



Exploration & Production

GENERAL SPECIFICATION

CIVIL WORKS

GS EP CIV 403

Temporary construction camps and associated facilities (onshore)

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1. Scope

This document gives the minimum general standards requirements for design and realization of onshore **Temporary Construction Camps** and facilities within turn key contracts concept.

It must be adjusted according to each particular Project and country.

It is within CONTRACTOR's responsibility to conceive and realize the facilities for temporary accommodation of CONTRACTOR's and COMPANY's personnel for Plant works Site.

Accommodations should be developed and designed to avoid social or security troubles, which could impact Project schedule at Site.

Consequently, COMPANY wants to make sure of a correct standard, for both CONTRACTOR's, and COMPANY's personnel, and wishes to obtain adequate standard level in compliance with Total Health, Safety and Environment charter and ethic.

This Specification does not concern Permanent Base Camps.

2. Reference documents

The reference documents listed below form an integral part of this General Specification. Unless otherwise stipulated, the applicable version of these documents, including relevant appendices and supplements, is the latest revision published at the EFFECTIVE DATE of the CONTRACT.

Standards

Reference	Title
BS 5378	Safety signs and colours
IEC 60364 (2006)	Electrical installation of buildings
ASTM E-84 (2007)	Test method for surface burning characteristics of buildings materials
ASTM E-136 (2004)	Standard Test Method for Behavior of Mater Vertical Tube Furnace at 750°C
IEC 61024	Protection of structures against lightning
IEC 60298 (1993)	A.C. metal enclosed switch gear and control gear for rated voltages above 1 kV and up to and including 52 kV
NF C 13-200 (1987)	High Voltage electrical installations
NF C 15-100 (2002)	Low-Voltage electrical installations
IEC 60449 (1973)	Voltage Bands for electrical installations of buildings
IEC 60050-826 (2004)	International Electro-technical vocabulary - Electrical installations of buildings
IEC 60439-1 (2004)	Low-voltage switchgear and controlgear assemblies - Part 1: Type-tested and partially type-tested assemblies
IEC 61024-1 (1999)	Protection of structures against lightning - Part 1: General principles

Professional Documents

Reference	Title
Not applicable	

Regulations

Reference	Title
Not applicable	

Codes

Reference	Title
NFPA 101 (2006)	Life Safety Code
NFPA 31 (2007)	Installation of oil burning equipment
NFPA 54 (2005)	National Fuel Gas Code
NFPA 17 (2002)	Dry chemical extinguishing systems
NFPA 220 (2006)	Types of building construction
NFPA 251 (2005)	Standard methods of tests of fire endurance buildings construction and materials
NFPA 255 (2005)	Method of test of surface burning characteristics of building materials
NFPA 259 (2007)	Standard test method for potential heat of building materials
NFPA 70 (2007)	National electrical code. Soft bound version
NFPA 82 (2004)	Incinerators and waste and linear handling systems and equipment

Other documents

Reference	Title
Not applicable	

Total General Specifications

Reference	Title
GS EP SAF 021	Lay-out
GS EP SAF 221	Safety rules for buildings
GS EP SAF 321	Fire pump stations and fire water mains
GS EP SAF 351	Escape, evacuation and rescue from fixed installations
GS EP ENV 421	Landfill design and operation for E&P sites

3. Preliminary data

3.1 Surveys impact

Environment and technical constraints shall be taken into consideration for the design of the Camp and the realization of the work, as described in particular Project's contractual documents:

- Topographic survey (existing relief, oueds, thalwegs, soil drainage, underground water table, etc.)
- Geometrical survey (limit of allocated land)
- Geophysical survey (borings, consistency and resistivity of soil, chemical)
- Local specific risks such as seismicity, landslides, floods, etc.

3.2 Climatic conditions

Design shall be based on climatic conditions as described in particular Project's contractual documents:

- Rain conditions, snow, icing, frost if any
- Winds (speed, direction, frequency, sand wind if any)
- Temperatures of air (minimal and maximal, daily and nightly, seasons during year)
- Hygrometry of air according to seasons
- Storm, lightening, etc.

3.3 Local environment

Design shall be based on local environment as described in particular Project's contractual documents:

- Existing logistic support:
 1. Accesses by road, sea, rail, air, etc.
 2. Nearest industrial center
- Availability of construction material and equipment in surrounding areas
- Local telecommunications facilities
- Administrative local regulations:
 3. Importation conditions and Customs conditions
 4. Local authorizations to be provided
 5. Miscellaneous local servitude's
 6. Requirements and constraints imposed by local Authorities.

3.4 Life duration

Life duration of buildings, utilities and equipment (assuming normal maintenance is carried out) shall be normally 3 to 5 years, unless otherwise specified.

3.5 Removal of the Camp

As a base case, CONTRACTOR shall remove the Construction Camp on completion of the work on Site.

Retention of the Camp (or part of) should be considered as an option if requested by COMPANY.

CONTRACTOR shall issue for COMPANY's approval a study demonstrating the feasibility of the decommissioning, dismantling and removal of the Construction Camp with minimum impact to the environment.

All the buildings, tools, vehicles and any other items subject to bonding for temporary import shall be re-exported or disposed of as directed by the local Authorities.

CONTRACTOR shall co-ordinate these activities with COMPANY.

Removal and dismantling of the Construction Camp shall be done with the approval of the COMPANY.

Site cleaning shall be performed by CONTRACTOR and shall include as minimum the removal of debris and/or surplus material making good all surfaces and areas as required by COMPANY.

Unless otherwise specified, all underground work, civil foundations, underground piping and cabling shall be removed. Soil restoration should be done with suitable back-fill material and compaction shall be controlled.

4. Population

4.1 Camp capacity

Camp capacity, (including Caterer's personnel), for normal occupancy and for peak occupancy, shall be in consistency with manpower histogram for:

- Beds availability
- Utilities availability.

4.2 Breakdown of population by categories of personnel

Breakdown of population, (including Caterer's personnel), for normal occupancy and for peak occupancy, shall define various categories of personnel as follows:

- COMPANY's camp
- Management and VIP's (may be common to COMPANY's and to CONTRACTOR's camp)
- Guest house for visitors (may be common to COMPANY's and to CONTRACTOR's camp)
- CONTRACTOR's camp:
 7. Senior's Staffs
 8. Junior's Staffs
 9. Skilled Labors
 10. Unskilled Labors.

The above theoretical repartition of categories of personnel shall be defined according to each particular Project/country.

4.3 Countries of origin/Cultural groups

Countries of origin, languages, cultural and religious groups shall be taken into consideration for design and concept of facilities:

- Impact for housing and amenity center
- Impact for Catering, food.

4.4 Types of stays and relieving system, work constraints

Rhythms and systems of stays ("rotation" systems) for the various types of population shall be anticipated for sizing of some facilities like entrance main Gatehouse, means of transport, etc.

Camp capacity and breakdown of population should be defined accordingly.

Refer also to § 12.2.1. for accommodation of night-shift workers in areas where disturbances to sleep and rest is minimal during the day.

4.5 Female staff facilities

In some particular cases some accommodations have to be provided for female staff.

In this case, separate accommodations shall be provided for bedrooms.

This shall be defined by each particular Project Specification.

In any cases, at least one set of separate female toilets shall be provided for all common buildings (Offices, Dining room, Recreation-halls and work areas).

5. Pioneer's camp

Temporary urgent facilities for first arrival of workload for erection of Camp are necessary, during a few months, before the Camp can accommodate the workers step by step.

Definition of Pioneer's Camp, capacity, types and breakdown of accommodations, shall be defined in relation with anticipated schedule of phased bed availability.

- Location of Pioneer's Camp shall be defined in accordance with future location of Construction Camp facilities
- Concept of Pioneer's Camp shall be developed and based on local availability, if any. Various options may be considered by CONTRACTOR which include:
 11. Utilization of existing facilities
 12. Trailers (In isolated areas, "portacabin type" with all amenities should be recommended, if available. They have to be hired sometimes long in advance)
 13. Prefabricated or pre-assembled skids
 14. Barge accommodation
 15. Temporary facilities
 16. Others.

- Minimum requirement for Pioneer's Camp shall be as follows:
 17. Accommodations, including COMPANY's Site representatives (Qty. and types to be defined)
 18. One first-aid
 19. One mobile workshop trailer
 20. One small restaurant with galley and services (capacity to be defined)
 21. Two units diesel generator set (type and capacity to be defined) (covering case when one unit is out)
 22. Relevant temporary power distribution
 23. One potable water treatment unit (or desalination unit, or transport by barge, or truck)
 24. Minimum Telecommunications facilities as per Telecom Specifications
 25. Fire-fighting protection by extinguishers
 26. Septic tanks or chemical units (Sewage treatment is not required at this stage, except specific local requirement)
 27. Waste management (mainly solid waste).
- CONTRACTOR shall also give following information:
 28. Security and Safety organization
 29. Food supply and preparation
 30. Logistic organization
 31. Schedule
 32. Pro-forma Purchase order for Pioneer's Camp with selected VENDOR or SUB-CONTRACTOR shall be issued as soon as contract award is signed with CONTRACTOR.

6. Organization of the camp

6.1 General organization

CONTRACTOR shall prepare, put it forces and maintain a set of regulations dedicated to the Camp.

Camp shall have its own administration logistic and police organization.

Use of local laborers should be systematically considered.

Camp Management team shall be fully aware of the socio-economics issues with the surrounding communities, and shall provide all efforts to maintain good relationships with local Authorities, and call for their assistance as and when required.

Dedicated teams shall be appointed to be in charge of hygiene control, fire-fighting, patrol, etc. (Possible use of multi-skill staff).

6.2 Relations with Local Population

CONTRACTOR shall appoint a Personnel Manager who will insure education of all workforces of Ethics and relation with local population so that any conflicts, arguments or cultural gaps with local population will not be issued.

6.3 Operation of Camp facilities

CONTRACTOR is fully in charge of the administration, management and operation of the Camp and associated facilities, including provision of all water, diesel fuel for power generation, materials, and supplies consumables, utilities and services.

Necessary manpower shall include:

- Management, administration, accounting and logistic team
- Catering, house keeping and laundry team
- Drivers and car maintenance
- Maintenance services and operation of facilities and utilities
- Maintenance services of roads, parking
- Medical support
- Security and guards
- Fire-fighting team.

CONTRACTOR shall collect, treat, process and distribute all utilities such as electric power, water, diesel, petrol and the like.

6.4 Maintenance of Camp facilities

CONTRACTOR shall maintain, service, regular cleaning and repair the Camp facilities to ensure it is maintained in a fully functional and operating state at all times to avoid any unacceptable deterioration during the construction phase of the Project.

Maintenance services shall include buildings, utilities, roads and car parks, and complete facilities.

A team of skilled labors, under supervision of the Camp management operation shall be responsible for operating a planned maintenance system covering structural, mechanical, electrical and communication systems. Particular attention shall be paid on the maintenance of air conditioning equipment, kitchen equipment, and transport, to ensure that levels of comfort, Catering and personnel movements are not allowed to fall due to equipment failure.

CONTRACTOR shall provide and store at the Camp adequate supply of spares and replacement items at the time of the construction of the Camp, for operation and maintenance for the duration of Contract, and replace this stock as required.

7. Catering

CONTRACTOR shall assign an experienced SUB-CONTRACTOR for Catering and ensure its control.

7.1 Training and behavior of Catering personnel

Particular attention shall apply to training and permanent control of Caterer's personnel capacities and behavior including not limited following:

- Good knowledge of strict hygienic attitude and reflexes
- Cleanliness of Catering personnel (hands, hair, clothes, gloves, hats, etc.)
- Cleanliness of Kitchen and associated facilities like cold stores (floors and floor drains, fume exhaust hoods, etc.)
- Cleanliness of Kitchen equipment and utensils
- Cleanliness of Catering toilets and changing rooms
- Medical permanent follow-up of Catering personnel
- Good knowledge of basic precautions to avoid diseases due to bad food conservation, bad defrosting, etc.

7.2 Caterer's duties

Caterer shall be in charge of not limited following duties:

- To ensure all messing, housing in appropriate conditions:
 33. Three meals per day shall be provided. Breakfast and evening meals shall be available in the mess rooms/restaurants before starting and after completing work.
 34. CONTRACTOR shall organize regular inspection/audit on food quality by independent third party.
 35. In the interest of health and hygiene, food shall not be removed from the restaurant/mess hall for consumption around the Camp premises or on Site.
 36. In some cases, to minimize transportation of personnel from Site to the Camp, meals of mid-day break may be taken by the labor force either in the Camp facilities or on Site served within mess rooms established for this purpose.
 37. To ensure food is prepare by culture and to have due regard to all recognized festivals and religious holidays.
 38. In case the resident population of the Camp may comprise Muslim, non-Muslim, Asian and European, meals shall be adapted to meet the requirements of religions and nationalities.
- To ensure cleanliness of all buildings:
 39. Cleaning of, accommodation rooms, dormitories seven days per week
 40. Regular daily cleaning of kitchen and mess rooms after each meal
 41. Daily cleaning of recreation areas
 42. Cleaning of offices and common areas
- To ensure regular changing of bedding, toilet and kitchen linen
- To ensure laundry of residents working and personal clothing
- To ensure refuse collection and disposal

- To organize distribution of newspapers, reviews, books, films, videos, music, entertainment, etc. with regard to local rules and habits
- To organize sportive competitions with awards and special occasion events to suit nationalities.

8. Security

CONTRACTOR shall be responsible for Security services inside Camp.

Security shall comply with COMPANY's general Specifications, with particular Project Security Specifications, completed or amended by Local Regulations.

CONTRACTOR shall provide minimum following requirement:

8.1 Security and Safety Central Station

CONTRACTOR shall form immediately after Contract award a special team to identify special Security requirements and actions thereof.

One Security and Safety Central Station shall be provided in the Camp to centralize all means (Ref. Chapter 9).

It shall be located in a **permanently manned building**:

- Like main Gatehouse for small camps (capacity < 500 persons)
- Or in a specific fire station room/building for large camps (capacity > 500 persons), which can be adjacent to main Gatehouse building, or separated.

Concept and location shall be defined on a case by case basis by each particular Project Specifications.

The Security and Safety Central Station shall be permanently manned with two men minimum during night time, and four men during daytime.

8.2 Security scope

Security team shall dispose of following means: badge unit, radio transmitter, motorcycles or bicycles or vehicles, uniforms, etc.

CONTRACTOR shall be responsible as well of:

- Prevention of socio-economics contentions in the neighborhood
- Prevention of internal contentions
- Ethics and code of conduct, respect of local traditions. Different ethnic groups of Camp population shall be considered for Security policy
- To ensure alcohol, drugs, firearms, etc., are forbidden on Site
- Regular and random security patrols shall be carried out, particularly at night, and street lighting within Camp shall be provided
- The Camp shall be fenced and provided with gates and guard posts, and surrounded by a patrol road.

8.3 Internal police

CONTRACTOR shall appoint a Security team and provide full-time Security guard (SUB-CONTRACTOR for all security matters, with supervision of main CONTRACTOR).

8.4 Badges control

Any entry/leave to/from the Camp of personnel or material, consumable, etc., shall be checked through security posts.

An ID card computerized system shall ensure full time Security control of personal.

Slip control shall be provided at gates in both directions (entrance and exit) for material control.

8.5 Liaison with local police and authorities

Security guards will be permanently in charge of Security, with support of local police at request if necessary.

9. Safety

Safety to life shall comply with the Code **NFPA 101**, completed or amended:

- By local Regulations
- By particular Project Safety concept
- And by COMPANY's general Specification **GS EP SAF 221**.

CONTRACTOR shall provide minimum following requirement:

9.1 Fundamental requirements for Safety of buildings

Buildings shall be provided with appropriate means of egress to permit prompt exit.

Means of egress shall be arranged and maintained free and unobstructed.

Every exit and road to reach every exit shall be indicated and adequately illuminated (this lighting shall be battery supplied back up).

Buildings shall be provided with fire protection features.

9.2 Organization of fire-fighting

One Security and Safety Central Station shall be provided in the Camp to centralize all means (Ref. Chapter 8 for description).

It shall be located in a **permanently manned building**.

Firemen brigade by CONTRACTOR under supervision of COMPANY shall be provided. CONTRACTOR shall assess whether fire brigade is permanent professional and/or how is supplemented by productive workers.

Training/drills of firemen and Camp occupants shall be organized.

9.3 Fire-fighting equipment

- Permanent fire water storage (capacity to be defined)

- Fire-fighting:
 - 43. Fire hydrants and distribution networks (outdoors)
 - 44. Hose reels and distribution network (indoor)
 - 45. Fire station (should be preferably located upwind of the Plant)
 - 46. Fire-fighting trucks (Location, Qty. and characteristics to be defined)
- Fire alarms/sirens
- Fire and smoke detection, when applicable, shall be connected to the permanently manned Safety and Security Central Station
- Fire extinguishers (wheeled and portable), sand boxes, shovels, etc.
- General public alarm, sirens
- Escape route, means to egress
- Mustering places (to see Chapter 13.2).

9.4 Emergency means

Oxygen masks, flashlights, flood lights, electrical saws, gas detectors, etc.

9.5 Radio/UHF

(Refer to Telecom Section Chapter 15.8).

9.6 Marking

Road signs, instructions, maps, self contained unit light, working ribbons, stake, surface cable marking for all buried cables, etc.

9.7 Miscellaneous

Uniforms, helmets, levers, sledgehammers, towing chain, first aid kits, etc.

(For further detail refer to COMPANY's Specification [GS EP SAF 321](#))

10. Health - Hygiene and medical support

Detail of Health, Hygiene and Medical support is defined by Health, Hygiene and Medical Specifications.

CONTRACTOR shall provide medical facilities, which cover the peak occupancy of the Site:

10.1 General requirements

CONTRACTOR shall ensure that adequate Hygiene level are maintained with due consideration to the local climate.

CONTRACTOR shall ensure that adequate accommodation conditions are maintained for all personnel involved in the work.

CONTRACTOR shall ensure through systematic medical visits that all personnel are physically and mentally capable for their job positions. As a minimum, systematic medical visits shall be

carried-out upon appointment on site, as a yearly routine, and upon job change to more demanding work conditions.

CONTRACTOR shall ensure that personnel can have treatment from small injuries and illness.

In addition, CONTRACTOR shall have a system to diagnose epidemic risks, at their early stage of development and undertake all necessary actions.

10.2 Clinic and medical equipment

As soon as work of Plant starts on Site, the Clinic shall replace the first aid of Pioneer's Camp.

Clinic concept, size, layout, equipment and organization of medical support team shall be in compliance with requirements of COMPANY's medical service, and approved by COMPANY.

10.2.1 Location of Clinic

Clinic shall be in a separate building, easily accessible from main entrance and guardhouse in order to get fast access of ambulances (but not directly close to traffic of main Camp entrance).

Clinic must be located in a quiet area, separated from housing accommodations and from noisy activities.

Clinic shall be practically accessible by stretcher from any place in the work site, and shall have an easy route by stretcher to the evacuation means (normally by helicopter).

The Clinic shall be designed and arranged in such a way to minimize the risk of contamination from/to other rooms in the Camp.

10.2.2 Clinic layout

Clinic, depending on remoteness of Site from other medical facilities, shall be of sufficient space to handle facilities for treatment, periodic visits, X-ray if any, pharmacy, sufficient bed wards.

The layout shall segregate private rooms and public rooms.

Design of building, width of corridors, width of doors shall be compatible with easy access of a stretcher handled by two persons.

Clinic building shall provide as minimum:

- **One Entrance hall** with large doors for stretchers, and waiting seats. Sheltered waiting area shall be provided as well outdoors
- **One Office of nurse** with key lockable cupboards and filing cabinets for storage of medical records
- **One Treatment room** with examination tables, workbenches, cabinets, one bath basin accessible by stretchers, and one shower.

In some particular cases, a bathtub can be required to treat light hypothermia. It shall be defined on a case by case basis by each particular Project Specification.

- **One Emergency room** with emergency stretchers carts
- **Doctor's consultation offices** (Qty. of doctors shall be defined according to Camp capacity)
- **One Pharmacy** (key lockable, with shelving and dust tight cabinets for medicine storage, and one lockable refrigerator for medicines)

- **Toilets** for public, and for medical team
- **Stores, technical rooms and lockers**
- **Isolation patient observation ward(s)** accessible with stretchers, for national and for executives (Qty. of beds shall be defined according to Camp capacity)
- **Private toilets and sanitary facilities** (showers and wash basins) adjacent to insulation ward
- **X-ray cabin** shall be required according to local context (lack of hospital in vicinity). In this case, wall protection shall comply with international codes and regulation
- **One small laboratory** for analysis, hematology, blood chemistry, testing.

10.2.3 Clinic equipment

Building shall be fully air-conditioned, with hot and cold water, telephone, adequate lighting.

Building shall be fully furnished with all necessary emergency medical tools and equipment, appliances and furniture to be fully operational.

The level of equipment shall be defined in rapport with following criteria:

- Level of risk
- Reliability of hospital of nearest town
- Possibility of fast medical evacuations
- Reliability of telecommunications with regard of local constraints (for example Camp may be isolated by sand wind for more or less duration)
- Reliability of medical team
- Medical and sanitation surroundings.

Clinic shall be supplied with complete adequate equipment for first aid to the injured patient and for medical evacuation. In case of difficult logistic context, the level of equipment should be more adequate (for example small operating unit, reanimate equipment, dentist, etc.).

The lighting and HVAC of the Clinic, and electrical powered equipment it contains shall be supplied by essential network.

CONTRACTOR shall provide mortuary facilities for conservation of bodies resulting from fatal casualty, if any, during the required period of time for the local enquiry. (To be defined on a case by case basis with COMPANY's medical Authority).

List of medical equipment and medicines

CONTRACTOR shall submit a complete list of medical equipment and medicines for approval by COMPANY's medical Authority (SMI).

Following non-exhaustive list recalls the main equipment to be supplied (Quantities to be defined with COMPANY's medical Authority on a case by case basis):

- Examination bed (80 cm minimum width), with free access for stretcher on four sides
- Material for fractures stabilization
- Table for casts
- Mobile X-ray set

- Two cardiac monitoring and defibrillation unit (one unit is for Medevac)
- Intubator laryngoscope
- Breath suction machine
- Oxygen inhalators sets
- “Ambu” (oxygen mask)
- Sterilizer
- Small surgery kit
- Material for analysis
- Suitable types and quantity of stretchers
- Suitable quantity of first aid responder bags and cold boxes.

10.2.4 Ambulances

Fully equipped and dedicated ambulances and accredited drivers in sufficient quantities, with necessary equipment and full time availability shall be provided, and maintained on standby during working hours, to transport injured personnel to the nearest designated health care facility.

Each ambulance shall be equipped for emergency response and transport to town or airstrip for medical evacuation, as a minimum, with the following supplies:

- Stretcher and blankets
- Portable oxygen
- Splints for bone fractures
- Bandages/rubber tourniquet
- Sterile wash water.

10.3 Organization and management of medical support

Medical support shall include followings:

10.3.1 Medical team

- **Doctors** shall be in sufficient number, reflecting by their mother's tongue and their culture the diversity of the nationalities of the workforce.

Quantity, qualifications and organization of doctors and medical team will be defined according to Camp's capacity, local medical context, and various origins of Camp's population, and shall be submitted to approval of COMPANY's medical Authority (SMI).

- **Nurses and assistants** in sufficient number.
- **X-ray inspector**, if needed.

10.3.2 Medical staff scope of duty

Medical team shall be in charge of followings:

- Treat occupational injuries and illnesses

- Contribute to accident reports
- Keep medical records, first aid log, and medical files
- Maintain a site register of all injuries treated
- Render re-treatment when required
- Control of personal medical status
- Control of hygiene of food supply/production
- Control of hygienic circuit of frozen food from origin to Site
- Control of water analysis (potable water supply/storage/distribution/wash eye bottles)
- Control/hygiene of Sewage treatment
- Control/hygiene of Refuse disposal (burying and incineration)
- Doctors shall in addition be involved in the Hygiene control on Site and shall attend periodic HSE meetings.

10.3.3 First aid facilities on Site

First aid is the immediate help that is provided at the Site to an injured or seriously ill person, before professional medical help can be obtained.

Proper first aid shall be made available to all employees at the Camp and at Site.

Some first aids facilities shall be organized at Plant Site, Construction area, and Site offices.

First aid supplies shall be kept available in designated cabinets for those supplies only.

These cabinets shall be placed under the charge of a first aid attendant, who shall ensure the cabinet is well stocked at all times.

Notices shall be posted on the first aid facilities indicating the following:

- Name of the person who is in charge of the first aid cabinet
- Hospital to which any injured person who requires hospital treatment is to be sent
- Telephones numbers of the doctor or first aid attendant
- Emergency telephone number to be called for assistance.

10.3.4 Organization of Medevac

In cases of severe and serious injuries or illnesses, medical team shall be in charge of medical evacuation for domestic and expatriates.

CONTRACTOR shall submit for approval by COMPANY two Medevac procedures for emergency evacuation:

- One domestic Medevac procedure for local workers to a convenient nearby hospital
- One Medevac procedure for expatriate personnel to the most suitable international hospital/airport, compatible with pre-existing COMPANY's Medevac procedure.

These procedures after Contract award, and after approval of COMPANY, shall be incorporated in the Safety Plan.

CONTRACTOR shall insure through the implementation of the Medevac procedures that any personnel seriously injured or ill can be immediately evacuated to the nearest convenient hospital within the required period of time.

11. Transports and traffic

11.1 Transport means

CONTRACTOR shall provide all transports for personnel and materials between the Camp, Plant and Site. The means of transport and organization shall permit safe and rapid movement of large numbers of personnel in a short period of time in order that productive time on Site is not diminished due to time lost in transit.

This shall include the provision of necessary vehicles like buses, trucks, saloon cars, 4X4 wheels vehicles, etc.

This shall include as well adequate maintenance and servicing to avoid accidents and breakdowns.

Truck loading/unloading stations for flammable and combustible liquids, or any chemicals should be located outside Camp to avoid traffic of trucks inside the Construction Camp.

11.2 Road safety plan

CONTRACTOR shall provide a Road Safety Plan applicable to any road movement, for COMPANY approval. This traffic plan shall include:

- Highlighting the roads to be used
- Setting up regulations and controls, safety courses and training for drivers
- Adequate road signs and markings needed for safe driving along with speed limits
- Monitoring road conditions for any maintenance or repair work
- Monitoring of road traffic safety.

11.3 Safety of transports

CONTRACTOR shall organize the transport including the provision of drivers and traffic patrol under Safety officer responsibility to monitor road traffic safety.

CONTRACTOR shall be responsible for organizing and enforcing road traffic regulations to minimize road accident within site.

Roads will be designed and equipped as necessary (humps roundabouts, traffic lights, adequate road signs, etc.).

CONTRACTOR shall put in place adequate Safety panels both inside the Site and in its vicinity on the public roads. The applicable standards for Safety signs and colors shall be as per British Standard [BS 5378](#) and those of local road traffic regulations.

Texts shall be in both English (UK) and local language.

CONTRACTOR shall avoid using the public roads as much as practically economical.

For this purpose, internal circulation roads shall be built and maintained over the whole duration of the Project.