment Damaged.
  - Equipment Name.
  - Model and Serial Number.
  - Year of manufacture etc.
- h) Persons interviewed.
- i) Description of tasks being carried out (Events leading up to the accident / Incident).
- j) Description of accident or incident.
- k) Events after the accident.
- l) Results of investigation and analysis.
- m) Main causes and reasons for the accident or dangerous occurrence.
- n) Conclusion.
- o) Remedial action taken by OISL to prevent recurrence.



### **6.3 Accident / Incident Investigation**

One of the essential features of effective Safety Management is the thorough investigation and follow-up of accidents. The main objective of accident investigation is to prevent recurrence of similar accidents by identifying and recommending remedial actions. Follow-up should ensure that remedial actions are implemented.

Most accidents have more than one cause. Studies have shown that accidents can be caused by many factors and that underlying causes often exist away from the site of the accident. Proper identification of such causes requires timely and methodical investigation, going beyond the immediate evidence and looking for any deep-rooted conditions, which may form the basis for future accidents.

The right approach to any accident or near miss investigation is that it could be an indication of deficiency or failure in the management of the particular operation. Every accident should be investigated, although the level of investigators and detail of the investigation will vary and depend on the actual or potential injury, damage or loss.

Management must support, and be involved in investigations and be prepared to act on resulting recommendations. Commitment is best demonstrated when a thorough and objective investigation is carried out by capable investigators, and prompt action is taken to correct deficiencies. The Accident Investigation Report proformas shown in the Project HSE Manual shall be used in the Project.



## **6.4 Investigation Process**

The accident investigation process comprises the following consecutive stages:

- a) Accident Report.
- b) Inquiry Board Meeting.
- c) Establishment of the Facts.
- d) Analysis of Investigation Findings.
- e) Recommendations.
- f) Follow-up.

## **6.5 Inquiry Board (Investigation Team)**

The enquiry board should be made up of the following personnel, if possible:

- a) The Project Manager.
- b) The Project HSE Manager.
- c) The Site HSE Advisor.
- d) The Work Superintendent.
- e) Experts from outside the site, as necessary, where the incident calls for an Independent Report to be submitted to the Client or the Local Authorities.

The level of investigation depends upon the Accident/Incident Potential as determined from the Risk Assessment Matrix shown in the HSE Manual. Generally, it is best to limit the attendance to those directly involved or those who can give positive input. Too many people, from too high a level, will restrict the flow of information.

## **6.6 Functions of the Inquiry Board**

- a) Establish the facts.





- b) Analyse the findings of the investigations.
- c) Make positive recommendations.
- d) Ensure proper corrective action and follow - up is undertaken.

## **6.7 Timing**

Investigations should be carried out as soon as possible after the accident. The quality of evidence can deteriorate rapidly with time, and delayed investigations are usually not as thorough as those performed with dispatch. A prompt investigation is a good demonstration of Management concern for Safety.

## **6.8 Scope**

The scope of the investigation can be divided into four areas:

- a) Personnel.
- b) Technique.
- c) Third Party / Environment.
- d) Organisation.

In each of these areas, conditions, actions or omissions may be identified which could be factors contributing to the accident or to subsequent injury, damage or loss.

## **6.9 Establishing The Facts**

The objective of the investigation is to collect as many facts as possible, which may help the understanding of the accident and the events surrounding it. The initial stages of every investigation should gather and record all the facts, which may be of interest in determining causes. At this point, it must be emphasized that the purpose of the Inquiry Board is not to establish blame or decide punishment. The object is to determine the appropriate corrective action. Avoid reaching



g conclusions too early, and consequently failing to keep an open mind by not considering the full range of possibilities.

### **6.10 Background Information**

It may sometimes be appropriate to obtain background information before visiting the accident site. For example:

- a) General procedures for the type of operation involved.
- b) Records of instructions/briefings given on the particular job being investigated.
- c) Location plan.
- d) Command structure and persons involved.

### **6.11 Other Facts**

In investigating an accident a systematic approach has to be taken to establish all the relevant facts about how the accident occurred. In order to complete a thorough investigation the following approach should be taken:

- a) Inspection of the accident location.
- b) Interviewing of all personnel involved.
- c) Establishment of underlying causes.

Investigation should commence as soon as possible. The Investigators must maintain an open mind and avoid any casual conclusion. The Project HSE Manager shall liaise with the Project Manager on all safety and accident investigation issues. Further information should also be sourced from:

#### 15.11.1 Internal

- Records, documents, past training and accident statistics.
- Direct interviews and observations of employees.



#### 15.11.2 External

- Industrial Training Boards.
- Employers Association.
- Client Training Centres.
- Emergency Services.

### **6.12 Completion of Accident / Incident Reports**

Preliminary reports should be completed within one day after the accident / incident and sent up the line of hierarchy for comments. After the Project Manager notes his observations, he passes it back to the Project HSE Manager who has the responsibility to include all comments and produce the final report within seven days for the Project Manager's approval and subsequent distribution.

### **6.13 Dissemination Of Learning Points**

All the learning points following the incident investigation shall be disseminated to the workers via Toolbox Meetings, Weekly HSE Meetings, Monthly newsletters, posters and pieces of information posted on notice boards.

## **7.0 EMERGENCY RESPONSE**

Various emergency response scenarios have been identified and their response patterns are as shown below. Adequate resources, material and trained personnel shall be made available to ensure the implementation of a sound emergency response should the need arise on the Project.



## 7.1 Safety Emergencies

### a) Fire Emergency

In general, on noticing fire, Project staff shall follow the procedure below:

- Do not panic.
- Sound the alarm by activating the fire alarm, or by shouting Fire!, Fire!!, fire!!! or by Ringing a hand bell, whichever is applicable.
- Fire wardens proceed to the scene of fire with portable fire extinguishers.
- In tandem, other workers shall briskly walk to their designated mustering point and await further instructions.
- Muster point leaders shall carry out head count.
- Search Party shall check that no person is trapped.
- Workers shall be de-briefed after the fire has been put out and shall be asked to return to their places of work after the all-clear alarm – Three blasts of the alarm.

Specific Fire emergency procedures shall be prepared for the Offshore Site accommodation barges and the Onshore fabrication yards.

### b) Man Over Board

On noticing Man Over Board, the procedure below shall be followed:

- The person who notices the Man over Board shall sound an alarm or shout Man Over Board! Man Over Board!! Man Over Board!!!
- The Quartermaster shall stop all engines.
- The Deckhand and/other passengers on board shall:



- Pick up the nearest life buoy with a line and throw it so as to land as close as possible to the “Man Over Board” victim without hitting him.
- Keep victim constantly in view.
- Lifesaver ONLY should assist victim out of water. Others must remain on board the vessel.
- Gather at the Muster Point for a roll call.
- Remove the appropriate railing and lay it safely aside. Standby to pick up the victim.
- Rescue the Man Over Board.
- Administer First Aid Treatment as soon as possible if required or Instigate Medevac if required.
- DO NOT PANIC

## **7.2 Medical Emergencies**

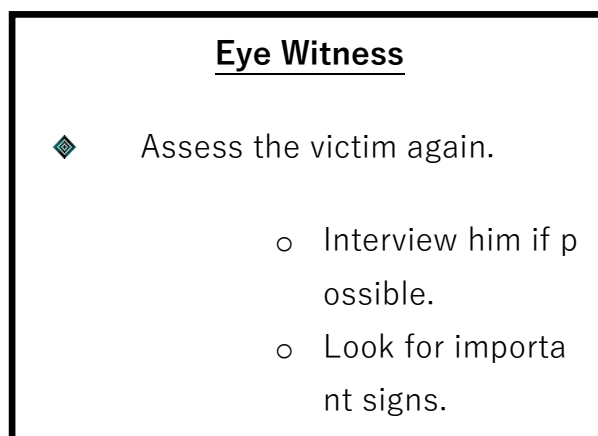
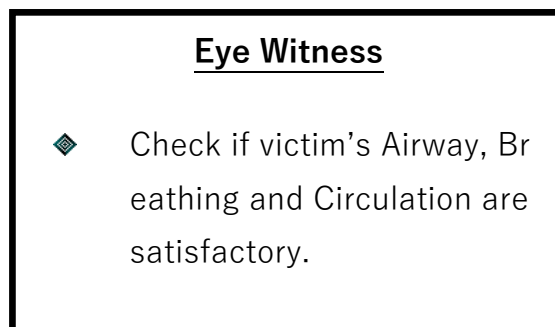
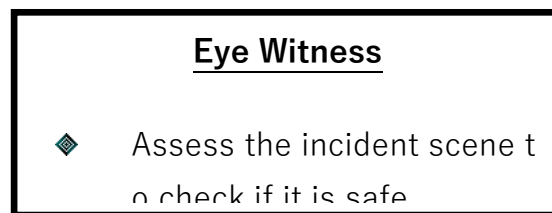
### a) Medevac

- In case of Medical Emergencies beyond the scope of the Site Clinic, the Medevac Procedure shown in the Project HSE Manual shall be followed whichever is applicable. The following should be noted:
- It is only the Site Doctor or Site Industrial Nurse that shall determine if Medevac is required.
- If Medevac is by Helicopter, the Client’s Site Representative shall be informed to initiate discussions with his/her Medical department.
- The Site Doctor or Industrial Nurse shall prepare the injured person ready for the arrival of the helicopter.



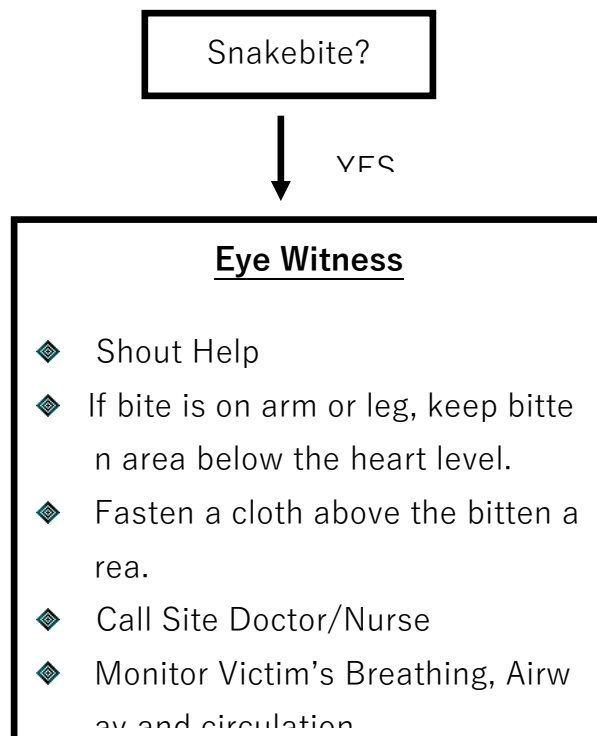
- OISL Base Office and the Retainership Clinic shall be contacted to make necessary arrangements to receive the injured person.
- The Site Doctor or Industrial Nurse shall accompany the injured worker from the site to the receiving Client's or OISL's Retainership Clinic.

In general personnel shall be educated on the Basic Principles to follow in case of Medical Emergencies as defined below:



b) Snake Bite

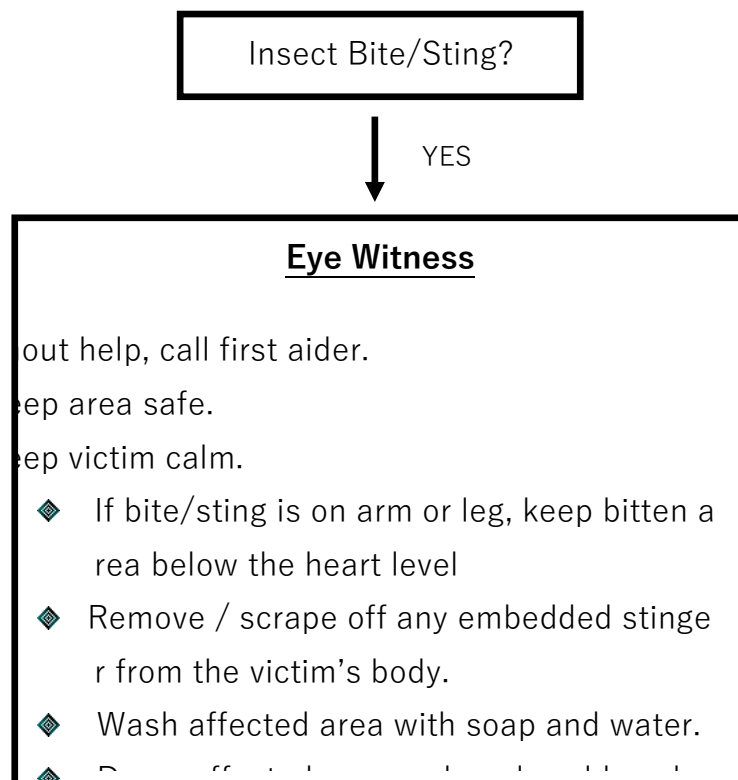
Snakebites are likely occurrences during bush clearing and every employee must at all times wear his/her Personal Protective Equipment while in the bush. No employee shall enter the bush alone or move alone to remote areas while in the bush. In case of snakebite, the following procedure shall be followed:



If considered safe, the snake should be killed and/or identified to enable the medics to know the type of venom introduced into the victim's body.



c) Insect Bites / Stings



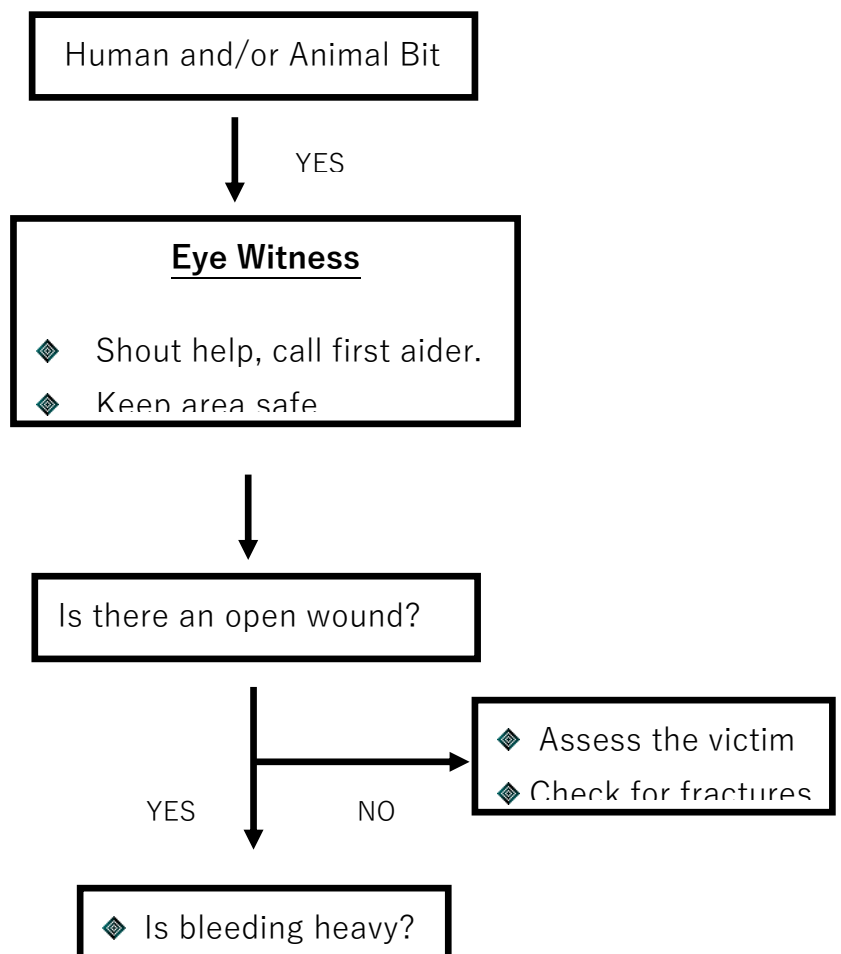
Symptoms of allergic reaction include: - pain, redness of the stung area, itching, swelling of the throat, decreased consciousness, difficult or noisy breathing.

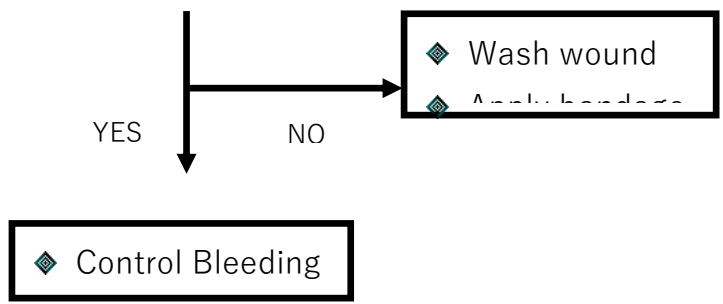




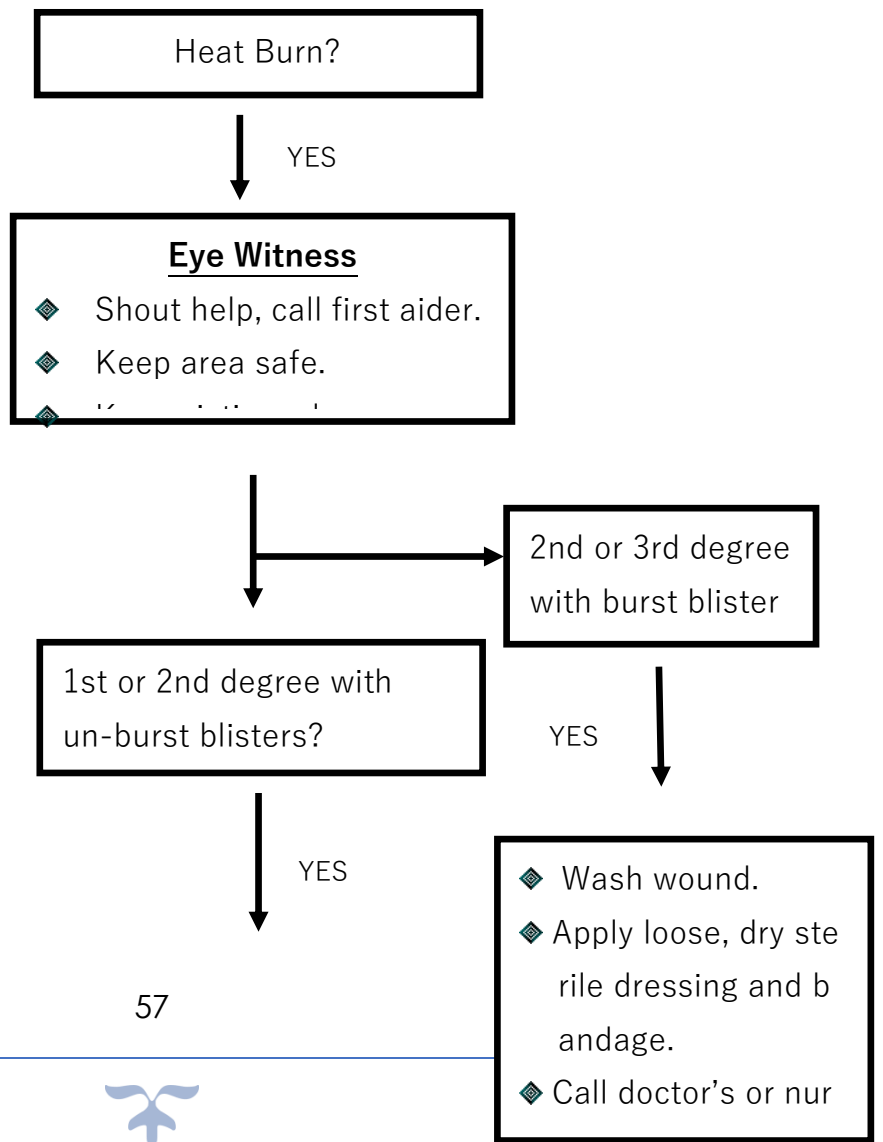
It is strongly advised that no employee shall apply perfumes while in the bush as this attracts bees and other insects, and no employee shall go to the bush alone.

d) Human and Animal Bites



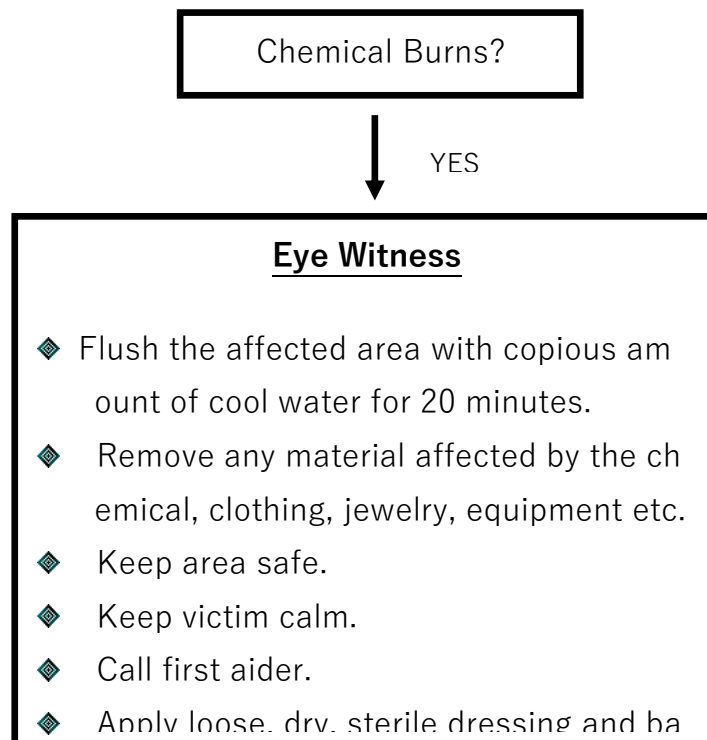


e) Heat Burns



- ◆ Wash out with cool water to reduce pain.
- ◆ Fix loose, moist, sterile

f) Chemical Burns



g) Fractures, Sprains, Dislocations, and Strains.



Fractures are cracks or breaks in bones. Fractures, which occur with no visible wounds, are referred to as closed fractures whilst those that result in open wounds are called open fractures. Fractures occur through falls, accidents, sports activities or bone diseases.

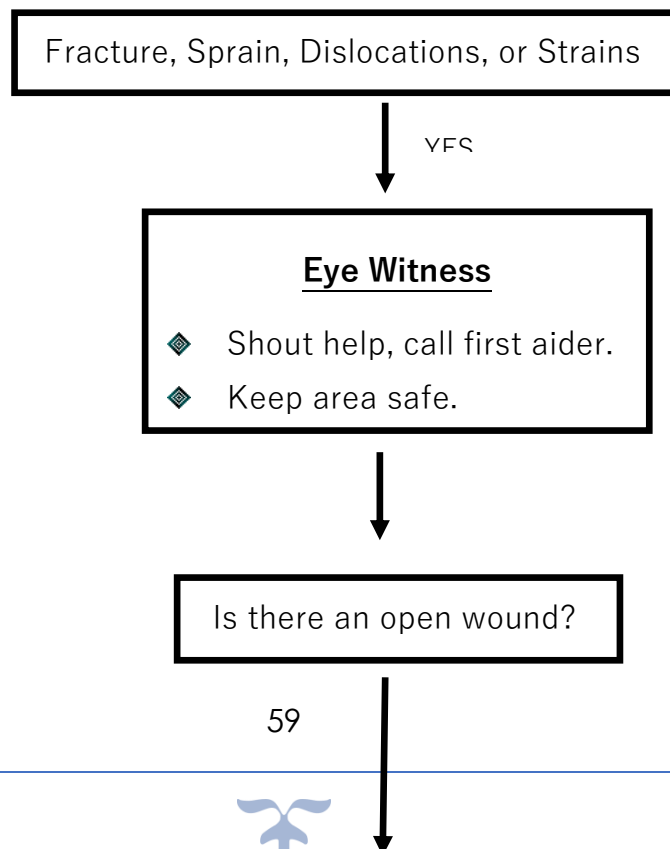
Sprains are torn tendons, ligaments and blood vessels around joints and can also occur through sports activities, falls, accidents as well as exertion.

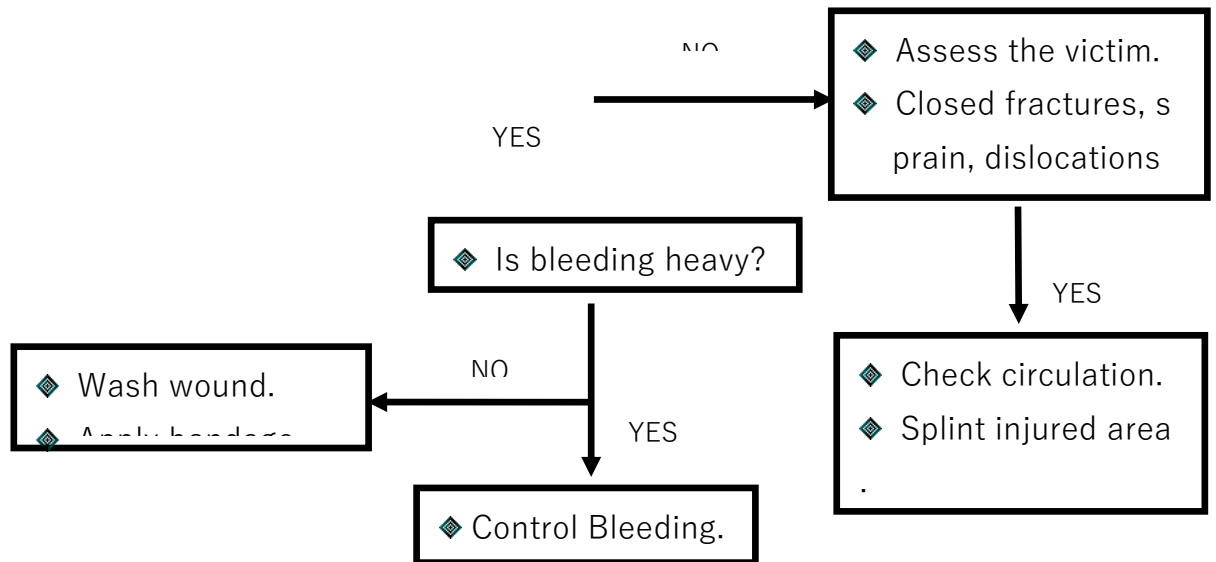
Dislocations are injuries to joints and the ligaments surrounding the joints. Falls, motor accidents and sports activities cause dislocations.

Strains are torn muscles. They occur more frequently in the back through improper lifting methods and over exertion.

The following procedure shall be followed in case of medical emergencies involving

Fractures, Sprains, Dislocations, and Strains.





### 7.3 Security Emergencies

- a) Security Emergencies
- b) Total Evacuation From Site

Some security emergencies have the potential to degenerate to a level such that a total evacuation of site personnel will become inevitable. Such emergencies include:

- ◆ Outbreak of Hostilities (Civil Unrest).
- ◆ Protracted industrial action by workers.
- ◆ Protracted Community Disturbance.

### 7.4 Environmental Emergencies

- a) Spillage Incidents

In case of spillage incident arising from OISL's activities, the following procedure shall be followed:

- ◆ As soon as possible, eyewitness shall inform the Project HSE Manager and / or the Site Manager.



- ◆ The Site Manager and / or the Project HSE Manager shall immediately inform the Client's Site Representative to follow up with their spillage response team.
- ◆ OISL's Spillage Control team shall immediately mobilise to the scene of the spillage with relevant spillage control materials such as: - absorbent booms, absorbent pads and absorbent pillows, etc.

b) Presence of Bee Colony

If a colony of bees is sighted within the work site or on the ROW during bush clearing or preliminary survey or during the actual work execution, the following procedure shall be followed:

- Eyewitness shall inform other workers immediately.
- No worker shall disturb or go close to the bee colony.
- Avoid the area until such times the bees leave. In most cases the bees are always on transit and leave within one day.
- Ensure everyone is informed during the toolbox meeting.

## **7.5 Emergency Contact Numbers**

Emergency Contact Numbers for personnel required for Safety, Health, Environmental and Security emergencies shall be compiled for both OISL and the Client and posted at strategic areas on Site.

### **a. Communication Facilities**

OISL shall maintain a sound communication system to enhance fast reporting of Project HSE issues to the key persons required for HSE Management and to the Client. To this end, telephones, fax machines, radios (fixed types or hand-held types) shall be maintained, which



never is applicable, at the various Work Spreads, Fabrication Yards, and office yards and offshore Work site on a 24-hour basis.

### **b. Emergency Drills**

Drills shall be planned and executed to test the effectiveness of the emergency procedures. Project specific Drills Plan is included in the Project HSE Manual as Appendix 15.

## **b. HSE COMMUNICATION AND DISSEMINATION**

### **a. HSE Communication and Dissemination**

HSE Issues shall be communicated and disseminated to the workforce through the following methods: - HSE Meetings, Monthly Newsletters, Poster Campaigns, Video Clips, HSE Training Sessions and HSE Information posted on notice boards. Notice boards shall be positioned at strategic areas in the Onshore Fabrication Yards as well as the Offshore Site.

OISL shall encourage the workers to contribute to good HSE Performance during question and answer sessions in the Weekly HSE Meetings and HSE Training Sessions. In addition, suggestion boxes shall be positioned at strategic areas in the Onshore and Offshore Sites where workers shall be encouraged to post their suggestions for HSE improvement. These suggestion boxes shall also serve as receiving points for all unsafe acts and conditions reports made by the individual workers. HSE Advisors shall collect these suggestions and unsafe acts and conditions reports for analysis and review by the HSE Manager.



HSE Meetings (Toolbox Meetings, OISL's General HSE Meetings with the shop-floor, OISL/Client HSE Review Meetings, and Ad-Hoc Safety Meetings), their frequency, attendees, content, etc .

### **c. MANAGEMENT OF SUB-CONTRACTOR / VENDOR HSE**

- Sub-contractors and Vendors form an integral part of OISLs HSE Organization and shall be included in the overall HSE Management, procedures, statistics, training, reporting of performance, meetings, communication and promotions, inspection and audits. All Sub-contractors and Vendors will be pre-qualified by OISL against HSE standards before contract award. Records of these pre-qualifications shall be maintained by the HSE Department.

The awarding of contracts by OISL is therefore determined not only on the grounds of prices and technical ability but also on past records and present ability to carry out the work safely and without risk to the health of personnel and the protection of the environment.

The Sub-contractor's HSE Management structure shall be assessed by OISLs' Management to including the following:

- HSE Policy Statement.
- HSE Performance.
- Details of Personnel experience.
- Details of Personnel qualifications.
- Safe Working Procedures.
- Emergency Response Procedures.
- Personal Protective Equipment Procedures.
- Sub-contractors' Insurance Policies.





**d. Disciplinary Action**

HSE violations may attract verbal or written reprimands, suspension or even termination of appointment depending on the degree of offence. This shall be clearly communicated to every Project personnel during HSE Induction Training. The Yellow card and Red card system (the Project HSE Manual) shall be used to discipline erring Project staff.

**e. HSE ACTION PLAN**

Specific HSE Action Plan has been developed for all the HSE elements specifying activity, responsibility and target dates for completion.

**f. SECURITY**

The Security of the site, materials and personnel shall be maintained in accordance with the Project Security Plan included in the Project HSE Manual as Appendix 9. The Project Plan includes the following:

- The organisation for the management of Security issues.
- Identified items of potential hazard to the security of personnel and equipment.
- Security Systems.
  - Fencing / gates
  - Access Control.
  - Gate pass system.
- Staff Security awareness training.
- Security and logistics support resources (personnel and material) available to the Project.
- Escorts.
- Rescue operations.



**g. HSE CASE**

The Contractor shall develop the Project HSE Case for the operational phase of the Project certifiable to ISO 14001. This shall address the risks in the Receiving Facilities located at sites. The HSE Case shall cover all items of potential hazards to the personnel and the environment during the pre-Commissioning and Commissioning Phases of the Project and shall be transmitted to the Client for approval.

APPENDIX A

**SECURITY RISKS ASSESSMENT**

Levels : High Medium Low

	H	M	L	SECURITY RESPONSE (based on Security Plan)
Operations				OISL's Responsibility
Thefts		X		Soldiers, Mopols, and CLO
Sabotage, vandalism		X		Soldiers, Mopols, and CLO
Physical aggressions		X		Soldiers, Mopols, and CLO
Site blocked by the communities		X		Soldiers, Mopols, and CLO

APPENDIX A1



## SITE SECURITY PLAN

ACTIVITY	APPROX .START	APPROX .STOP	EQUIPMENT	LOCATION	TOTAL NO. SEAY C.	NIGHT/ D	SECURITY DETAILS/ COMMENTS

APPENDIX 'B'



## SECURITY STRATEGY

S/No.	STRATEGY
1.	OISL shall liaise with CLIENT to provide adequate security cover to escort all work equipment to the Worksite at Bonny. On arrival at the Worksite, the security escort will hand-over all security duties to dedicated Project Security Supervisor
2.	The dedicated Project Security shall provide escort cover for all requested site movement of all Sub-Contractor assets.
3.	Dedicated Project Security shall maintain a presence at key Project Worksite locations, including specified areas for night cover.
4.	OISL shall inform and maintain contact with the relevant Senior Government Security Officers.
5.	In the event of either a security incident or major crisis, OISL shall notify the CLIENT/relevant Government Agency for assistance and/or advice.

CLIENT PROJECT TEAM TELEPHONE CONTACT NUMBERS				
S/No.	NAME	DESIGNATION	OFFICE PHONE	MOBILE PHONE
1.		Project Manager		
2.		Client Representative	-	
3.		Project Engineer		

OISL'S PROJECT TEAM TELEPHONE CONTACT NUMBERS				
S/No.	NAME	DESIGNATION	OFFICE PHONE	HOME PHONE
1.		Project Manager		
2.		Deputy Project Mgr.		
3.		Project Engineer		
4.		HSSE Manager		
5.		Security Supervisor		

OISL'S PROJECT TEAM RADIO CONTACT FREQUENCIES				
S/No.	NAME	DESIGNATION	VHF FREQUENCY	VHF - CALL SIGN
1.		Project Manager		
2.		Project Engineer		
3.		HSSE Manager		
4.		Security Supervisor		

\*SIDEBAND (SSB) FREQUENCY: Frequency

\*\*MARINE VHF FREQUENCY: Channel

\*\*The Number of Security men ( Community & Mopol ) is to be confirmed later.

Mopol are staying within Job and Accommodation locations.



Security are to be contacted through Radio call and Cell phones.

## **i. Regulatory Compliance**

The following will form the key regulatory compliance for the gas processing plant project:

### **Permitting and Approvals**

- Obtain construction permit, operating license, and environmental compliance certificate from NUPRC. Apply at least 6 months before planned start date.
- Secure permits from State agency for effluent discharge, air emissions, hazardous waste handling. Apply for any tax exemptions.
- Obtain local permits related to building codes, utility usage, land use restrictions. Engage early with community.

### **NUPRC Environmental Guidelines**

- Implement NUPRC waste management guidelines - safe handling, storage, disposal of industrial and hazardous waste.
- Follow NUPRC guidelines on producing water management - monitor quality, reinjection specifications.
- Comply with NUPRC guidelines on wellhead operations related to safety, testing, certification etc.
- Maintain NUPRC recommended buffer zones around facilities near forests, rivers, residential areas.

### **FEPA Environmental Regulations**

- Conduct EIA covering impact identification, evaluation, mitigation measures for issues like oil spills, habitat damage, emissions etc.
- Treat gaseous emissions to meet FEPA regulatory limits for pollutants like SO<sub>x</sub>, NO<sub>x</sub>, VOCs.



- Install effluent treatment systems for produced water, sewage etc. as per FEPA guidelines. Perform toxicity testing.
- Ensure hazardous material storage guidelines are followed including containment, handling, labelling, PPE etc.

### **Safety Regulations**

- Classify hazardous areas as per codes and install electrical fittings suitable for area classification.
- Inspect pressure vessels, storage tanks, relief valves as per codes like API 510, API 653.
- Ensure staff competency verification, safety training requirements as per regulations. Maintain training records.
- Conduct equipment integrity tests like radiography, hydrotesting as mandated by codes. Maintain inspection logs.
- Implement prescribed precautions related to hot work, confined space entry, lifting operations, high voltage safety etc.

## ii. Security Blueprint

### **a. Perimeter Security**

- Concrete perimeter wall to be reinforced with steel rebar, embedded metal mesh, and topped with concertina razor wire. Wall foundation 3 ft deep to prevent tunneling.
- PTZ cameras to be high resolution (4K), all weather, with 30x optical zoom, IR night vision range of 150 ft, and video analytics. Camera pole foundations concrete encased.
- Lighting to be LED floodlights with luminance output of ~150,000 lumens. Integrated radar motion sensors and UPS backup. Pole foundations set in concrete piers.



- Entry sally port to have bollards rated for 100,000 lbs force vehicle impact. Kiosk constructed from ballistic glass. Entry barriers hydraulic operated, crash rated.
- Inspection pit to be reinforced concrete construction, partially covered with electro-hydraulic lifting lids. Mirror poles cemented into ground.

#### **b. In-Plant Security**

- Turnstiles to be biometric enabled with facial, iris scanning capabilities integrated with access control system. Provision for card/PIN as backup.
- CCTV coverage to include 4K cameras with 180° field of view lens for equipment monitoring. Dome cameras used in office/admin areas.
- Video analytics to include object classification, left behind object detection, loitering identification, augmented visualization.
- Radar systems to be volumetric wide area units for 3D perimeter and open area monitoring with >99% detection rates.
- Chemical/fuel storage to have hardened steel enclosures, locking systems. Critical valves to be chained and padlocked.
- Daily inspection checklist to cover flange bolts, valve positions, leak indicators, altered signage, debris/packages left behind.

#### **c. Emergency Systems**

- Emergency response plan to cover initial response, evacuation, medical aid, damage control, communications, restoration. Checklists for personnel roles.
- Fire and gas system to integrate IR and UV detectors, flame cameras covering all process equipment. SIL-2 rated safety PLC.



- Communication systems to include intrinsically safe radios, satellite phones, public address system, emergency response team vehicles.
- Bunker room to be designed as reinforced concrete shelter with air filtration, ration supplies, water, communication links.

## SECTION C: BUSINESS PLAN

### 1. Copies of Proposed business plan

#### a. Executive Summary:

Our Gas Processing Plant project, spearheaded by Obodofei Resources Limited, is a transformative endeavor poised to establish a pioneering gas processing facility in Polako, Yenagoa LGA, Bayelsa State Nigeria. Our strategic vision is to contribute to Nigeria's energy diversification, reduce carbon emissions, and drive economic development through the production of high-quality LPG and CNG.

#### b. Company Overview:

Obodofei Resources Limited comprises a multidisciplinary team of industry experts with **over [X] years** of combined experience in gas processing, engineering, finance, and sustainable energy solutions. Our leadership brings a deep understanding of Nigeria's energy landscape and a commitment to technological innovation. Our team with proven expertise includes:

- Chairman/CO: Pius Andabai Wareyai an investor of repute with investments in **A, B, C**, and proven experience in human management
- ED Operations: Ken Embelede an industry veteran with 20 years of experience management undertakings.





- iii. ED Projects: Funmi Ocheche-Alabi a project management specialist with over two decades in the oil and gas industry, known for project execution and project solutions.

**c. Market Analysis:**

Nigeria's energy landscape is evolving, with a growing emphasis on cleaner energy sources. The government's initiatives to promote LPG and CNG usage align with our project's goals. Our target markets encompass:

- i. Residential customers seeking cleaner cooking alternatives.
- ii. Commercial establishments looking to reduce energy costs and environmental impact.
- iii. Industries aiming to transition to greener fuel options.
- iv. The transportation sector demanding environmentally friendly CNG for vehicles.

**d. Key market insights include:**

- i. Between 2020 and 2030, demand is expected to grow at a compound annual growth rate of 16.6 percent per annum (<https://businessday.ng/news/article/nuprc-estimates-22-5bcf-daily-gas-demand-in-nigeria-by-2030/>)
- ii. Government initiatives promoting CNG as an alternative vehicular fuel.
- iii. Rising awareness of environmental impact and demand for cleaner energy solutions.

**e. Product and Service Description:**

- i. Our gas processing plant will consist of the following core components:



- ii. Raw Gas Intake: A dedicated terminal for receiving and preliminary treatment of raw gas.
- iii. Fractionation Process: Efficient fractionation towers with automated controls and safety features.
- iv. Compression Process: Multi-stage compressors with cooling systems for CNG production.
- v. Quality Assurance: Rigorous quality checks at each stage, including gas composition analysis.
- vi. Safety Measures: Emergency shutdown systems, fire detection, and evacuation protocols.

**f. Operational Plan:**

- i. Our plant's layout 10 hectares (144 plots) and is optimized for operational efficiency and safety. The process flow entails:
  - ii. Raw gas intake and pre-treatment to meet quality standards.
  - iii. Fractionation process that produces premium LPG fractions.
  - iv. Multi-stage compression of natural gas to generate high-quality CNG.
  - v. Stringent quality control measures at every stage to ensure product purity.
  - vi. Continuous monitoring, emergency shutdown systems, and fire detection mechanisms to ensure personnel safety.

**g. Marketing and Sales Strategy:**

- i. Our marketing efforts will include:
  - ii. Distribution Partnerships: Collaborations with established distributors and refueling stations for effective product distribution.



- iii. Educational Campaigns: Workshops, seminars, and digital content to raise awareness and benefits of LPG and CNG in terms of environmental impact and cost savings.
- iv. Online Platforms: Online platforms to engage customers, provide information, and facilitate product ordering. User-friendly interfaces for easy product ordering and information access.
- v. Pricing Strategy: Competitive pricing structures for LPG and CNG to attract a wide customer base. Customer loyalty programs and attractive pricing strategies to encourage adoption.

#### **h. Regulatory and Legal Considerations:**

- i. Our operations will align with Nigerian regulatory requirements, including obtaining permits, licenses, and approvals from relevant authorities. Rigorous compliance measures will encompass health, safety, environmental, and quality standards, ensuring public trust and safety.
- ii. Permits and Licenses: Obtaining approvals from relevant regulatory bodies
- iii. Compliance Measures: Strict adherence to health, safety, environmental, and quality standards.
- iv. Monitoring and Reporting: Regular reporting and audits to ensure ongoing compliance.
- i. Financial Projections:
  - i. Initial Investment: \$[Amount]
  - ii. Year 1 Revenue: \$[Amount]
  - iii. Year 1 Operating Expenses: \$[Amount]
  - iv. Gross Margin: [X]%
  - v. Net Profit Margin: [X]%
  - vi. Payback Period: [X] years



j. **Funding and Investment:**

- i. We are seeking \$[Amount] in funding, comprising [Amount] in equity and [Amount] in debt. Investors can anticipate an estimated ROI of [X]% within [X] years, with revenue projections reflecting sustainable growth.

k. **Risk Analysis and Mitigation:**

- i. A comprehensive risk assessment and mitigation approach includes:
- ii. Supply Chain Disruptions: Diversification of suppliers and the establishment of contingency agreements.
- iii. Regulatory Changes: Regular monitoring of regulatory updates and swift adaptation to new requirements.
- iv. Market Volatility: Hedging strategies and thorough market analysis to predict and address market fluctuations.

l. **Sustainability and Corporate Social Responsibility:**

- i. Environmental sustainability and community engagement are integral to our operations. Initiatives include:
- ii. Emission Controls: Implementation of advanced emission control technologies to minimize environmental impact.
- iii. Local Impact: Job creation and training programs to enhance local employment opportunities.
- iv. Community Projects: Support for community development projects, including environmental conservation and educational initiatives.

m. **Implementation Timeline:**



- i. Feasibility Studies: [Duration]
- ii. Engineering and Design: [Duration]
- iii. Construction and Commissioning: [Duration]
- iv. Full-Scale Operation: [Date]

n. **Conclusion:**

Our Gas Processing Plant project is emblematic of innovation, sustainability, and growth. By producing LPG and CNG, we envision transforming Nigeria's energy landscape, fostering economic development, and enhancing environmental stewardship. With a solid foundation in technology, compliance, and community engagement, our project is poised to drive change and create a cleaner, brighter future.

## 2. STRATEGIC GROWTH PLAN

This strategic growth plan outlines how Obodofei Resources Limited's gas processing plant will expand, evolve, and capitalize on opportunities over time.

a. Introduction:

The Obodofei Gas Processing Plant's strategic growth plan is designed to navigate the evolving energy landscape of Nigeria. This plan outlines a comprehensive strategy to expand operations, introduce innovative products, and establish the company as a pivotal player in the clean energy sector.

b. Vision and Mission:

- Vision: To be a pioneering force in Nigeria's clean energy sector, driving economic growth and environmental stewardship.
- Mission: Produce premium LPG and CNG while embracing innovation, sustainability, and social responsibility.



c. Current Status Assessment:

i. SWOT Analysis:

- Strengths: Cutting-edge infrastructure, skilled workforce.
- Weaknesses: Limited market penetration in western & northern regions, regulatory dependencies.
- Opportunities: Growing demand for eco-friendly fuels, untapped rural markets.
- Threats: Regulatory changes, supply chain disruptions.

ii. KPI Review:

- Current Production Capacity: 10,000 tons of LPG and 5,000 tons of CNG annually.
- Customer Satisfaction Score: 85%.

d. Market Expansion Strategy:

- Market Research:
  - Identify regions in western and northern Nigeria with rising demand for LPG and CNG.
- Entry Approach:
  - Establish satellite storage facilities and partnerships in key western and northern cities.
- Market Penetration:
- Conduct localized marketing campaigns and collaborate with local distributors.

e. Product Diversification:

- Research and Analysis: Assess feasibility of producing bio-LPG from organic waste
- Pilot Programs: Initiate bio-LPG production trials, partnering with local waste management firms.



- Launch Strategy: Launch bio-LPG with a "Green Fuel" campaign, highlighting reduced carbon footprint.
- f. Research and Development (R&D):
- R&D Allocation: Dedicate [X]% of annual budget to R&D initiatives that focus on process optimization, energy efficiency, and emissions reduction.
  - Technological Innovations: Collaborate with research institutions and technology partners to explore innovative solutions.
  - R&D Roadmap: Develop a clear timeline for implementing R&D findings into plant operations.
- g. Technology Upgrades:
- Equipment Audit: Conduct bi-annual audits to identify upgrade opportunities.
  - Automation Integration: Invest in AI-driven automation to enhance process efficiency and safety.
- h. Capacity Expansion:
- Capacity Triggers: Plan expansion when utilization reaches 80% of current capacity.
  - Scalability Strategy: Expand production capacity by 20% within 2 years.
  - Regulatory Navigation: Obtain necessary permits and approvals from NUPRC for capacity increase.
- i. Strategic Partnerships and Alliances:
- Partner Selection: Collaborate with [Local Distributor] to extend reach into western and northern markets.



- Mutual Benefits: Leverage distributor's existing network to gain traction in new regions.
  - Collaboration Agreements: Establish a partnership agreement outlining growth targets and responsibilities.
- j. Talent Development and Training:
- Skills Assessment: Conduct regular skills assessments to identify training needs.
  - Training Programs: Develop a comprehensive training program encompassing technical, safety, and leadership skills.
  - Career Pathways: Launch a leadership development initiative to groom internal talent.
- k. Sustainability and CSR Initiatives:
- Environmental Innovations: Research carbon capture and utilization technologies to reduce emissions.
  - Community Engagement: Establish a "Gas for Good" initiative, partnering with local schools for cleaner cooking solutions.
  - Transparent Communication: Publish an annual sustainability report detailing environmental and social initiatives.
- l. Financial Planning and Investment:
- Budget Allocation: Allocate funds as follows: R&D (7%), Capacity Expansion (20%), Technology Upgrades (10%), Market Expansion (8%).
  - Financial Projections: Projected annual revenue growth of 12% over the next 5 years.
  - Funding Sources: Utilize reinvested profits, equity financing, and targeted external investments.





m. Risk Management:

- Risk Identification: Conduct a comprehensive risk assessment for each growth initiative. Identify potential risks including regulatory changes and supply chain disruptions.
- Mitigation Strategies: Develop contingency plans and mitigation strategies for identified risks. Maintain close regulatory compliance, diversify suppliers, and develop contingency plans.
- Monitoring and Adaptation: Establish a system to monitor risk indicators and adjust strategies as needed.

n. Implementation Timeline:

- Phase 1: Year 1-2
  - Establish Western and northern satellite facilities.
  - Launch bio-LPG pilot program.
- Phase 2: Year 3-4
  - Upgrade compression systems.
  - Expand production capacity.
- Phase 3: Year 5
  - Launch full-scale bio-LPG production.
  - Evaluate international market expansion.

o. Conclusion:

The Obodofei Gas Processing Plant's strategic growth plan outlines a bold trajectory for our future. By capitalizing on market opportunities, investing in technology and sustainability, and fostering partnerships, we envision not just growth but a transformational impact on Nigeria's energy landscape and communities.

### 3. KEY PERFORMANCE INDICATORS



The following Key Performance Indicators (KPIs) are measurable values that will help us assess progress and performance towards achieving our goals and objectives. The KPIs will also provide valuable insights into various aspects of the operation. They are as follows:

**a. Operational KPIs:**

- i. **Production Capacity:**
  - Breakdown of LPG and CNG production capacity by unit (tons/day, cubic meters/day).
  - Utilization rate trend over time to identify peak demand periods.
- ii. **Plant Uptime:**
  - Downtime categorization: planned maintenance, unscheduled maintenance, equipment failures.
  - Uptime trend analysis to spot patterns affecting operational efficiency.
- iii. **Energy Efficiency:**
  - Energy consumption per unit of product output, categorized by individual process stages.
  - Energy efficiency benchmarking against industry standards.
- iv. **Yield:**
  - Comparison of feedstock input to LPG and CNG output.
  - Yield variances analysis with a focus on optimizing production processes.
- v. **Maintenance Downtime:**
  - Root cause analysis of maintenance-related downtime incidents.
  - Maintenance schedule adherence and its impact on overall production.
- vi. **Process Efficiency:**



- Process-specific efficiency metrics (compression efficiency, separation efficiency).
  - Continuous improvement initiatives in specific process areas.
- vii. **Waste and Byproduct Management:**
- Quantification of waste generated during processing and its responsible disposal.
  - Utilization of waste streams for energy recovery or other applications.

**b. Financial KPIs:**

- i. **Revenue:**
- Revenue breakdown by product (LPG, CNG) and customer segments.
  - Revenue growth trend year over year.
- ii. **Gross Profit Margin:**
- Detailed cost breakdown (raw materials, labor, energy, maintenance) impacting margins.
  - Gross profit margin comparison to industry peers.
- iii. **Net Profit Margin:**
- Net profit analysis after accounting for operational costs, taxes, and interest.
- iv. **Return on Investment (ROI):**
- ROI for specific projects (e.g., capacity expansion, technology upgrades).
  - ROI for sustainability initiatives (e.g., waste-to-energy conversion).
- v. **Cost of Production:**
- Itemized cost analysis for producing each unit of LPG and CNG.



- Cost of production variations due to factors like feedstock price fluctuations.
- vi. **EBITDA Margin:**
- EBITDA margin comparison to industry benchmarks.
  - EBITDA trend over time and its correlation to operational changes.
- c. **Quality and Safety KPIs:**
- i. **Product Purity:**
- Detailed breakdown of LPG and CNG composition, ensuring compliance with standards.
  - Purity variance analysis and corrective actions for deviations.
- ii. **Safety Incidents:**
- Incident severity classification (minor, moderate, major) for better risk assessment.
  - Analysis of incident causes and implementation of preventive measures.
- iii. **Regulatory Compliance:**
- Tracking changes in regulations impacting the gas processing industry.
  - Timely updates to operational practices and documentation to ensure compliance.
- iv. **Emission Levels:**
- Emission data comparison against environmental regulations.
  - Initiatives to reduce emissions and improve environmental performance.
- v. **Process Safety Metrics:**
- Frequency of safety drills, emergency response preparedness assessment.



- Near-miss reporting and analysis for potential hazard mitigation.

#### **d. Customer Satisfaction KPIs:**

##### **i. Delivery Timeliness:**

- Delivery lead time analysis for different regions or customer types.
- Impact of delivery timeliness on customer satisfaction scores.

##### **ii. Product Quality:**

- Customer feedback on product attributes (odor, energy content, etc.).
- Quality improvement initiatives based on customer input.

##### **iii. Customer Complaints:**

- Categorization of complaints (product quality, delivery, service).
- Complaint resolution time analysis and continuous improvement strategies.

##### **iv. Customer Retention Rate:**

- Customer churn analysis to identify reasons for attrition.
- Initiatives to enhance customer retention, such as loyalty programs.

#### **e. Environmental and Sustainability KPIs:**

##### **i. Carbon Emissions:**

- Carbon emissions intensity per unit of production.
- Implementation of emission reduction strategies and their impact.

##### **ii. Renewable Energy Usage:**

- Percentage breakdown of energy sources used in the production process.
- Investment in renewable energy infrastructure (solar, wind, biogas).

##### **iii. Waste Management:**

- Waste reduction initiatives and their effectiveness.



- Recycling rates, waste-to-energy conversion rates, and landfill diversion efforts.
- iv. **Water Usage Efficiency:**
- Water consumption reduction strategies in production processes.
  - Water usage efficiency metrics per unit of production.
- v. **Biodiversity Impact:**
- Biodiversity assessments in the vicinity of the plant.
  - Initiatives to mitigate negative impacts and promote local ecosystem health.
- f. **Employee and Workforce KPIs:**
- i. **Employee Turnover Rate:**
- Analysis of turnover rates by department, job role, and tenure.
  - Strategies to improve employee retention and job satisfaction.
- ii. **Training Hours per Employee:**
- Training hours spent on technical skills, safety protocols, and professional development.
  - Training impact on employee performance and engagement.
- iii. **Health and Safety Training:**
- Health and safety training completion rates and frequency.
  - Correlation between training and reduction in safety incidents.
- iv. **Diversity and Inclusion:**
- Diversity metrics (gender, ethnicity) in the workforce composition.
  - Initiatives to promote diversity and inclusion within the organization.
- v. **Employee Engagement:**
- Regular employee engagement surveys and assessment of feedback.
  - Initiatives to address employee concerns and enhance workplace satisfaction.



#### **g. Supply Chain and Logistics KPIs:**

##### **i. Supplier Performance:**

- Supplier evaluation based on quality, delivery timeliness, and cost.
- Supplier collaboration for process optimization and mutual growth.

##### **ii. Inventory Management:**

- Inventory turnover rate for raw materials, intermediate products, and finished goods.
- Inventory accuracy and reduction of obsolete inventory.

##### **iii. Lead Time:**

- Measurement of lead time from raw material procurement to product delivery.
- Lead time reduction strategies to enhance operational efficiency.

##### **iv. Logistics Efficiency:**

- Distribution lead times and transportation cost analysis.
- Optimization of transportation routes for cost savings and reduced emissions.

#### **4. KEY GROWTH DRIVERS**

The following are the factors, strategies, and conditions that will contribute to the expansion and success of our gas processing plant. These drivers influence the plant's ability to increase its production, revenue, market share, and overall value. Understanding and leveraging these drivers will help guide strategic decisions and initiatives to achieve sustained growth. Here are some key growth drivers for your gas processing plant:

##### **a. Increasing Energy Demand:**

- **Population Growth:** As the population expands, the demand for energy rises, creating an opportunity for your plant to meet the increasing energy needs.



- **Industrialization:** The growth of industries requires substantial energy resources, making LPG and CNG attractive alternatives due to their cleaner nature.
- **Urbanization:** Urban areas often have higher energy requirements, providing a potential market for residential and commercial energy consumption.

b. **Government Policies and Incentives:**

- **Subsidies:** Government subsidies on LPG and CNG can incentivize consumer adoption and promote market growth.
- **Tax Benefits:** Tax breaks for using cleaner energy sources can drive higher demand for LPG and CNG products.
- **Regulatory Support:** Favorable regulations that encourage the use of cleaner fuels can create a stable market environment for your products.

c. **Market Penetration:**

- **Untapped Regions:** Expanding into regions where LPG and CNG adoption is still low can open up new markets and customer segments.
- **Rural Areas:** Addressing the energy needs of rural areas that lack access to traditional energy sources can drive significant growth.

d. **Product Diversification:**

- **Bio-LPG:** Producing bio-LPG from organic waste can position your plant as an eco-friendly and innovative energy provider.





- **Specialized CNG Blends:** Developing customized CNG blends for specific industries or applications can cater to unique customer requirements.

e. **Technology Upgrades:**

- **Automation:** Implementing advanced automation systems can enhance process efficiency, reduce operational costs, and minimize errors.
- **IoT Integration:** Utilizing the Internet of Things (IoT) for real-time monitoring and predictive maintenance can optimize plant operations.
- **Energy Efficiency Solutions:** Adopting energy-efficient technologies can result in cost savings and reduced environmental impact.

f. **Capacity Expansion:**

- **Demand Forecasting:** Analyzing market trends and demand projections can guide informed decisions about when and how much to expand production capacity.
- **Strategic Timing:** Expanding capacity ahead of anticipated demand spikes ensures readiness to capture market opportunities.

g. **Strategic Partnerships:**

- **Distributor Collaboration:** Partnering with established distributors can extend your market reach and provide access to their distribution networks.
- **Supplier Relationships:** Strengthening relationships with suppliers ensures a reliable feedstock supply and favorable terms.



#### h. **Environmental Focus:**

- **Green Image:** Promoting your plant's commitment to reducing carbon emissions and providing cleaner energy options can attract environmentally conscious consumers.
- **Carbon Offsetting:** Exploring carbon offset initiatives can further demonstrate your dedication to sustainability.

#### i. **Rising Environmental Awareness:**

- **Consumer Education:** Launching awareness campaigns about the environmental benefits of LPG and CNG can drive consumer preference.
- **Corporate Sustainability Initiatives:** Businesses increasingly seek eco-friendly energy sources to align with their sustainability goals.

#### j. **Research and Development (R&D):**

- **Innovation:** Ongoing R&D efforts can lead to improved processing methods, higher product quality, and new applications for LPG and CNG.
- **Competitive Advantage:** Technological innovations can set your plant apart from competitors and attract discerning customers.

#### k. **Investor Confidence:**

- **Financial Transparency:** Demonstrating strong financial performance, sound management practices, and clear growth strategies can attract investor interest.
- **Sustainable Practices:** Highlighting your commitment to sustainable practices can align with socially responsible investors' preferences.



l. **Economic Growth:**

- **Indirect Demand:** Economic growth in sectors like construction and manufacturing can indirectly drive demand for LPG and CNG as energy sources.

m. **Infrastructure Development:**

- **Refueling Stations:** Expansion of refueling stations can increase accessibility to CNG for vehicles, promoting its adoption.
- **Distribution Network:** Strengthening distribution infrastructure can extend your reach to new markets.

n. **Regulatory Support:**

- **Stable Environment:** Favorable and consistent regulations provide a predictable business environment for your plant's growth.
- **Emissions Regulations:** Stringent emissions regulations can encourage industries to switch to cleaner energy sources like CNG.

o. **Customer Education:**

- **Awareness Campaigns:** Educating customers about the benefits of LPG and CNG, including cost savings and reduced pollution, can drive adoption.
- **Demonstration Projects:** Showcasing successful case studies can build trust and encourage customer interest.

p. **Adoption in Transportation:**

- **Public Transport Conversion:** The conversion of public buses and taxis to CNG can create a substantial demand for your plant's products.



- **Fleet Vehicles:** Commercial fleets transitioning to CNG can contribute to sustained demand growth.

q. **Supply Chain Optimization:**

- **Supplier Collaboration:** Collaborating closely with feedstock suppliers can ensure a stable supply and potentially negotiate favorable terms.
- **Efficient Procurement:** Optimizing procurement processes can reduce costs and streamline supply chain operations.

r. **International Market Expansion:**

- **Export Opportunities:** Exploring export markets for LPG and CNG can diversify revenue streams and enhance profitability.
- **Cross-Border Partnerships:** Collaborating with neighboring countries can facilitate market entry and trade.

## SECTION D: OTHERS

### 1. Nigerian Content Plan

This Local Content Plan embodies our profound commitment to upholding the principles of the Nigerian Oil and Gas Industry Content Development Act 2010. With unwavering resolve, we embark on a journey that encapsulates the spirit of local participation, the pursuit of excellence, and the upliftment of Nigeria's economic and industrial landscape.

a. Introduction:

At Obodofei Integrated Services Limited, the proposed gas processing plant in Polako, Yenagoa LGA, Bayelsa State is firmly committed to upholding the principles of the Nigerian Oil and Gas Industry Content Development Act 2010. This Local Content Plan underscores our unwavering dedication to advancing local participation, fostering capacity development



t, and driving socio-economic progress within Nigeria's oil and gas sector.

b. Legal Framework and Regulatory Compliance:

We recognize the Nigerian Oil and Gas Industry Content Development Act 2010 as the bedrock of our operations. Our resolute adherence to this Act encompasses the full spectrum of local content regulations, establishing the framework for ethical, transparent, and compliant practices.

c. Ownership and Management:

Our commitment to indigenous ownership is unshakable. We pledge to align with local ownership stipulations, inviting Nigerian investors and partners to join us in steering our enterprise towards mutual prosperity and growth.

d. Workforce Development and Capacity Building:

- Local Employment: We are dedicated to nurturing a workforce that is predominantly Nigerian, ensuring that our operations are driven by the talents and capabilities of our nation's citizens.
- Training and Development: Our training programs will empower Nigerian employees, providing them with opportunities to sharpen skills, pursue career growth, and contribute effectively to our industry.
- Internship and Apprenticeship: Through structured internship and apprenticeship initiatives, we will provide young Nigerians with a solid foundation to embark on meaningful careers in the oil and gas sector.

e. Technology Transfer and Research:



- Local Partnerships: Collaboration with Nigerian institutions of higher learning and research centers will underpin our endeavors to transfer technological knowledge and spur indigenous innovation.
- Research Empowerment: Through concerted R&D efforts, we will tap into local expertise, fostering technological advancements and contributing to the enrichment of the industry.

f. Supplier Development:

- Local Procurement: Our commitment to sourcing goods and services locally is unwavering. We will actively engage Nigerian suppliers, bolstering economic growth and reinforcing local supply chains.
- Supplier Capacity Enhancement: Partnering with local suppliers, we will offer capacity-building initiatives to elevate their standards, quality, and competitiveness.

g. Infrastructure and Facilities:

- Local Infrastructure Investment: By investing in local infrastructure development, including distribution networks and refueling stations, we will amplify accessibility to cleaner energy sources across Nigeria.
- Empowering Local Contractors: Collaboration with Nigerian construction and engineering firms will empower local expertise, fostering job creation and skills advancement.

h. Environmental and Community Engagement:



- Environmental Stewardship: Our operations will exemplify environmental consciousness, embodying sustainable practices that safeguard the ecosystems we operate in.
  - Community Empowerment: We are committed to active community engagement, ensuring that local communities thrive alongside our operations through socio-economic development initiatives.
- i. Health, Safety, and Quality:
- Local Safety Culture: Our training initiatives will cultivate a robust local safety culture, empowering our workforce to operate in accordance with the highest safety and quality standards.
  - Continuous Enhancement: Continuous improvement of our health, safety, and quality practices will be our guiding principle, evolving in tandem with local regulations and industry best practices.
- j. Reporting and Monitoring:
- Transparency and Accountability: Our regular progress reports will offer transparent insights into our local content compliance efforts, initiatives, and their tangible outcomes.
  - Outcome-Centric Monitoring: We will establish a rigorous monitoring system to gauge the efficacy of our local content initiatives, enabling us to fine-tune strategies for optimal impact.
- k. Partnerships and Collaboration:
- Local Collaborators: Our strategic partnerships with Nigerian entities will fortify collective efforts in driving local content initiatives, transcending individual boundaries for the greater good.



- Knowledge Exchange: Through active participation in knowledge-sharing forums, we will contribute to the growth of best practices , enhancing the broader landscape of local content development.

I. Future Growth and Sustainability:

- Sustainable Vision: Our local content initiatives will remain intrinsic to our long-term growth vision, fostering sustainable socio-economic development that spans generations.
- Innovative Evolution: As we expand and innovate, our local content strategies will adapt and evolve, ensuring that we continue to create meaningful impact within the Nigerian oil and gas industry.

