



RC No: RC1628749

GENPHET TECHNICAL SERVICING LIMITED

HSE

**PLAN FOR THE DESIGN AND
CONSTRUCTION OF BOREHOLES**

Submitted by:

GENPHET TECHNICAL SERVICES LIMITED

CONTRACTOR: GENPHET TECHNICAL SERVICES LIMITED

Project Title:

Design and Construction of Boreholes



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HSE Policy

Health, Safety and Environmental Policy

The company will conduct its activities in a manner, which ensures so far as is reasonably practical, the health and safety of its employees and others that may be affected in any way by the company's activities.

GENPHET TECHNICAL SERVICING LIMITED will conduct its activities in a manner which, so far as is reasonably practice avoids disturbance to the environment and, if disturbance does occur as a result of the Company's activities, will initiate every effort to restore the environment to its former standard.

GENPHET believes:

- That health, safety and environment preservation are equally as important as other business activities.
- That accidents, injuries and environmental disturbance are preventable and unacceptable.
- That health, safety and environment preservation are line management responsibilities
- That everyone is responsible for their own safety and the safety of their colleagues at work.
- That suitable programs and appropriate line actions will be implemented and taken respectively towards the continual improvement of its HSE-MS .
- That each subcontractor must adhere to GENPHET and its clients plans and procedure to establish a safe work site during all phases of their work scope .

The company will pursue the concepts of this HSE Policy through its Company Plans and Procedures, visible management and supervisory commitment, through the inclusion of these concepts in its training, communication and motivation programs of its stakeholders.

Sign.....

JAPHET ELUOZO

(Managing Director/Chief Executive Officer)



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COMMUNITY AFFAIRS POLICY

GENPHET TECHNICAL SERVICING LIMITED shall continue to identify with the needs and aspirations of hers and clients host communities in the execution of its operation.

The company is of the view that it shall not operate in isolation and therefore shall liaise with clients communities, relevant government departments and others in order to ensure a safe and peaceful working atmosphere.

The company shall also ensure the building sustenance of solid harmonious relationship with client and communities and shall exhaust every known peaceful strategy to resolved conflict in case of any disagreement .

Sign.....

JAPHET ELUOZO

(Managing Director/Chief Executive Officer)

Project Title:

Design and Construction of Boreholes



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PERSONAL PROTECTIVE EQUIPMENT (PPE) POLICY

It is the policy of **GENPHET TECHNICAL SERVICES LIMITED** to provide relevant and high quality personal protective Equipment – Coveralls, Safety shoes, Rain Boots, Rain coat, Life jacket, hard hats, Hand gloves etc. for all personnel' engaged in her operations.

Continually, the management shall enforce the effective use and maintenance of available personal protective equipment ppe, with entails regular condition audits and replacement of defective ones.

Site HSE officer and supervisor shall continue to monitor compliance with this policy. Record of insurance kept for audit purpose .

Sign.....

JAPHET ELUOZO

(Managing Director/Chief Executive Officer)



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DRIVING /SEAT BELT POLICY

It shall be the **POLICY** of the company that operations will be carried out at safe conditions . Attempts shall be made to control excessive exposure to road hazard .

Distant journeys shall be planed and applicable hazard anticipated with good judgement of time speed, nature of roads , visibility and safety coupled with good journey management procedures.

All company drivers shall process valid Nigerian Driving license for the class of vehicle he intends to drive, and shall have been subjected to Porto client & Glare test to check blurred visions.

BELT UP AND LIVE!!

Sign.....

JAPHET ELUOZO

(Management Director/Chief Executive Officer)



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ENVIRONMENTAL / WASTE MANAGEMENT POLICY

This policy will seek to preserve the environment to its primary condition. Therefore, impact assessments will be carried out together with a measure of consequences before any work is started. Efforts shall be geared towards reducing noise, dust, fumes and other injurious substances by our working condition and environment. We are also committed ensuring clean and healthy environment in the course of work.

To this effect all waste generated shall be identified according to their nature and degree of harm to the environment. Any material that has dangerous environmental consequences will be eliminated where practicable or substituted. Waste will be segregated at source and kept in containers marked or tagged with contract. It may be necessary to seek assistance from waste disposal contractors. The permit to work where necessary shall be extended to cover environment checks. During work compliance monitoring shall be ensured to assess defects through regular site visit.

Implementation of this policy is the responsibility of all employees.

Sign:.....

JAPHET ELUOZO

(Managing Director / Chief Executive Officer)

Project Title:

Design and Construction of Boreholes



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ALCOHOL AND DRUG POLICY

It is the company's obligation to maintain Health, Safety and Environment for efficient worker conditions for its employee's .

Being under the influence of drug or alcohol it may pose serious health and safety risks not only to the consumer but also to the safety of co-workers, members of the public at large and employee's performance.

Most workplace accident are caused by human error which could be drug or alcohol related. The possession use or sale of an illegal drug or alcohol in the work place poses danger and unacceptable risks for safe, health and efficient operation.

In order not to jeopardize its good intention for employee's the company maintains the following policy in respect of drug/alcohol.

- Management of **GENPHET TECHNICAL SERVICES LIMITED** shall deal decisively with any employee(s) who engage(s) in drug abuse and/or take active interest in self-medication and alcohol.
- Medical fitness examination shall be conducted to include urine/blood or other alcohol/drug-screening test and maintained as afore-employment screening practice. This is a measure to check hiring individuals who use illegal drug or individual whose use of drugs or alcohol indicates a potential for impaired or unsafe work performance .
- Working under the influence of alcohol puts at stake the company's obligation to sustain safe and efficient operations. Therefore the use or being under the influence of alcohol or sale transfer or possession of illegal obtained drug by an employee while on company's business or while in the facility of either the company or its clients is strictly prohibited.



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- Violation of this policy shall attract serve discipline and may eventually need to discharge from duty.

Sign.....

JAPHET ELUOZO

(Managing Director/Chief Executive Officer)



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OCCUPATIONAL HEALTH POLICY

Facilities Available

Medical

For the **BORE-HOLE DRILLING** Services, **GENPHET TECHNICAL SERVICES LIMITED** maintains a fully equipped first aid on site.

All on-site personnel prior to the resumption of duties shall undergo complete medical examination. The results of these medical test are to be judged by a physician specializing in occupation medicine. It is **GENPHET TECHNICAL SERVICES LIMITED's** policy to send its staff for periodic medical fitness test and medical check-up.

First Aid

Our first aid kits will be available at different parts of the work location for use by qualified site First Aider at all times. First Aid Kids will contain only, which have been approved by and certified. An inventory list, of all contents will be included in each first aid kid.

At least one person certified in first aid shall be present at the work site at all times. These shall be one fully trained First Aider for every twenty employees. All site employees must be trained in the basic skills of First Aid.

Note: Eye wash facilities shall be available and located at the main facilities and in workshop area and any area where workers may come in contact with chemicals or other micro substance.

Sign.....

JAPHET ELUOZO

(Managing Director/Chief Executive Officer)



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NO SMOKING POLICY

Smoking is injurious to health. Therefore, smoking of any sort, inhalation or chewing of tobacco is prohibited on our worksites.

Any employee of **GENPHET TECHNICAL SERVICES LIMITED** found smoking cigarette or consuming hard drugs on site would be summarily dismissed.

Sign.....

JAPHET ELUOZO

(Managing Director/Chief Executive Officer)



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QUALITY ASSURANCE POLICY

In **GENPHET TECHNICAL SERVICES LIMITED**, Quality Assurance is not just words, IT IS ACTION. It starts at the top : The Ceo/Managing Director , Manager, Operation Manager, Accountant, Secretary, Engineers, Supervisors, down to the workmen and all our staff. The first and most important aspect of what we do is vested in '**QUALITY CONTROL**'. We always strive to satisfy our customer's quality control requirement whether they are exact or different from ours.

We have realized that in order to stay in business, we must develop, maintain, monitor, evaluate and update our quality specifications and work at all levels to assure the highest quality projects at the lowest possible cost to our customers.

For us, it is not quality until our customer is satisfied.

Sign:.....

JAPHET ELUOZO

(Managing Director/ Chief Executive Officer).



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GENPHET TECHNICAL SERVICES LIMITED

CONTACT DETAILS

- 1. HEAD OFFICE:** 53 IWOFE ROAD, CLOSE TO PEPPERONI
FAST FOOD, PORT HARCOURT.

- 2. BRANCH OFFICE:** 14 ATABA (OJIEGBU STREET)
PORT HARCOURT.



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COMMUNICATION

Genphet Technical Services Limited will provide employees information about the general duties of care liable for and / or to them by employers as well as in particulars.

1. Safe plant and system of work e.g. testing and maintenance of rig engine, mud pump engine and mud tank mixer. The safe system of work is needed for the employee to know what is involved in the work, the identified hazards, precautionary measures in particular details of the permit to work system etc.
2. Safe use, handling, transport and storage of substances and articles e.g. material safety data sheet (**MSDS**) etc.
3. Safe place of work, with clearly defined access and egress points.
4. Safe working environment with adequate welfare facilities e.g. sanitary conveniences.
5. Provision of information, instruction, training and supervision e.g.

Genphet Technical Services Limited will disseminate information with the three basic methods of effective communication.

1. Verbal – most commonly during drills, training, toolbox and START (safe Task Assignment and reinforcement training) meetings although for relatively simple pieces of information and instructions.
2. Written- memo clearly stating the title, our company codes of practice, minutes of health and safety meetings, health and safety procedures etc.
3. Graphic- **Genphet Technical Services Limited** will provide adequate safety signs appropriate for the task e.g. **NO PPE, NO ENTRY, WORK IN PROGRESS, MEN AT WORK, and MUSTER POINT.**



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COMPETENCE

Genphet Technicals Services Limited management will recruit competent people who have experience in carrying out the instructions of the clients.

We are well equipped with a Director, Project Manager, HSE Supervisor, drivers, skilled operator (mechanists), rig operator and other hands etc. who know what they are doing in assisting the management in meeting the obligations; they have

- a. knowledge and understanding of the work involved, the principles of risk assessment and prevention of the current health and safety applications.
- b. The principles of risk assessment and prevention of the current health and safety applications.
- c. The capacity to apply this to the task required by the employer in the form of problem and solution identification, monitoring and evaluating the effectiveness of solution, the protection and communication of health and safety and welfare advances and practices.

Finally , the requirement to employ competent workers covers the whole workforce in **Genphet Technical Services Limited**.



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PLANING IMPLEMENTATION AND MONITORING

Risk assessment is an essential part of the planning stage of **Genphet Technical Services Limited** HSE Plan and Health and Safety Management system . It shall be suitable and sufficient and cover both employees and non-employees affected by our undertaking .

- **Reduced Time Exposure to:**

Hazard particulate dust from bentonite, CMC, Pack-R, Extende, Antisol and noise nuisance from the equipment .

- **Housekeeping to:**

Reduce risk of fall, trips, slips and falls .

- **Training and information to:** Attend the workshop program organized by our client and hazard awareness training for our employees.

- **Genphet Technical Services Limited** prioritization of the implementation of risk control will depend on the risk rating (high, medium and low) which is medium.

- Monitoring and supervision in **Genphet Technical Services Limited** is to ensure that all risk control measures, whether they rely on engineered or human behavioural controls, must be monitored for their effectiveness and supervised to ensure that they have been applied correctly .

Competent people who have sound knowledge of the equipment will undertake monitoring.

The operator will be monitored to ascertain that all relevant procedure have been understood and followed. The operator will also be able to suggest improvements to the equipment or system of work.

The supervisors will be our major source of information during the monitoring process.



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WORK METHOD STATEMENT

INTRODUCTION

The method statement, is a document that breaks down the project to be executed in a safe practice. The method statement will outline the hazards controls and recovery measures on how the job will be done safely.

Using the method statement avenue, we want to sufficiently demonstrate to our client the competence of our organisation, to carry out the project schedule, both quantitatively and safely.

PROJECT OVERVIEW

The title of this project is DESIGN AND CONSTRUCTION OF A WATER WELL;

1. Site visitation
2. Electrical sounding
3. Mobilization of equipment and personnel/materials to site.
4. Site preparation and masking up drilling rig
5. Drilling of conductor
6. Casing and cementing conductor casing
7. Drilling of well at required depth
8. Drilling pilot hole
9. Reaming of pilot hole to accommodate casing
10. Installation of 9 casing pipes/cementation
11. Drilling of 8 diameter hole to total depth
12. Deviations survey
13. Geophysical logging
14. Installation of screen/parker/liner hanger
15. Development of borehole
16. Submersible pump installations



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- 17. Well head construction
- 18. Cathodic protections
- 19. Demobilization and site clean up

STRUCTURE FOR EFFECTIVE HSE MANAGEMENT

Effective HSE management will be achieved in the in this project using the following tools:-

1. monthly HSE meeting
2. Tool box talk meeting
3. Safety inspection
4. Hazard and effective management process (HEMP)
5. Hazard management form
6. Hazard management register
7. Unsafe acts/condition audit form
8. Near miss report form
9. Job hazard analysis



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JOB HAZARD ANALYSIS (JHA)

The (JHA) of the Design and construction of BOREHOLES PROJECT in;

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JOB HARZARD ANALYSIS (JHA)

Job hazard analysis (JHA) is the application of the hazards and effects management process at the task level. The four (4) HEMP stages are involved. A systematic identification of the hazards, a quantitative assessment of the hazard's risks and defining appropriate controls and recovery measures for these identified hazard.

IMPORTANCEOF JOB HAZARD ANALYSIS (JHA)

- a) The job hazard analysis (JHA) demonstrates that all the credible hazards inherent in the job have been identified, assessed and controlled. It reduces the potential for errors and has been proven to enhance overall safety performance.
- b) Job hazard analysis (JHA) outlines the role and influence of the company's systems controls at the worksite and ensures a consistent risk burden by application of additional worksite controls as necessary.
- c) The hazard analysis (JHA) can guide **GENPHET** requalification and thus, optimize company's supervision.



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WHERE AND WHEN JHA APPLIED?

Job hazard analysis (JHA) is appropriate for any task where hazard and controls measure needs to be formally assessed. The most common areas of application are:-

- a. Routine tasks that have the potential for serious incident or have a history incident including near misses.
- b. New tasks or task introducing new work methods.
- c. Routine task being carried out in unusual circumstances.
- d. Non-routine or one – off tasks.

Over leaf is a typical JHA designed for the Design and Construction of Boreholes.



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PROCEDURE FOR LIFTING OPERATIONS

Lifting procedures

General: Lifting operations shall include the operator, lifting supervisor etc. it shall be covered by valid (PTW) permit to work and access authorization at locations where these systems operate.

Lifting plan: Prior to carrying out any lift a lifting plan shall be discussed and agreed by the equipment operators, rigs operators and any other personnel involved in the lifting. Potential hazards shall be identified and the plan shall identify the means to avoid them.

LAND BALANCE AND STABILITY

This means that the load must be both balanced and stable.

BALANCE: For most lifts the load is required to be level when cleared of the ground, and to achieve this, the hook must be positioned vertically above the centre of gravity (C.G) of the load.

The legs of the sling should be distributed as possible as the lifting points available.

1. The load in the sling legs will be unequal i.e. the angles between the legs of the slings must be small.
2. Balance force has to be applied if the rigid load is lifted on four or more lifting points, hence it may be found only in the two or three legs considering the majority of the load with the remaining legs provided and if this is the case, larger capacity sling will be required.

Stability: Means resistance to tipping. An object with a narrow base and high centre of gravity will need less force to topple it than a wide base and a low centre of gravity.



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The load: The load shall be assessed to determine the lifting plan including type of lifting application and lifting gear to be used.

Assessment shall cover:

1. Whether the load is chemical or hazardous material.
2. The shape and number of piece intended to lift at a time
3. Whether load is self – supporting or requires additional support.
4. Weight of the land (this is vital)
5. Centre of gravity of the load before lifting

THE LIFTING APPLIANCES (MACHINE) AND LIFTING GEAR

The lifting appliance shall be positioned above the centre of gravity of the load. It must, in particular, be of sufficient safe working load SWL
Lifting gear shall have been inspected and marked with the current colour code in accordance with SP 1239.

The Site: There shall be a clear and safe path from the lifting site to the landing site . The Landing site shall be level and strong enough to take the load. Beware of excessive floor loading, soft ground and hidden weak sport such as ducts and drains. The landing site may need preparation in which case this shall be done before the life commences.

SELF LODER CRANE (HIAB)

The crane operator shall be satisfied that site conditions are suitable to execute the lifting. He should check the weight of the load against the crane capacity. The operator shall assess the radius **at which** the crane will be required to operate during the lift and consult the load charts to verify crane capacity to work under the load/radius combinations. He shall ensure the crane set up has an adequate number of wire rope falls to accommodate the load.



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REQUIRED PPEs FOR THE DESIGN AND CONSTRUCTION OF DEEP BORE HOLES PROJECTS

SAFETY SHOES/BOOTS

Safety shoes/boots shall be provided for all personnel at every working area or expose working environment .

HAND GLOVES

Hand glove both leather and rubber gloves shall be provided to protect personnel from contacting skink infection or skin irritation from chemicals.

HARD HATS/HELMET

Ensuring all Personnels are provided with these safety gears at all time at operational site and must be observed.

SAFETY HARNESS BELT

Safety harness belt shall be provided to protect personnel from falling from heights.

EYE GOGGLE /PROTECTION

Eye protection shall be provided to protect personnels against sparks,splashing of mud and flash burns caused by radiation from welding equipment.

EAR MUFFS

Ear muffs shall be provided to protect workers from noise caused by rig engine,and mechanical pumping machine .

COVERALLS

Coveralls, aprons, Leggings, Tie vest and welding mast should be provided. .



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PROJECT HEALTH/WELFARE

FIRST AID BOX AND TREATMENT

First Aid

- It is important for all employees to be familiar with the basic principles of first aid treatment, as this could sometimes mean the difference between life and death
- Besides, first aid can save lives and reduce endless suffering when accident occurs at any given time.
- It doesn't mean to replace treatment, which must be rendered to a approved qualified medical doctor.

First Aid Boxes

- The company shall provide fully equipped medical first aid boxes for all location i.e. offices, vehicle etc.
- Supervisors must ensure supplies are promptly replenished as they are used, or accidentally damaged.
- Supervisors must therefore be promptly informed whenever an item of first,medical supply has been used to ensure replacement .

WELFARE FACILITIES

We have one mobile toilet to be evacuated

CANTEEN FACILITIES

We have arrange for own eating services.



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GOOD HOUSE KEEPING

INTRODUCTION

In the plan for controlling or eliminating common hazards in industry, it is suggested that the evaluation of hazard potential should start from a base point. The base point recommended is the **WORKPLACE OR JOB SITE**. Since its status can affect all categories of hazards in most instances, good industrial **HOUSEKEEPING** is considered a good starting point for the safety program of any business.

DEFINITION

GOOD HOUSEKEEPING is defined as an arrangement of operation tools, equipment, storage facilities, and supplies. It means more than cleanliness. It means a place for everything, and everything in its place. It is a practical method of getting high production, low accident rates, and improved employee morale.

RESULT OF GOOD HOUSEKEEPING

Immediate and long range results can be obtained by development and instituting a well planned and well administered housekeeping program .

- **REDUCED OPERATION COSTS:**

Once an operation is clean and a housekeeping program has been established, less time and effort are required to keep it clean.

- **INCREASED IN PRODUCTION:**

Once obstacles to production are removed, orderly and businesslike methods can function without undue interference delay.



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WASTE DISPOSAL PLAN

Company: **GENPHET TECHNICAL SERVICES LIMITED**

Project: **DESIGN AND CONSTRUCTION OF BOREHOLES**

Designated Disposal Coordination:

Waste Management Goals: This project will reduce 85% by weight of the waste generated on – site to minimize the potential hazardous chemicals with non-toxic alternatives in order to cause no harm to human and the environment.

Communication plan:

- Waste prevention and reduced activities will be discussed at the beginning of each safety meeting.
- As each new sub-contractor comes onsite, the disposal coordinator will present him/ her with a copy of the Waste Management Plan and provide a tour of the disposal areas.
- The sub-contractor will be expected to make sure all their crew comply with the waste management plan.
- The general waste bin will be clearly labelled

Lists of acceptable/ unacceptable materials will be posted throughout the site.



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HSE TARGETS

Lost Time Injury (LTI)	-	Zero
Medical Treatment Case (MTC)	-	Zero
Road Transport Accident (RTA)	-	Zero
Restricted Work Case	-	Zero
Fire Drill Exercise	-	Monthly
HSE Meeting	-	Monthly
Tool Box Talks	-	100%
Unsafe Act Audit	-	Zero
Incident Report	-	Zero
Hazard Identification Report	-	80%



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HSE INDUCTION

GENPHET TECHNICAL SERVICES LIMITED maintains a CASHES INDUCTION policy for every staff in all new sites. This is applicable to all employees on their first day of work in site.

The company views this aspect of her policy with all seriousness as it borders on the does and don'ts of a particular work- site.

The responsibility of inducting all staffers on site on the first day lies with the site HSE Officer. Another officer vested with this responsibility is the site supervisor. Records of induction exercises could in the CASHES INDUCTION file.

S/N	TOPIC	DISCUSSED	
		YES	NO
1	Company organization		
2	Company HSE policy (i.e.)		
3	Employee's responsibility		
4	Client's HSE regulations		
5	Emergency procedures/ muster point		
6	Good housekeeping		
7	Work program		
8	Fire protection / prevention		
9	Work permit		
10	Importance of PPE		
11	Medical certification		

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State the PPE given.....

Iacknowledge that I have received verbal instructions explaining HSE procedures and practices on the above listed topics and violation will lead to my dismissal.

HSE Officer.....

Employee.....

Sign.....

Sign

Date

Date.....



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JOURNEY MANAGEMENT

JM plans were enforced by the safety officer, drivers filled the journey management slips and were given proper orientation about the community roads and customs before embarking on their journeys. Police and road safety escorts were provided for the trucks when entering into the town. Vehicles were routinely inspected to prevent hazards such as falling items and spilling fluids.

JOURNEY MANAGEMENT REQUIREMENTS

1. START Time: From 07.00HOURS
2. END Time: Before 19.00HOURS
3. Driver medically fit for the day? ---Y/ N
4. Vehicles road worthy, with spare tire, tire extinguisher, enough fuel and up to date papers?----Y/ N
5. Driver/ user has all necessary PPE?---Y/ N
6. Driver/ user has all PTW papers?----Y/ N
7. Vehicle equipment with first aid kit?-----Y/N
8. Vehicle equipped with Telecom (mobitex / hand held Radio)—Y/ N
9. Are there toll gates on the route?
10. Have provisions been made for lunch, overnight stay etc?---Y/ N
11. Does the user have contact address/ phone numbers to handle emergencies? Y/ N
12. Is IVMS installed, functioning? Y/ N

NOTE:

- JM SLIP MUST ACCOMPANY ALL TRIPS
- Dispatchers should physically check the speed reading before dispatch
- JM Slip must be submitted to the dispatcher on return.