

TURRET ENGINEERING SERVICES LTD

CASHES POLICY/MANUAL

POLICY/MANUAL ON

COMMUNITY AFFAIRS, SAFETY, HEALTH,

ENVIRONMENT & SECURITY

(CASHES)

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1.0 PURPOSE AND SCOPE

This CASHES / MANUAL Plan has been prepared to provide a comprehensive document to our clients and incorporates instructions and information related to the implementation of responsibilities, standards, and correct working practices for the management of health, safety and environmental risks associated with engineering, procurement, fabrication, construction, transportation, and other services that shall be undertaken by CONTRACTOR for the project.

The plan has been written to comply with the contractual requirements for the projects in the COMPANY specification of Safety Management and Project Health, Safety and Environmental Plan (PHSEP).

This manual / plan shall apply to all phases of the project activities on site. The use of established procedures and policies shall be promoted as an overall objective.

Management and all employees are encouraged to ensure they are aware of the contents of this manual. The management recognizes that the effectiveness and application of this manual / safety plan, requires the co-operation of all as outlined below:

- Present our policy on health, safety, environment and security at work to our employees and others.
- Identify our responsibility for health and safety at work with respect to the employees and personnel not employed by the company but affected by our operations.
- Describe our safety training requirements and needs.
- Establish the system for accident/incident investigation and reporting with the intention of reducing the accident/incident rate.
- Reaffirm safe working practices.
- Identify situations to the employee, which may involve a risk of accident or injury.
- Educate the employee about self-help and help to others when confronted by an emergency or accident involving injury.
- Detail the responsibilities of every employee for health and safety matters.

2.0 SAFETY POLICY, ORGANIZATION & RESPONSIBILITIES

- **SAFETY POLICY STATEMENT**

The contractor will conduct its activities in a manner, which ensures that the health and safety of its employees and others that may be affected in any way by the Contractor's activities are managed correctly.

TURRET ENGINEERING will conduct its activities in a manner, which will not impact negatively on the environment, and, if this does occur as a result of the Contractor's activities, a recovery measure will be initiated to restore the environment.

In the execution of various phases of project works, our objective will be to operate in a safe and economic manner. Safety awareness is considered of great importance and all staff is encouraged to view it in the same manner. We are aware of the nature of works involved in the oil industry and the necessary safety measures required to minimize injury to persons, damage to equipment and the environment. We would re-emphasize that each employee at every level is responsible for adopting a positive attitude towards safety. As a company, **Turret Engineering** accepts both its legal and moral obligations towards the workforce and will continue to maintain to the best of its ability, a safe, healthy and good working environment for all employees. It is as a result of this that we had treated the company policy under four main headings namely, **Health, Safety, Environment and Security (HSES)**.

- **HEALTH POLICY**

Work may affect any or every system of the human body. It is therefore essential that early recognition of health hazards is established, monitored and controlled. Turret Engineering employs qualified nurses and retains the services of local clinics in the country to cater for their employees and also to ensure that adequate medical services are provided to cover the type of operations performed by our company. **Turret Engineering** encourages employees to participate in the First Aid training programs. The company places great emphasis on the promotion of health and the protection of the worker.

- **SAFETY POLICY**

It is the policy of the company to carry out her business activities in such a manner that no fatality or serious injuries or damage to property arise during its operations. Every necessary step shall be taken to safeguard all its workers including third party workers. Positive Safety attitudes shall be rewarded and poor safety attitudes frowned upon. Detailed safe procedures must be put in place and site management held accountable for its site implementation.

In order to ensure an enviable safety performance, the following strategies will be employed:

- The continuous monitoring of hazards and identification of accident causes.
- Reporting and Control of hazards / accident causes
- The minimisation of losses.

While the overall policy responsibility for safety rests at the highest management level, individuals at various levels will be responsible for ensuring compliance. Therefore, employees are encouraged to report potential hazards and observe safety rules, procedures and codes of practice. This policy will be brought to the notice of all employees. It will be reviewed from time to time and revised as necessary. **Turret Engineering** believes that all accidents are preventable and therefore shall work towards the actualization of this.

3. ENVIRONMENTAL POLICY

Turret Engineering environmental policy is a complete fulfilment of the recent clamour for improved living conditions. The company is committed to ensuring clean and healthy environment. We must take environmental sanitation programme seriously and encourage all our employees to do so.

Physical factors in the environment do influence health at work. These are lighting, ventilation, humidity and effects of extreme of temperature. Appropriate measures will be taken to guard against them. Every effort will be concentrated towards the minimisation of dust and other pollution agents released during the course of work. Structured use and disposal of injurious chemical should be applied. Due regard must be paid to reduction of noise at source. It is expected of every employee to provide healthy and environmentally acceptable conditions both at home and work.

- **SECURITY POLICY**

Considering that the loss of any materials or equipment may have a great impact on costs, and on working conditions, it is a target of **Turret Engineering** to properly sensitise its workers on the respect of personal integrity, ensure adequate security of personnel, materials, plant and equipment on site.

For: TURRET ENGINEERING

MANAGING DIRECTOR

Date:.....

2.2 ORGANIZATIONAL RESPONSIBILITIES /POLICY IMPLEMENTATION

- **Management's Role**

The ultimate responsibility for ensuring implementation of the safety policy for Health, Safety and Environment rests directly upon the Management of **Turret Engineering**.

Responsibilities will be assigned to Supervisors and the necessary support in terms of funds and training given to them.

Safety officers will also be appointed and will be present at every work site. Safety Officers is to advise and ensure that all work activities are conducted in a safe manner that ensures compliance to all HSE rules. In addition, Management will carry out the following measures to ensure effective implementation of the Company's safety policy:

- Allocate sufficient resources to provide and maintain conditions and places of work as far as is reasonable practicable.
- Ensure that all machinery, plants and equipment are in good working order. Appropriate tools for the job will be made available.
- Provide necessary and approved personal protective equipment and ensure that employees understand their proper usage.
- Ensure that adequate instructions are given to employees on all aspects of their work, especially those hazardous to health.
- Review operations and work methods from time to time in order to incorporate where necessary, changes in statutory obligations and new technologies.
- The Company and its subcontractors will comply with applicable statutory requirements and apply the necessary resources to ensure the health, safety and welfare at work of their employees / others exposed.
- **Role of Safety Officer**

The Safety Officer will advise Management and Supervisors on safety matters as necessitated by the job to be executed. He will carry out the following duties:

- Ensure that workers wear necessary personal protective equipment.
- Ensure that appropriate work permits are obtained from the client and all the precaution stipulated strictly observed.
- Conduct unsafe act audit on site daily.
- Attend client's safety meetings and implement all related action points as they affect company's operations.

- Ensure that the right tools are being used for the job.
- All equipment in service must be in good working condition.
- Holds safety meeting with the work force every two weeks and the minutes shall be properly documented and sent to the Client's Representative in charge of the project being executed.
- Displays appropriate safety notices and sign boards in the work site.
- Ensure that functional first aid box is on site and all employees made to obtain treatment no matter how minor the injury must be.
- Regular inspection of work place and advising Management on hazardous conditions noted.
- Investigate any accident that may occur at work site.
- Compile monthly safety statistics.
- **Project Manager**
 - Has the Overall Responsibility for all matters affecting safety, health, and welfare of the entire work site and coordinates as may be required.
 - In connection with health, safety and welfare has general responsibility for maintenance order and discipline. In the discharge of this responsibility he can exercise authority over all persons concerning work sites.
 - Provides leadership and active support for the safety program.
- **Operations Manager**
 - Directs and provides leadership for safety activities within area of responsibility.
 - Ensures that all employees under his supervision are held accountable for their safety responsibilities.
 - Considers the safety attitude of subordinates prior to promotions.
 - Assures that no unsafe conditions exist in area of responsibility and reports to their supervisor / or the safety officer on any corrective actions needed.

- **Superintendent**
 - Overall responsibility for the safety at the sites
 - In emergencies involving risk of death, or serious personal injury the Superintendent has authority to take whatever measures necessary to manage the situation.
 - The Superintendent is empowered to stop any operation that endangers personnel.
 - Provides leadership and ensures active support for safety program.

- **Supervisors**
 - Enforces safety regulations applicable to company operations within area of responsibility.
 - Co-ordinates safety activities within area of responsibility, to include motivation of employees for safe work practice.
 - Ensures that persons under his supervision use safety devices and proper personal protective equipment.
 - Instructs all persons within area of responsibility in job safety and health requirements and insists on compliance.
 - Ensures that injuries are treated promptly and reported properly.
 - Assist with investigations of accidents and initiates corrective actions when required.
 - Ensures that no unsafe conditions exists in area of responsibility and reports to their supervisor or the safety officer on any corrective actions needed to be carried out.

- **All Employees**
 - Workers are to be familiar with and comply with company safety / health practices and statutory obligations.
 - Use the required safety devices and proper personal protective equipment.
 - Notify supervisor / or safety officer immediately of unsafe conditions and acts.

- Report all accidents / near misses to their supervisor/or safety officer immediately.
- Attend safety training sessions and safety meetings.
- Ensure that new workers and visitors to the site are aware of the hazards in their operations. It is expected that the old workers are encouraged to correct new workers who they find doing things in an unsafe manner at their work place.
- Upon assignment to a new work location, employees are encouraged to acquaint themselves with emergency plans, station bills and exit – escape routes, fire-fighting equipment, lifesaving and first aid equipment as are placed on site notice boards.
- No job shall be considered efficiently completed unless the worker himself has followed every precaution and safety rule to protect him and fellow employees from injury.

2.3 SAFETY ORGANISATION

- **Corporate Safety Department**

The safety department has the overall control for the safety in the company and audits projects in compliance with company policy, Client's requirements, and Governmental regulations. It acts as advisor on safety matters to the bases, yards and is to liaison with the registration / certification societies and the corporate commissioning department.

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- The safety department provides specialists advice and assistance to line departments and management on safety matters. This includes information about the hazard prevention aspects of facility design, industrial standards and may take the following forms:

- Provide guidance on hazard prevention on health and personnel safety matters to designers and project teams.
- Give advice and assistance to management on such matters as job planning and implementation, incident review, flow – up work, hazard prevention, safety of work environment, equipment safety aspects of technical training.
- Be responsible for planning and co-ordinating periodic audits of equipment design function, hook-up and operating procedure; and the interaction with operator practices.

- **Project Safety Engineer**

The base office monitoring project activities is generally situated in the country having authority over the work site. The project manager is the head of the base. The base employs and / or appoints project safety engineers whose duties consists of, but are not limited to the following.

- To be in contact with safety and health authorities and request approval of safety data.
- Serve as liaison with the client's safety organisation. Review / advise on safety aspects of contracts and specifically follow up request for approval of safety data.
- Monitors site compliance with the Company's safety program.
- To prepare and distribute safety statistics / reports.
- Advise base management on regulatory compliance and general accident prevention efforts.

- **SAFETY POLICY – SUBCONTRACTORS**

- It is the **Turret Engineering** request that subcontractor's working in its sites (Non-destructive Testing, Diving, Catering etc) and /or in connection with **Turret Engineering** adhere to the same standards in such area where these are relevant.
- The subcontractors are issued with this manual. The contract with the subcontractors' states their obligations requires them to adhere to the rules and standard set forth in this safety manual and the relevant governmental agencies.
- Subcontractors shall in addition issue their safety plan / manual in compliance with that of Turret Engineering.

- **LEGAL REQUIREMENTS**

This policy statement will be made available to all employees of the Company and copies will be posted on the information board in the office and in all locations / work sites. The policy will be reviewed from time to time to accommodate changes in statutory requirements and new manual with the said modifications brought to the attention of all employees.

- **CODES OF WORK PRACTICES**

All jobs executed by the company shall comply with accepted codes of standard and practices. All specifications stipulated in the drawings and contract papers must be strictly complied with. Necessary precautions must be taken and safe work practices and methods employed throughout the execution of job.

3.0 SAFETY RULES & REGULATIONS

This section deals with fundamental safety rules and regulations applicable to each employee and as follows:

1. Promptly report to the supervisor when one's physical condition is unsatisfactory.
 2. On the job, know your job; follow instructions and where you are not sure ask your foreman.
- Use the right tools and equipment for the job do not improvise.
 - Wear all prescribed personal protective equipment necessary for the job (e.g. Coverall Safety Shoes & Hard Hats etc.)
 - Do not run within the construction area or indulge in horseplay or practical jokes while you are working.
 - Do not read while working.
 - Do not operate, use repair or alter any plant or equipment unless you are trained and authorised to do so.
 - Report without delay to your foreman any condition, act, or practice that you think may cause an accident (Injury or damage) to any employee or equipment.
 - Obey all specific rules, warning signs and other safety notices.
 - Maintain good housekeeping; keep your work area clean and tidy.
 - Do not work without wearing a **Full body harness** while working at height where there is the danger of falling from that height.
 - Do not remove safety devices from machines or attempt to operate a machine without such devices.
 - Do not drive any vehicle or watercraft at speeds exceeding the designated speed limit.
 - Always use ladders, stairways or other access ways when going up or descending scaffolds, tower pipe racks etc.
 - Do not throw or drop any tools or materials from a height or to your colleague.
 - Do not stand or sit under a suspended load.

- Forklift operators must not carry loads that are capable of obstructing their views.
- Do not work directly under other persons working above without adequate protection.
- Do not smoke or use open fire except at designated points.
- Advise fellow workers if any imminent safety hazards are discovered.
- Observe all safety directives pointed out or made by supervisor, safety officers and / or committee members.
- Do not touch or move cocks, valves, gauges or step on small pipes or meters, especially while working with an oil field.
- Do not enter restricted areas without authorisation by supervisors.
- Obtain Permit to Work (**PTW**) prior to commencement of any activity including (hot work, excavation works, especially in oil field and / or developed areas).
- When lifting manually, use the correct lifting techniques and for heavy loads request for mechanical aids or the assistance of a fellow worker.

These rules and regulations are in place to keep you safe in your daily activities.

4.0 SAFETY PLAN

• GENERAL GUIDELINES

1. A safety manual is in place Company to cover all aspects of the work done by our organization.
- All staff engaged in swamp operations and offshore must pass the shell / recommended swimming certification.
- All staff engaged in work offshore shall wear floatation aid while outdoors.
- 4 All workers shall at all times while at the work site wear appropriate and required Personal Protective Equipment (PPE).
5. Risk analysis shall be carried out for all work activities being done prior to work commencement and recovery measures put in place, and documented in the work procedures and methods manual.
6. All equipment engaged on site shall be jointly inspected prior to mobilisation.
7. Adequate signs and awareness campaign shall be displayed on site to increase safety awareness at all times.
8. Our safety Officers shall continuously monitor all work sites and report all anomalies on a daily basis to the respective heads of project for correction.
9. Regular safety drills shall be conducted on all our work sites.

4.2 OBJECTIVES

Our overall objectives is accident prevention which could otherwise result in Pains, Disabilities, Damage to properties (**Plant & Equipment**), Death as well as damage Environment in which we operate. Thus, our health safety and environment protection programs are designed to:

1. Sustain Management's commitment to health, safety and environmental protection.
2. Increase the level of awareness among all employees.
3. Provide healthy and safe working conditions for all employees.

4.3 TARGETS

- No fatality among company and subcontractor employee.

- No fatality among client employees connected with our jobs.
- No property damage or serious injuries to other persons resulting from our operations.
- No preventable air, road or marine accidents during our operation.

4.4 PROGRAMS

The Company Safety Officer shall hold an orientation safety meeting with the entire work force, highlighting the scope of work, the foreseeable hazards and measures taken by the Company to avert unfavourable occurrence. In addition, induction course will be organised for every new employee as they are engaged.

- Review of scope of work and the attendant hazards shall be part and parcel of periodic instructional safety meeting to be held on site, audio visual aids are part of our safety-training programme.
- A copy of the Company's safety rules and regulations shall be provided to every employee for their personal reference and understanding.
- Safety warning signs and stickers will be placed at appropriate location to caution all employees on a daily basis on safety.
- The Company Safety Officer shall undertake periodic site inspections and report his findings and/or recommendations. This is a form of checks and balances on the site safety administration. And the Client shall be kept informed of such reports.
- All accidents cases, should there be, shall be promptly reported and investigated. This shall be a fact-finding exercise.
- The site shall be provided with a centralised standard first aid box to be manned by the nominated First Aider/Nurse.
- The site shall be provided with adequate portable fire extinguishers, and every employee is expected to know their operational module.
- The site where applicable shall be provided with adequate life saving devices to prevent drowning.
- All subcontractors' facilities are inspected to ensure that the minimum safety requirements are met. Adequate lighting shall

be provided during the night and non-sparking tools should be engaged where necessary.

- Spark arrestors shall be fitted to vehicles working on the project site, where necessary.
- The site management shall keep necessary records and logbooks.
- All transport media shall be checked to ensure their safe condition before embarking on any journey.
- Open backups shall not be used for personnel carriage.
- All open deck vessels shall be provided with guard-rails.
- All transport media shall be provided with appropriate safety gears including fire extinguisher, life jackets (if necessary), warning signs, etc.
- Qualified competent operators shall man all transport media.

4.5 - TRAINING

Turret Engineering believes in training and retraining of both new and old staff. The company will continue to invest in this area. A trained and skilled worker is a valuable asset. Both in-house and external training programs shall be given to the workers. Employees are encouraged to take advantage of this gesture in developing themselves and improving their knowledge and safety awareness.

Training is a vital aspect of personnel development and it is an on-going exercise to get all levels of employees trained. The level of training will depend on the type of work and the level of supervision required. Apart from formal safety training, toolbox briefing and weekly safety meetings are systems used to get safety message across.

Prior to moving to a work site, the employee is briefed on daily basis on:

- How to use a life jacket.
- How to use portable fire extinguisher.
- The use of permit-to-work system (**PTW**).
- How to respond to fire emergencies.
- Where to get first-aid attention.

- There is also induction on site, so arranged to acquaint the employee to the characteristics of the work environment and a brief description of the general work activity.
- The induction should mention the type and nature of hazards to be expected and means to avert occurrence.

4.6 SAFETY MEETINGS

Safety meeting shall be held every two weeks or monthly as the case may be, to discuss unsafe acts and dangerous work / equipment conditions observed by workers. Also the safety officer will bring to the attention of employees observations during daily / weekly inspections and new safety guidelines / directives from the client. Minutes of Safety meetings shall be recorded documented properly.

4.7 SAFETY DRILLS

4.7.1 Drills are to be conducted on board according to the drill schedule below, weather permitting.

4.7.2 If certain workers are excused only by the superintendent from participation in a drill due to their work then the next drill should be scheduled when they can attend.

- Drill schedule

DRILL TYPE	FREQUENCY	APPROXIMATE DURATION
FIRE	EVERY 15 DAYS	15 MINUTES
MUSTER	EVERY 30 DAYS	20 MINUTES
FIRST AID	EVERY 15 DAYS	30 MINUTES

4.7.4 a. The main purpose of muster drills is to ensure personnel know Escape Routes

a. During announced muster drills it may not necessary each time to carry lifejackets to the stations

4.7.5 All drills conducted shall be recorded in the ship logbook, lapses corrected and mentioned on progress reports.

4.8 VISITORS

4.8.1 Visitors are those persons not normally working on the site and whose stay will be less than three days.

Upon arrival, shall be accompanied by their host and would be given induction at site.

- On site visitors are supplied with information showing a description of emergency signals and some basic safety guidelines.

5.0 ARRANGEMENTS FOR HEALTH & HYGIENE

5.1 MEDICAL EXAMINATION

1. Prior to employment, new employees shall undergo a full medical certification of fitness issued by a physician. The result and data obtained by medical examination shall be recorded and filed accordingly. Personnel on very severe terminal health conditions may not be considered for employment.
2. All personnel found fit after the examination shall undergo periodical examination in the course of work as the company's physician may prescribe. Taking due account of the risk inherent from the work.
3. Self-medication is discouraged. All illness arising from work will be reported and appropriate medical treatment given.
4. We maintain a retainer clinic where physical examinations or referrals are done to take care of ailing workers.
5. First line treatment for minor injuries at work will be handled by the first aiders on site. A first aid box shall be made available on site for treatment of minor injuries and manned by competent persons. Records of treatments handled shall be documented correctly.
6. To ensure that there is continuity between the First Aider and the Retainer Clinics, the first aid treatment register should be regularly reviewed by a Senior Medical Officer for the following reasons:
 - a. Provide advice on the effects of a particular job on health.
 - b. Periodic examinations and Inspections are to be carried out on site to ensure workers are protected against hazardous substances as well as the environment.
 - c. Undertaking epidemic studies of exposed groups of workers to determine long-term effects of the substances used on their health.

5.2 HEALTH PROVISIONS AT SITE

- Workers are advised to eat from restaurants with a high standard of hygiene.

- Workers are encouraged wash their hands after visiting the toilet; no food or smoking will be allowed. Smoking is injurious to health and workers who smoke are advised to desist from such.

There are three routes of entry of toxic substances into the body and these are by:

- Inhalation of dust, vapour or gas, these causes damage to the respiratory tract or long tissue or enters the blood stream.
- Injection of solids or liquids via the digestive system through the skin
- To this end, each worker must be adequately protected against health hazards arising from the nature of his occupation
- Well-equipped first aid box shall be provided on site and manned by a competent first aider.

5.3 CAMP GENERAL HEALTH AND HYGIENE REQUIREMENTS AND PROCEDURES

1. Suitable provision shall be made to prevent the entry of insects and vermin into the camp.
2. Suitable and sufficient lighting shall be installed in and around the camp.
3. Supply of constant electricity shall be maintained.
4. Adequate ventilation shall be provided; and such vents shall be screened as to render them mosquitoes proof.
5. Emergency exits shall be provided: and such exits shall be conspicuously marked.
6. Personnel shall not enter the quarters in working clothes.
7. Personnel shall remove dirty footwear prior to entering the camp.
8. Provision shall be made for separate facilities for the storage of working clothes outside the sleeping area.
9. Personnel to wash themselves before dining.
10. Adequate space to occupants of quarters to hang their personal clothing shall be provided.
11. Room occupants shall ensure their room is kept clean and tidy always.
12. Sufficient number of receptacles with lids shall be provided at suitable places for the disposal of garbage and other wastes.
13. Contents of waste recovered shall be disposed off correctly at designated dump sites.
14. A dedicated person, shall be assigned to ensure that the camp is kept clean
15. The mess (eating house) shall be kept in neat condition
16. Smoking while people are eating is prohibited
17. Entering the mess with only towel on is prohibited.

- **TOILET / WASHROOM**

In the toilet / washroom, personnel shall observe the followings:

- Keep toilet well ventilated and flush out waste after use.
- Disinfectant and deodorants shall be used to clean the toilet to odours.
- Avoid water spillage on the floor.
- Do not allow any electrical tools to come in contact with water.

- **KITCHEN**

In the kitchen the following shall be observed:

- Kitchen properly ventilated, lighted and free from nuisance odour.
- Water or other spills shall be wiped off immediately.
- Adequate electrical loading to operate electrical appliances shall be provided and maintained.
- Cracked and or frayed electrical appliances and extension cords shall be replaced immediately.
- Make sure hands are dry before operating electrical appliances.
- Racks or Compartments shall be provided for knives and other related items.
- Wholesome and potable water shall be provided
- Loosed clothing shall not be permitted / allowed around flames.
- Adequate and suitable fire extinguishers shall be provided for use at the camp / kitchen.
- Safety audit of the entire camp shall be carried out weekly.
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- **GOOD HOUSEKEEPING**

Housekeeping is the orderly arrangements and placement of equipment, tools, materials (both raw and finished good) and wastes. Good housekeeping implies that there is a place for everything and that everything is in its proper place. It leads to reduced accident rates, fire hazards, operating costs and wastage on one hand and it increases production, employee morale, judicious use of space and time.

Measures aimed at ensuring good housekeeping include:

- Keep work place clean daily.
- Designate a place for wastes / scraps. This will ensure that such scraps or wastes are not littered around.
- Raw materials shall be received and stored in a designated place. Finished goods shall be accordingly stored at a designated point / place.
- Floors shall be kept clean and free from substances that can cause slips, trips and falls.
- Broken floors shall be repaired immediately.
- Obstructions shall not be allowed on gangways, passages, steps or doorways.
- All routes to various parts of the workplace especially emergency routes shall be kept free always.
- Flammable materials shall be stored in safe places and separate from non-flammable ones. Similarly, toxic / corrosive liquids or substances are to be kept in separate places.
- Rags used in cleaning oils, greases, etc. must be carefully stored in closed containers to prevent fire outbreaks.
- Tools must be removed from the floor and kept in the tool box or proper storage places.
- Hands Tools extensions cables, flexible power supply leads and equipment shall be coiled carefully and kept away from the work floor and passages.
- Materials shall not be stacked to block emergency or fire fighting equipment.

6.0 PERSONAL PROTECTIVE EQUIPMENT

- Safety shoes / boots protect feet and ankle-less from impact punctures. All workers must wear them. The company provide rain boots for wet conditions.
- Other protective equipment such as raincoats, overalls, kneepads, creams and leggings will be provided as and when necessary.

NOTE: Damaged personal protective equipment shall be discarded. They shall not be managed at all.

7.0 HSES PLAN FOR MOBILISATION

7.1 SITE INSPECTION

Upon receiving the tender, a visit to the site is organised.

The team is made up of the followings:

- Project Engineer
- Supervisor / General Foreman
-
- Safety Engineer / Supervisor

The aims of the site visit are:

- Determine extent of surface arrangement.
- Estimation of resources which may be required.
- Preliminary arrangement for staging.
- Preliminary arrangement for staff accommodation.
- Detection of unsafe condition.
- Determinations of access difficulties, if any.

This site inspection will be used.

- For work planning.
- Contingency planning.
- First safety meeting topic.

7.2 MOBILISATION

This involves movement of personnel, equipment and materials to site.

- Site must be fenced to keep unwanted trespassers.
- Sign posts are erected:
 - * For entrance / exit
 - * First aid centres
 - * Fire / Emergency equipment
 - * Parking spaces
 - * Safety statistics board

7.3 SITE CLEARING

Site clearing may be manual or mechanised.

7.3.1 MANUAL CLEARING

- Equipment:
- Machete
- Spade

- Head pan
-
- Wheel barrow
- Dumper

Workers involved in manual clearing must wear safety toe shoe, hand gloves, safety glasses and coverall (**Complete PPE**).

When not in use, machetes should be kept in its sheath.

Horseplay is not allowed at the work place.

- **MECHANIZED CLEARING**

Equipment deployed includes:

-Bulldozer

-Scraper

-Pay loader

-Tipping Trucks

-All Operators must be certified and competent

-All equipment must be in good working order

-No riders are permitted

-Operator must observe bench mark boundaries or identified right of way

-Unauthorized persons are not allowed in the work area

-Excavated spoils and other rubbish must be disposed off at approved and designated dump sites.

8.0 DANGEROUS GOODS

8.1 GENERAL:

- Harmful atmospheric contaminants such as dusts, fibres, fumes, gas and vapours shall be prevented or controlled at source.
- When harmful atmospheric contaminants cannot be reduced to acceptable standards, persons exposed shall be provided with appropriate protective equipment and advised on first aid / recovery measures.
- When necessary to prevent danger, the atmosphere of workplaces shall be tested for harmful contaminants at suitable intervals by a competent person.

- Before a person is required to enter any potentially hazardous space, steps shall be taken to ensure that the atmosphere is safe and remains safe.
- No person shall enter or remain on any space if there is any reason to consider that there may be present any fume, gas or vapour to such an extent that may likely cause risk to persons, unless a permit to work has been issued, and either:
 - That the person is wearing a safety harness with Line yards securely attached.
 - The person holding the free end of the rope is keeping watch outside and is capable of rendering and obtaining assistance in removing the person from the space.
 - That a second person equipped with rope and who is also trained in the use of respiratory protective equipment is always available in the vicinity;
 - That the space had been and remained adequately ventilated.
 - Persons must be properly trained in the use for respiratory protective equipment.
- No internal combustion engine shall be used in any enclosed space unless specific provision is made for conducting the exhaust gases from the engine into the open air and the space is adequately ventilated.

8.2 SUPERVISION OF USE

- Dangerous goods shall not be kept, used or disposed of:
 - a. Except of under the immediate control of a competent person;
 - b. Until all necessary precautions have been taken; and
 - c. Unless the quantities stored are kept to a minimum.
- The safety officer shall be informed by the chief storekeeper about the delivery aboard of dangerous goods (acids, thinners, explosives, etc.) and provided with a copy of the "Material Safety Sheet" (**MSDS**). The MSDS is supplied by the manufacture, which gives safety precautions and other relevant information about the product. The doctor and the worker using the product shall also have copies of the MSDS.
- The safety defines the place where dangerous goods are to be stored (locked stows).

- The disposal of dangerous materials are authorised by the safety / environmental officer, who instructs the personnel in charge with the safety precautions to be observed.
- The spillage of dangerous liquids shall be mopped, diluted, neutralised disposed off under the control of the safety / environmental officer.
- **PERSONAL PROTECTION**
 - Workers likely to be exposed to dangerous goods shall be provided with personal protective equipment (including clothing respiratory protective equipment) if necessary to prevent danger.
 - Where necessary, personal protective equipment and coverings shall be removed before the wearer partakes of any food.
 - Workers exposed to dangerous goods shall thoroughly wash their hands and body before partaking of any food or before leaving the work site.
 - Workers exposed to dangerous goods shall promptly report any physical complaints to the doctor on board.
 - Persons with open wounds shall not handle toxic or corrosive substances.
 - Appropriately located emergency showers and eyewash stations shall be provided at close proximity at the work location.
 - For drawing off acids from containers. Siphons, tipping appliances or other suitable devices shall be used.

8.4 STORAGE

- Highly flammable, corrosive, toxic or explosive substances which are likely to be injurious, any substances which is stored or used at pressure greater than atmospheric pressure, shall be kept:

8.4.2 In a safe and, where necessary, separate place.

- In suitable receptacles clearly marked in accordance with international classifications and labelling codes of dangerous goods to indicate the contents; and
- As far away as possible from any area where there is a risk of ignition or explosion or other chemical reactions, or from any living accommodation.

- Containers in which there are dangerous goods should carry or be accompanied by instructions for the safe handling of the contents and first - aid measure in case of contamination.
- The precautions in paragraph 9.4.1 above shall also be taken in the case of empty containers, which have held highly flammable, corrosive toxic or explosive substances. Arrangements shall also be made to ensure that empty containers are kept separately from full ones.
- Highly flammable liquids, including liquefied gas, shall be stored in suitable, closed vessels, either in a safe position in the open air or, if the quantity is small, in a fire-resisting bin or cupboard.
- Storage should be clearly marked "**highly flammable**"
- Storeroom should be ventilated to a safe area and constructed of fire - resisting material.
- When not stored in bulk, flammable liquids shall be kept in containers that are:
 - a. Tightly closed
 - b. Fireproof and unbreakable; and
 - c. Labelled to indicate their contents
- When flammable liquids are transferred from one bulk container to another, the two containers shall be electrically bonded and earthed, so as to prevent the risk of ignition from static electricity.

8.5 ENVIRONMENTAL MONITORING

- The need for adequate and suitable precautions to provide protection against asphyxiating atmospheres, toxic hazardous substances implies a need to monitor the atmosphere, for which appropriate monitoring equipment shall be used.
- An experienced and competent Environmental Supervisor / Officer shall be responsible for environmental monitoring. .

DISPOSAL

Dangerous goods, which are not required for further use shall be returned to the store and disposed off at an approved dump site.

8.7 ENVIRONMENTAL WASTE MANAGEMENT POLICIES / PROCEDURES

Turret Engineering shall dispose off all wastes in accordance with the national and local requirements, to ensure and maintain a clean, healthy and safe work environment.

All wastes shall be sorted, separated at source and disposed off accordingly. Batteries shall not be disposed off by incineration or by burying, instead by recycling. Lead, steel, rubber and aluminium waste / scrapes shall be sent for recycling after batching.

Furthermore, waste generated during swamp operations shall not be discharged into the water body.

Waste bins shall be strategically located and specifically marked (colour-coded) for different types of waste for easy identification, and handling.

All wastes shall be disposed off at approved dump sites in line with state and national requirements.

There shall be a daily cleaning and collection of waste from various waste bin locations on site. This daily waste collection shall be dumped in bigger bins and be disposed off accordingly.

Decomposing waste shall be disposed off immediately on generation.

All types of waste shall be tracked to the final disposal point and shall be handled with care.

Waste Management Procedures

An environmental hazard is a potential to cause harm to the environment. Substances or activities that have potential to cause the following effects;

- Harm to living resources
- Damage to human health
- Hindrance to other activities
- Impairment of quality for use
- Reduction of amenities
- Damage to physical structures

Environment aspects are activities that have effect on the environment. Environmental aspects identified in the project includes but not limited to:

- Use of chemicals including hydrocarbons (Liquids and Gases), Acids, Cleaning agents, Aerosols,
- Influx of workers as a result of new developing activity, which may result in interference with the ecosystem.
- Mechanical and civil works bringing about Noise.
- Sanitary waste discharge

- Solid waste from fabrication and decommissioning of old facility
- Other solid waste generated during commissioning.

Environmental aspects are usually analysed, with control and recovery measures put in place to control impacts to as low as reasonably practicable (ALARP).

Environmental Action Plan

With the view to progressively reduce, eliminate and treat material harmful to the environment and the following environmental action plan is adopted in the implementation of the project.

Action Plan – Air Quality

- All fuel combustion engines are maintained at optimal operating conditions to reduce the emission of gases that cause green house effects.
- Electric motors shall replace gas and diesel operated power generators where possible.
- Indiscriminate burning of materials is prohibited. Trees felled will be given to the community for use. Other materials will be disposed appropriately in accordance with the waste management plan.

(a) Action Plan Noise

- Noisy and stationary equipment is enclosed in acoustic structures to reduce noise at yard.
- Noise equipments are located at yard distance away from habitat.
- **Turret Engineering** shall monitor noise inside the yard.
- **Turret Engineering** provides Ear plugs / muffs for all workers working in noisy areas or engaged in the use of high noise equipment / machinery.
- **Turret Engineering** shall comply with all requirements for noise control in accordance with the international standards (**OSHA**). **Turret Engineering** shall use the following noise limits, which are also in compliance with international regulations.

Machinery workshops for light maintenance	80dB(A)
Control room at the CPF/AGG	80dB(A)
Temporary shelter at the flow station	80dB(A)
Yard offices	80dB(A)
Fabrication	80dB(A)

- All equipment shall be maintained in good working conditions, good working practices shall be implemented to minimize noise.
- Night operations shall be eliminated and if not practicable, adequate measures shall be taken to reduce the noise.

- If any noise level results in public complaints, **Turret Engineering** shall take necessary action to alleviate the problem.
- Safe distance shall be maintained between facilities and host communities to reduce the adverse impact of high noise levels from the facilities.

(b) Action Plan – Waste Management

- **Turret Engineering** shall employ Approved waste handling guidelines, generation minimization guidelines, segregation and categorization guideline and disposal guideline in the management of all-waste generated.
- All waste shall be stockpiled and disposed off at designated and Approved Waste Management Facilities.
- “Waste consignment note” shall be used in tracking all waste streams.
- In the absence of a sewage treatment plant, pre-qualified contractor shall be utilized to convey sewage to Approved sewage treatment plant.
- Topsoil shall be stockpiled and used upon decommissioning to re-vegetate the construction yards.
- Waste management notices and guidelines shall be displayed in all appropriate locations and offices at the yard.
- Waste management awareness briefings shall be given special attention.
- Responsibilities for waste management and disposal lies with the construction manager with advisory support supplied by the HSE management team.
- Environmental officers shall monitor and report on waste management monthly.
- Monthly waste stream reports shall be compiled.

Waste Management by Class

S/N	WASTE CLASS	MANAGEMENT
1.	Waste not confinable in bins.	<ul style="list-style-type: none"> • Special fenced yard shall be designated for temporary disposal of metal scraps and salvaged equipment.
	Wood scrapes, packaging pallets, off cuts etc.	<ul style="list-style-type: none"> • To be stock piled in temporary yard clearly marked and given to host community for their use.
2.	Waste confinable in bins	<ul style="list-style-type: none"> • Packaging materials, food/garden waste, waste, IT consumables, plant, Asbestos, Aerosol cans, wastes plastic containers. • Waste segregation at source shall be employed in managing these wastes.
3.	Fabrication waste	<ul style="list-style-type: none"> • These wastes shall be segregated and collected in covered waste drums and plastic bags. Colour coded and labelled using the waste consignment Note in accordance with SPDC Waste Management guideline). These drums shall be evacuated to SPDC dumpsite where they shall be

		appropriately disposed. Bin colours to be used are as follows:
	General Waste such as packaging materials	Black Bin
	Food/Garden Waste	Green Bin
	Burnt Electric Bulbs and glass.	Blue Bin
	Paper to be shredded	Black Plastic Bags
	Waste Plastic containers.	Brown Bin
	IT consumables e.g. Toners, cartridges/Computer tapes	White Bin
	Dangerous Waste, e.g. paints asbestos	<ul style="list-style-type: none"> Dangerous waste shall be handled in accordance with procedure contained in the Material Safety Data Sheet (MSDS) or Safe Handling of Chemicals (SHOC) cards for the appropriate waste. These wastes shall be store in red bins
4	Liquid Wastes	<ul style="list-style-type: none"> Minor liquid/chemical splits are immediately: cleaned out with rags or using appropriate absorbent granules and powders To avoid minor splits, chemical containers should be covered and stowed away according to specifications as spelt out in the SHOC cards
5.	Used Oil from maintenance works.	<ul style="list-style-type: none"> Products of combustion, refrigerant leakage, engine exhausts: To avoid pollution by exhausts and leaked oils Only inspected and certified equipment in good condition shall be permitted for use on yard Equipment will be maintained as planned and approved by the maintenance department.

9.0 RADIATION

• GUIDELINES

9.1.1 All activities associated or involved with radioactive materials shall be performed in accordance with the national regulatory body and the company's procedures.

• DOSE LIMITS

9.2.1 All exposures shall be kept as low as can be reasonable achievable and will not exceed the limits stated below:

- The whole body dose equivalent shall not exceed 50m Sv (5rem). In any one year period.
- The average annual dose equivalent shall not exceed 5 m Sv (0.5 rem).
-

9.3 RADIOLOGICAL WORKERS CLASSIFICATION

- Persons below 18 years of age shall not be involved in radiological work.
- Any person who may be exposed to a dose equivalent 5 m Sv (0.5 rem) shall be classified as a radiological worker (typically this includes radiographers and their assistants).
- In addition, any person who may be exposed to radioactive emission levels in excess of 7.5 usv/h (0.75 m rem/h).

9.4 RADIOLOGICAL WORKERS REQUIREMENTS

- The names of all workers requiring classification shall be notified to the company at the time they commence employment and also before they leave employment in this type of work.
- Every radiological worker shall be fully acquainted with the rules and regulations contained within this section of the procedure.
- Every activity requiring the exposure or handling of radioactive sources shall be performed when two persons are present, with at least one of these being trained and qualified to an internationally acceptable standard for the work in which they are engaged.
- All radiological workers shall be medically examined before commencing work and re-examined an annual basis.
- All radiological workers shall wear a person film badge relevant to the type of radiation, which they may be exposed. These film badges are to be changed and sent for analysis on monthly basis with the results of the analysis being advised to the company's representative, when requested.
- All radiological workers shall wear personal dose meters and a log kept of the readings. If a radiation exposure is suspected, the film badge should be sent for analysis as soon as possible.
- During the handling of radiation sources a constant reading radiation meter shall be at hand.

9.5 WORK PROCEDURES

-
- Any area where radiological work is regularly performed shall be walled off and have black and yellow trefoil-warning signs outside it. No unauthorised personnel shall be allowed into the area. The maximum radiation levels outside the area shall be 2.5 uSv/h (0.25 mRm/h) and non-classified personnel shall be kept out of this area.

9.6 SOURCES AND CONTROL

- Radioactive substances shall be kept in specially designed containers with proper shielding shutters and locks.
- All radioactive substances and equipment in use or being stored on or around the site shall be notified to the company's representative. The following information shall be supplied:
 - Custodian company
 - Reference Number
 - Type or radioactive substance
 - Sealed or unsealed sources
 - Nuclide (type of substances)
 - Activity (Becquerel or curie)
 - Date or receipt
 - Storage locations
 - Date of disposal
 - Method of disposal
- Any change of storage location is to be advised in writing.
- X-ray equipment shall be registered and the following data submitted:
 - Make and type
 - Maximum tube voltage
 - Location and usage
- Decay charts shall be kept for all sources with the classified persons using them.
- The company shall maintain a record of the radiation levels emitted from the exterior of the container by having tests performed on the container at least annually for all sources and six monthly on alpha sources with the first reading taken following arrival. Further reading shall be taken in the event of the sources being damaged.
- Inspection measurements shall also be taken on X-ray equipment at least annually.
- A daily log shall be maintained for each source to show:
 - Time out of storage
 - Area of use
 - Time returned to storage
 - Name(s) of user

9.7 TRANSPORT OF SOURCES

- Transport of sources shall be reduced to the practical minimum compatible with storage and control.
- Source substances shall only be transported in properly designed transport containers, which do not emit more than 0.1 mSv/h at one meter from the sources.
- Any loss of a radioactive source shall be reported to the company engineer / representative.
- Personnel shall not travel in the same compartment of a vehicle as a radioactive source.
- All radioactive sources being imported shall be secured so that they cannot be damaged or lost in transit.

9.7.6 All vehicles transporting radioactive sources shall:

- Display yellow and black trefoil signs on the entry to the compartment the sources and at the front and rear of the vehicle.
- Display a fire proof warning notice at the front and rear stating the contact and telephone number of the company controlling it.
- Carry a portable halon type fire extinguisher.
- Not to be left unattended.

9.7.7 Trained radiological workers who shall during the operation be wearing at all times his film badge and personal dose meter shall undertake transport of radioactive substances.

- **STORAGE OF SOURCES**

- Radioactive substances shall be stored in a locked underground pit from which radiation level shall not exceed 2.5 Sv/h (0.25 mRem/h).
- The storage pit shall be located inside a securely fenced area with locked gate, with the fence being at least 3 meters from the pit edge and the emission level outside the fence shall not exceed 1 uSv/h (0.1mRm/h).
- Yellow and black trefoil warning signs be displayed on all sides of the fenced area.
- The storage area shall be located away from accommodation building and roads, other than the access route to the store.
- Sources shall be put into or removed from the pit by classified radiological workers.

- X-ray equipment shall not be left unattended if in an operable condition and the X-ray room or equipment shall be kept locked when not in use.
- **WASTE HANDLING AND DISPOSAL**
 - Sealed sources shall be disposed off by returning to the supplier or an approved international radioactive waste disposal agency as agreed with the client.
 - Waste is considered radioactive as long as its activity is higher than 100Bq (2nCi) per gram.
 - Detailed proposals for methods of waste disposal shall be agreed with the client for each occurrence.

10.0 FIRE PREVENTION AND FIRE FIGHTING

• GENERAL

Every effort shall be made by employees to prevent fire out breaks. Hot work permit must be obtained for all jobs involving use of ignition sources.

- Necessary precautions must be taken during welding operations.
- Fuels shall be stored away from heat sources.
- 'No smoking' signs shall be strictly observed
- Electrical lines and sockets shall not be overloaded.

For Fire Fighting:

- Employees shall know the positions of fire extinguishers in the location.
- They shall be familiar with the operation.
- Routes to fire extinguishers shall not be blocked.
- All exhausted fire extinguishers must be reported so that they can be recharged.
- Employees shall be familiar with fire emergency procedures.

• FIRE TEAMS

- a. During Operations there is fire team comprising of a minimum of two people in each.
- a. A list of the trained firemen on board is kept with the administrator and all fire team lists are posted at bulletin location. The safety officers shall ensure this list is kept updated.

- a. At the superintendent's choice of time and types, once every two weeks, one of the below listed drills or instruction are performed to provide practical training and experience to the teams:

DRILLS / INSTRUCTIONS

- | | |
|------------------------|----------------------------|
| 1. Mechanic | 8. Fire detector system |
| 2. Civil work | 9. Smoke driving apparatus |
| 3. Cranes instructions | 9. General fire fighting |
| 4. Electrical team | 10. Use of extinguishers |
| 5. Accommodation | |
| 6. Piling | |
| 7. Boats/barges. | |

11.0 PERMIT TO WORK

11.1 GENERAL

- The reasons for requiring a permit to work are listed as follows:
 - a) Ensures that effective control is maintained on the types of work known to have inherent risk, hazards, danger, or perils
 - b) Requires competent personnel, usually the supervisor over the work area, foreman over the work carried out, and the safety officer to analyse the job and list all required safety precautions to be taken on the permit to work.
 - c) Assure the persons in charge, and ultimately responsible for safety at the work site, usually the barge captain, barge superintendent, or the offshore installation manager has given their permission for the work to be done
- A permit to work is valid for one work shift only (usually a 12 hours period offshore).

11.2 WHEN REQUIRED

- A permit to work is required on the barge / site for the type of work described in 8.2.2 through 8.2.6 and by the client when these types of work are done on their properties.
- HOT WORK is described as work involving the use of cutting or welding equipment, mastic pots, abrasive grinding, soldering equipment not rated intrinsically safe, power actuated tools, sandblasting, or any other type of device which might provide a source of ignition.
 - a) A permit to work is only required when the hot work presents a potential hazard of fire or explosion. For example: a permit to

work would be required to perform cutting/welding inside the living accommodation or on deck near helicopter fuel storage tank.

- **CONFINED SPACE**

Work in an enclosure with known potential hazards and not designed or intended for normal worker occupation.

Emergency escape from such a space is usually difficult.

- ✓ During pipe laying operations if personnel enters the pipe for any reason and intends to go past the first double joint line up station a permit to work is required.

- **RADIOGRAPHY WORK**

This is carried out at the designated radiography stations. This requires a permit to work and is issued prior to the beginning of any radiographic activity. The permit to work remains valid for the entire work activity and all the safety precautions shall be followed.

- ✓ If it becomes necessary to perform radiography work outside the areas described above, a specific permit to work shall be issued as per 9.1.2

- **ELECTRICAL WORK**

This fits the description of 9.2.2 above, or that which exposes personnel other than electricians to risks; or that in the opinion of the chief engineer or safety officer involves extraordinary risks shall require a permit to work.

- **HAZARDOUS WORK**

Hazardous work of any type as judged by the safety officer, captain, or superintendent which requires specific precautions to be taken shall require a permit to work

- **HOW TO OBTAIN**

- Step One - The supervisor responsible for the work completes the description of the work section on the Permit to Work Form.
- Step two - The supervisor, responsible foreman, and the safety officer visit the work site and together complete the precautions to be taken section on the form.
- Step three - The supervisor obtains the approval signatures and distributes the copies.

- Step four - The Supervisor and Safety Officer ensures that precautions listed on the forms are complied with.
- Step five - The Supervisor obtains the completion signatures and returns the original to the Safety Officer for filing.

12.0 ACCIDENT REPORTING AND INVESTIGATION

12.1 GENERAL

Accidents result in suffering, pain and death to victims and their families, and waste of time, money, materials and damage plants, machines and equipment of the company. The Government incurs losses when accidents occur at work. Consequently, it is the desire of **Turret Engineering** to prevent accidents in all its operations. All efforts will be made to achieve this golden objective of zero accidents and zero LTI's in our operations.

One of the weapons which, the company will use in preventing accidents is the proper dissemination of information to workers, investigation of any accidents (**Learning From Incidents – LFI**). The primary purpose of this exercise is to determine the cause(s) of the accident and use these facts to prevent a recurrence in the future. Appropriate warning and precautionary measures will be prescribed for employees to observe and follow. It is the policy of this organization to ensure that every employee reports immediately any accident that occurs on site to the Supervisor of his section or the HSE department.

The Supervisor in turn is expected to investigate the accident to determine the circumstances surrounding the accident. He will correct any unsafe acts and or conditions that were responsible for the accident. Where such causes cannot be immediately corrected, he will make recommendations to the Management on the measures required to be implemented in order to forestall a similar mishap occurring in the future. Employees must co-operate during the investigation.

The exercise is a **FACT-FINDING and NOT a FAULT FINDING**; one. It is not witch-hunts. Management will not hesitate to deal seriously with any worker who, obstruct or hides facts during an investigation.

12.1.1 A definition of an accident is simply "an unintended happening". The accident may or may not cause injury to personnel, loss of productive work time, and damage to equipment, the barge, or material.

12.1.2 The objectives of accident reporting are as follow:

- ✓ Obtain facts concerning causes of accidents in order to take corrective actions to prevent recurrence of a similar accident.
- ✓ Provide an accurate report to insurance companies, government authorises; Company management, or the client.

12.1.3 Examples of most of the forms required for reporting accidents are included at the end of this chapter.

12.2 WHAT TO REPORT

- All accidents that occurred on site requires investigation and reporting and includes the following:
 - ✓ **Death to personnel (Fatality)** - client representative (or project manager if no client representative) will immediately notify the police having jurisdiction through established communication lines.
 - ✓ **Serious personnel injury (LTI)** - defined as life threatening, or potentially causing long term disability. These injuries include the following:
 1. Fracture of skull, spine, pelvis, arm, or leg
 2. Dislocation of shoulder, elbow, hip, knee, or spine
 3. Amputation of limb or part of limb
 4. Damage to eyes or loss of eye
 5. Asphyxia toxic poisoning, or bends
 6. Severe electrical shock
 7. Any case of accidental radiation exposure
 - ✓ **Lost time cases** - defined as those accidents in which personnel injured one day are unable to work their next schedule work shift.
 - ✓ **Diving, accidents** - All types including those under pressure, surface diving, related equipment, etc.)
 - ✓ **Accidents involving near miss** injures to personnel, but could have cause injury such as:
 1. Structural failure of any part of the barge, equipment, or materials.
 2. Failure of lifting appliance of lifting gear.
 3. Fire or explosion
 4. Any accident which could have endangered life

DOCTOR / NURSE

NOTE: Distribution: Project Manager, Operations Manager Safety Engineer, Medical Doctor and Safety Director.

- a. Accident Report – required on all accidents described in 12.2 above and is completed by the safety officer, Superintendent.

Example form is included at the end of this chapter and guidelines for completion are listed below.

1. Accidents shall be investigated as soon as possible after they happen or within 12 Hours maximum.
 1. In case of deaths or serious personnel injuries accident scenes should not be changed until relevant authorities have visited the scene.
 1. Investigation interviews shall be conducted privately between the safety officer and one witness at a time.
 1. It must be emphasised that the purpose of the investigation is to find causes of the accident, not to place blame on anyone.
 1. Normal distribution of the form is listed at the bottom of the form; photocopy the original if extra copies are required for the client representative or other.
 1. Photographs shall be taken as soon as possible after the accident and attached to the report, also sketches or drawings with dimensions, weights, etc. are helpful
- c. Other reports – Local authorities may require specific reporting for accidents. This should be investigated before start of project and the requirements clarified.

12.4

STATISTICS

- The basic objectives for keeping detailed accidents statistics are as follows:-
 - Allow comparison of the current accident rates against previous project rates or similar industry rates.

- Indicates if trends are developing concerning the location of accidents, causes of injuries, nature of injuries, or occupations injured.
 - Clients' routinely request accident statistics with their invitations to bid contracts.
- The HSE department issues the Monthly Project Accident Summary by the middle of the following month.

The information is based on data taken from the Accident Report and the site medical records (**Base Data**).

- The form allows a comparison of each month's performance to that of previous projects.
 - The site medic at the end of each month and before the 5th of the following month makes a summary of all recordable cases, lost workday cases, or lost workdays and forwards the form to the safety and medical director.
 - A recordable case is either an occupational injury or occupational illness (illness caused by something in the working environment, i.e. inhalation of fumes) which requires treatment other than merely first aid by a doctor (or nurse under the standing orders of a doctor). For example, a cut to that finger which is only cleaned with bandages applied would be first aid; however, if sutures are necessary including follow-up observations this would be classified as a recordable case.
 - A lost workday case is such as defined in paragraph (1) above in which the person is unable to work their scheduled work shift.
 - Lost workdays are simply the number of days the person would have normally worked had they not been injured/ill. This will often be estimated by the doctor/nurse. Especially when the person is sent home for holiday rotation and does return, to site based on their experience with previous similar cases
- The HSE department issues an annual report for each year within February of the following year with guidelines for its format as follows:-
 - Statistic charts showing:

1. Locations of accidents
 2. Injury causes
 3. Nature of injuries
 4. Accidents by occupations
- Comparable accident rates of similar industrial activities
 - Highlights of accident prevention activities
 - Accident prevention suggestions based on the past years' experience.

13.0 CONTINGENCY PLAN OF ACTION IN EMERGENCY SITUATION

13.1

GENERAL

Turret Engineering believes that Safety is everybody's business. Therefore, all reasonable measures are to be taken to prevent the occurrence of an unwanted event. All such measures form part of the Company's Safety Policy and Operation guidelines, which are already being propagated in our operations.

However, after all efforts to prevent the occurrence of an unwanted event, accidents may still happen. Primarily, first-aid and medical evacuation procedures are in place in our company's safety policy manual. Accidents occur in varying forms and are of varying in magnitude. Some could even result in sudden change in the condition of either the human or material resources of an organisation, and apart from disrupting normal operation, could result in more damage to the human and material resources of the organisation. This could be identified as a crisis or an emergency situation.

In order to avoid more damage resulting from confusion and stampede, and to prevent the crisis situation from escalating, it is wise to identify specific emergencies or crisis situations for which specific plan of action could be drawn. All such plans must be practical within the limits of human and material resources, and must aim at:

1. Saving life
2. Minimising pain and suffering
3. Minimising waste on normal operation
4. Restore normal operation.

Also the emergency plans are directed towards realising a workable assistance at the shortest possible time, and ensure that all services likely to

be involved or affected are informed within the shortest possible time. An orderly and effective response to the measures in place is of vital importance for achieving the desired results.

13.2 RESCUE TEAM/COMMAND STRUCTURE

The rescue team in an emergency shall include the following:

1. Manager
2. The Site Supervisor
3. The Site Safety Officer
4. First Aiders / Nurse
5. The Foreman/General Foreman

Other members of the rescue team shall include employees from the security and as shall be requested and directed by the Site Supervisor. They shall be trained

NOTE: In the event of an Accident, the Client and Contractor Representative's shall be conveyed to the nearest clinic for initial treatment and thereafter to the Company hospital / clinic takes over.

13.3 FIRE EMERGENCY PROCEDURES.

- I. if you discover fire outbreak :
 - Raise an alarm (**Shout Fire” Fire” Fire”**)
 - Operate alarm system if possible
 - Telephone fire Department for assistance on
 - Try to put off fire (**Do Not Risk YOUR Life**)
 - Assemble outside at a safe place for head count.
- II. If you hear the fire alarm
 - Leave whatever you are doing / worksite at once
 - Follow the e14t route
 - Assemble at the muster point for roll call
 - Don't re-enter the building / worksite, **“except when instructed”**.
- III. Specific crisis situation / emergencies
 - Serious injuries
 - Fire disaster
 - Accommodation unit going up in flames
 - Road traffic accident
 - Personnel drowning
 - Armed robbery attack on site

EMERGENCY CONTACT:

IEFCL:

- FIRE ---
- MEDEVAC ---

Turret Engineering RETAINER (EBONY CLINIC):

If serious injuries;

- Ensure breathing.
- Control bleeding
- Transport victim to clinic for medical case

14.0 CORPORATE SAFETY AUDIT

14.1 GENERAL

- Corporate Safety Audits are carried out at all company work sites / barges / yards as a minimum of one time per year.
- The Corporate Safety Audits reports are distributed to all managers within the relevant divisions of the company.
- Work site / barge / yard superintendents are obliged to respond to any recommendations listed within the audit report.

15.0 COMMUNITY AFFAIRS PLAN

15.1 GENERAL

a. Presentation

Turret Engineering has in the last 5 years carried out many major projects in the oil and gas industry including pipelines, storage tank farm, gas treatment, painting, lifting and handling operations of a variety of industrial installations requiring special equipment and highly specialized teams, mechanical works etc. Regarding fabrication and piping erection, **Turret Engineering** has permanent yard in Port Harcourt. Actual work force in operation is 32 trade tested personnel and 50 semi – skilled.

b. Purpose of the plan

The purpose of this community affairs plan is:

To implement a **CA** policy that must be distributed to all Contractor employees working on the job site allowing for a mutually beneficial relationship throughout entire project.

- to identify all **CA** issues arising during the performance of the work
- to define the responsibilities and work of the project personnel regarding **CA** issues.

15.2 POLICY STATEMENT

- **Turret Engineering** standard is to maintain mutual beneficial relationships with host communities.
- The Contractor fully recognizes that community affairs concerns are of prime importance for satisfactory and proper execution of the work in serving the COMPANY
- Every employee, regardless of operational level, has the personal responsibility to follow good practices concerning **CA**.
- Should a problem arise, Contractor's staff working with labourers from the host community will report to the community affairs officer in order to rectify the situation and maintain communication.
- Any problem arising with the host community must be immediately reported to the community affairs officer and to the project management.

The management will contact the community representative to determine the nature of the problem and a resolution.

If agreement is not achieved between the contractor and the community, the Client through its Community Relations Officer (**CRO**), will be informed and will be asked for its opinion considering the reasons and rights of both parties.

This policy will be distributed to all Contractors' personnel working on job site.

For: TURRET ENGINEERING

MANAGING DIRECTOR

15.3 MANAGEMENT

a. Community Affairs Officer

The CA officer shall be nominated by the project manager for the entire duration of the work at job site.

The CA officer is responsible for maintaining cordial relationship with local communities.

The CA officer is responsible for opening and updating a CA register where he shall record any problem arising from the relation with the local communities.

b. Project Manager

The project manager shall be the direct superior of the CA officer.

The project manager will keep the project director and Company project manager informed of all relevant CA matters.

The project manager must be informed as soon as any CA problem arises, and the project manager will confer with the CA officer before any decision is taken.

c. Construction Manager

The construction manager shall be kept informed of all matters concerning CA to ensure that the policy implemented on the site follows the CA policy.

The construction manager shall seek advice from the CA officer to solve CA situations.

In case of disagreement between the CA Officer and the construction manager, the project manager's opinion shall prevail.

15.4 TARGETS AND OBJECTIVES

Targets for the Contractor:

- Assist the host communities in improving their way of life
- Ensure the site work progresses smoothly and compatibly with the host communities, without any conflict.
- Acknowledge and treat the community members and villages, as well as the environment, with respect.

15.5 ACTION PLAN

a. Meeting with affected communities

Before mobilization and as soon as possible after effective date, the Contractor project management and the COMPANY Representative will meet with the community representatives (the landlord community) concerned by the work and will pay a courtesy call on it leadership with customary drinks / items of presentation.

The contractor appointed Community Affairs Officer will be officially presented to the community.

b. *Employment of local sub-contractor and labour*

Turret Engineering will work as much as possible with the villages and communities. The work is organized as follows.

- **Turret Engineering** will establish an annual agreement with the principal concerned labour organizations on skilled workers.
- **Turret Engineering** organizes courses and training for community workers, allowing them to reach the requested standard in quality and safety.
- Qualification of welders and other highly specialized personnel is systematically tested by **Turret Engineering** management and training is organized at the Port Harcourt **Turret Engineering** yard or on other sites.
- Priority will be given to community workers who have demonstrated greater ability to the required conditions.
- Nonetheless, when absolutely necessary to meet peak man-hour requirements, **Turret Engineering** shall periodically hire competent personnel (as sparingly as possible) to meet up its targets.

Turret Engineering will work with the COMPANY registered contractor.

c. Operation of boats

The boat operation shall be conducted following the recommendations of the HSES manual:

To minimize the risk of disturbance, the following rules will be enforced:

- No night sailing, except in case of emergency (with special authorization)
- Boats are required to reduce speed when overtaking local canoes, or when passing villages.
- Avoidance of fish traps or fishing nets.

d. Resolution of problems

Any problem arising with the host community must be immediately reported to the Community Affairs Officer and to the project management.

The management will contact the community representative to determine the nature of the problem and a possible resolution.

If no agreement was reached between the Contractor, the Community and the COMPANY, through its community liaison officer, shall be informed and would be asked to give its opinion considering the reasons and rights of both parties.

e. Subcontractors

The Contractor shall ensure that all its subcontractors comply with the CA plan and that each of its employees has read and understood the CA policy.

The CA Officer shall also be responsible for the implementation of the subcontractors CA activities.

The subcontractor shall nominate a representative who will be in charge of the CA issues and who will be in direct communication relation with the contractor CA Officer.

f. Community Project

In co-ordination with the COMPANY liaison officer, **Turret Engineering** shall investigate community projects which can be implemented during the site work progress and will propose assistance to the communities to achieve the most urgent ones.

15.6. COMMUNICATION AND RECORDING OF CA PERFORMANCE

a. Communication

Time will be allotted during the HSES meeting for discussion of community affairs issues.

In the event of a serious matter requiring special attention from all the employees, a special meeting can be called (after approval from the project manager and Company Representative).

b. Recording of CA Performance

The contractor CA Officer shall keep a central register of all the CA issues raised throughout the performance of the work, which will state:

- Date of the issue
- Originator of the issue
- Staff who was the first point of receipt of the issue

- Method of resolution / response
- Contractor's authorized signature of the response
- Close out date of the issue
- CA Officer signature for close out

15.7. AUDITS AND CORRECTIVE ACTION

a. General

It is a normal part of good business practice to initiate and carry out systems of inspection and checking to ensure operations are performed in an efficient and profitable way.

CA Auditing is a method which will give a reasonable indication of how well a company's CA program is working in all its aspects.

Audits will also aim to promote contact with individual employees as a manifestation of management's interest and concern to gain their involvement, to encourage comments and suggestions relating to CA.

b. Incident Investigation and Follow – Up

Incident is simply “an unintended happening”. The incident may or may not cause injury to personnel, loss of productive work time, or damage to equipment, environment. Consequently, it is our desire to prevent accidents in all operations. No effort will be overlooked in the crusade to achieve this golden objective.

One of the weapons which the Contractor will use in preventing incidents is the investigation of any incident that may occur. The primary purpose of this exercise is to determine the cause(s) of the accident and use these facts to prevent a recurrence in the future. But if the incident is not reported, no efforts can be made to establish its cause(s). Hence it is a matter of Contractor policy that every employee is expected to report immediately to his Supervisor any incident which occurs to him, his fellow employee(s) in his place of work.

The Supervisor, in turn, will contact the CA officer who is expected to investigate the incident to determine the circumstances surrounding the accident. He should correct conditions that were responsible. Where such causes cannot be immediately rectified, he should make recommendations to management on what measures to be implemented in order to forestall a similar mishap occurring in the future. Employees must cooperate during the investigation.

The exercise is a fact finding and not faults finding one. Management will not hesitate to deal seriously with any worker who obstructs or hides facts during an investigation.

The CA Officer will issue statistics to be included as part of the HSES statistics in the monthly report. These statistics will be reviewed with the Company Community Relations Officer and discussed with the management if corrective actions are needed.

16.0

APPENDICES

16.1 APPENDIX 1 : HSES ACTIVITY - RESPONSIBILITY CHART

	HSES ACTIVITY	M D	O P	P L	P M	P E	S M	Q A	S O	S U	S C	SS O
1	Overall responsibility for HSES	P	P	P	S	S	S	S	S			
2	Arrange HSES Briefing for Subcontractor & Contractor Personnel	S	P	P	P	S						
3	Review subcontractor HSES Plan	S	S	P	P	S						
4	Issue Environmental Impact Assessment Statement (EIA)	P	P	P	S	S						
5	Arrange pre-mob Inspections	S	S	S	S	P	P	S	P	S	P	P
6	Medical Certification	S	S	S	S	P	P	S	P	S	P	P
7	Swimming Certification	S	S	S	S	P	P	S	P	S	P	P
8	HSES Meeting	S	S	S	P	P	P	S	P	S	P	P
9	Unsafe Act Audit	S	P	P	P	P	P	P	P	S	P	P
10	Incident near miss reporting	S	P	P	P	P	P	P	P	P	P	P
11	Site/facilities inspections	S	S	S	S	S	P	S	P	P	S	S
12	Emergency Drills	S	S	S	P	S	S	S	P	S	S	S
13	Site/Facilities/HSES System Audit	S	S	P	S	S	S	S	S	S	S	S
14	MEDEVAC/MEDRESCUE	S	S	S	P	S	S	S	S	S	S	S
15	Toolbox Meetings	S	S	S	S	S	S	S	P	S	S	P
16	Unsafe Act Audit Induction	S	S	S	S	S	S	S	P	P	S	S
17	Permit to work Induction	S	S	S	S	S	P	S	P	P	S	S
18	Emergency Procedure Induction	S	S	S	S	S	P	S	P	S	S	S
19	Accident report/investigation induction	S	S	S	S	S	S	S	P	S	S	S
20	Work Procedure Assurance	S	S	S	S	S	S	P	P	S	P	S

LEGEND

MD	Managing Director	SO	HSES Officer
OP	Operation Manager	SU	Site Supervisor
PL	Project Leader	SC	Subcontractor Leader
PM	Project Manager	SSO	Subcontractor Safety Officer
PE	Project Engineer	P	Primary Responsibility
SM	Site Manager	S	Secondary Responsibility
QA	QA/QC Engineer		

APPENDIX 2

ACCIDENT RESPONSE

INFORM

CO-ORDINATE

ACTION

MEDEVAC / MEDRESCUE PROCEDURE

SITE PERSONNEL

TURRET ENGINEERING SITE MGT

SUPERVISOR

- **SHOUT “HELP, HELP”**

- **GETFIRST AIDER**
- **ALERT SUPERVISOR**
 - **CONTACT:**
 - FIRW
 - SAFW
 - **FIGHTFIRE**
 - **START MUSTER**
- **COMPLETE CHECK-LIST**
 - **CONTACT:**
 - TURRET ENGINEERING SITE NURSE
 - TURRET ENGINEERING SITE MGT
 - TURRET ENGINEERING MGT.

CLIENT SITE MANAGER

TURRET ENGINEERING SITE MANAGER (RADIO)

FIRST AIDER

- **CONTACT:**

- CLIENT

- HEAD TERMINAL

- MEDW

- **MONIITOR SITUATION**

- **REPORT**

- **TAKE CHARGE**

- **MAKE AREA SAFE**

- **GIVE FIRST AID**

- **CONTACT:**

- DUTY ENGINEER EPTW

- TURRET ENGINEERING CLINIC AT PHC

- TURRET ENGINEERING SITE MANAGEMENT

MEDW PHC

CLIENT MGT

SITE NURSE

CLIENT DUTY ENGINEER (Radio)

- **CONTACT:**
 - IEFCL DUTY MGR.**
- **MEET CASUALTY**
- **GO TO CASUALTY**
 - **TAKE CHARGE**
- **EXAMINE CASUATY**
- **TRANSPORT TO CLINIC**
- **CONTACT CLIENT**
- **GIVE FIRST AID**

EMERGENCY CHECKLIST

CONTACT:

- **NAME**
- **COMPANY/DEPT.**
- **PHONE NUMBER**

INCIDENT

- **LOCATION**
- **TIME**
- **NATURE**
- **SITUATION REPORT**
- **CONTACT/**
- **CLIENT**

-SPDC DUTY MR

-SAFETY CO-RD

- **FEEDBACK TO;**

-CLIENT DUTY ENGINEER

-TURRET ENGINEERING SITE MANAGER

CLIENT DUTY CO-ORD (Radio)

- **MEET CASUALTY**

EXAMINE CASUALTY

RELEASE TO CLINIC

- **CONTACT;**

- **CLIENT DUTYCORDINATOR**

- RADIO ROOM**

- CLIENTSITE MGT**

- CLIENT MGT**

- SAFETY COORDINATOR**

- **START INVESTIGATION**

EMERGENCY CHECKLIST

ACCIDENT REPORT CHART

ACCIDENT

First Aider/Nurse

Project Engineer

Safety Officer

Arrange evacuation
(If necessary)

Client

GM

Project Manager

Clinic

Victim Family

Insurance Company

FIRW

CONTROL ROOM

EYE WITNESS

FIRE / LEAKAGE EMERGENCY PROCEDURE

- CONTACT
 - FIRW
 - SAFW
- FIGHT FIRE

- ACTIVATE SIREN
- CONTACT:
 - FIRE DEPARTMENT FIRW (NO)
 - PRODUCTION PRDW (NO)
 - DUTY ENGINEER EPTW (NO)
- SHOUT "FIRE" OR "LEAK, LEAK"
- IF FIRE, BREAK THE CLASS OF THE NEAREST MANUAL ALRM CALL POINT
 - IF FIE/LEAK CONTINUE AS FOLLOWS
 - PHONE, GIVING YOUR NAME & EXACT LOCATION O FIRE/LEAK
 - ALERT YOUR SUPERVISOR

INTERMITTENT SIREN-EVACUATION

- FOLLOW THE ABOVE PROCEDURE
- FOLLOW FURTHER INSTRUCTION FROM THE TERMINAL AUTHORITIES/CLIENT
DUTY ENGINEER

CONTINUOUS SIREN MUSTER

- PUT OFF ALL MACHINES
 - PROCEED TO THE TALLY BOARD AND CHANGE YOUR DISK
 - MUSTER AT THE NEAREST MUSTERING POINT TO THE TALLY BOARD
 - OBSERVE THE FIRE SCENE/EVACUATION PLAN
 - MOVE TO THE NEAREST TERMINAL MUSTERING POINT USING THE EVACUATION
ROUTE
 - ACTIVATE SIREN
 - CONTACT
 - FIRW(NO)
 - PRDW(NO)
 - CLIENT DUTY ENGINEER (NO)
- BLEETER PROCEDURE
- CONTACT CLIENT & LCL MGT
 - LIASE WITH:
 - PRDW
- TURRET ENGINEERING SITE MANAGER

CLIENT DUTY ENGINEER

Phone/Radio

- CONTACT:
 - DUTY ENGINEER EPTW (NO)

-TURRET ENGINEERING SITE SUPERVISOR
-TURRET ENGINEERING SITE MANAGEMENT
TURRET ENGINEERING SITE MANAGER (RADIO)

- ACTIVATE SITE ALARM
 - START MUSTER
- CONTACT LCL DUTY ENGINEER
- CONDUCT TALLY CHECKS

SUPERVISOR (RADIO)