

HSE

1.0 Strategies and Procedures:

1.1 Introduction

This HSE Plan brings together the procedures for achieving the highest standard of health, safety and environmental conservation during the construction works of the project. The objective is to ensure that adequate precautions are taken to avoid accidents, occupational illness and harmful effects on the environment during construction as well as to assure that satisfactory emergency planning is done and adequate means are taken to secure contract objectives.

The Site Construction Manager shall be the custodian of this HSE Plan. The Site HSE Officer reports to the Site Construction Manager.

The suitability of any (potential) sub-contractors to provide services shall be examined in respect to their HSE system and way of working by means of checklists and questionnaires.

1.2 Statement of Policy

WPPCO Quality and HSE Policies Forms part of the Company HSE Manual, an extract of which is attached.

WPPCO management considers Health, Safety and Environment aspects as a matter of high importance in the execution of projects and the provision of products and services.

Our Health, Safety and Environment Policy is implemented through the following primary objectives:

- To comply with the requirements of national and international regulations and codes of practice.
- To ensure that potential health, safety and environmental risks associated with all our activities are assessed as early as is practicable in order to minimize adverse effects and to identify opportunities for improvement.
- To continually improve our resources through the implementation of structured training designed to reinforce the HSE culture.
- To regularly scrutinize, evaluate and review the health, safety and environmental performance to ensure compliance with our policy and to learn from our experience.
- To ensure that personal protective equipment are provided to all employees who may be exposed to risks to their health and safety, except where the risk has been adequately controlled by other means which are equally effective.

1.3 Performance Targets

In principal, a target **Zero** shall be established for the duration of the project.

- **Zero** (0) fatalities.
- **Zero** (0) Lost Time Incidents.
- **Zero** (0) fires.
- **Zero** (0) accidents resulting in personal injury.
- **Zero** (0) accidents resulting in material damage.
- **Zero** (0) environmental incidents.

This plan has been developed with the aim of ensuring that the above targets are met.

2.0 Organization, responsibilities, resources and standards

This section describes methodology and techniques for managing HSE at client site, both for **GEEMCO** and Sub-Contractors activities.

2.1 Client Organization

Figure 2-1 shows the Project Management Organization Chart.

2.2 Construction HSE Responsibilities of GEEMCO

It is a basic principle for this project that health, safety and environment are a line responsibility. All construction personnel have individually their own responsibility in achieving the highest possible level of HSE in construction. Site Safety Officers for this project are included in the site organization but their role is mainly consultative and educative. Direct accountability for HSE performance lies with supervising engineers. **GEEMCO** regards all HSE related matters as of its highest priority.

3.0 Training and education

3.1 Induction Briefing

All new members of the Client Team shall be briefed by the Site Manger on (or before) arrival on site. The purpose of this induction briefing being:

- To underline the importance of HSE management in this project's execution.
- To explain the objectives and the responsibilities outlined in the project HSE Plan.
- To discuss the techniques to be used for HSE management.
- To give an overview of the range of ongoing activities and their locations.
- To highlight any particular hazards present on the site at the time and/or any specific risks associated with the individual's job responsibilities including:
 - smoking limitations
 - work permit procedures
 - traffic and parking regulations
 - restrictions on the use of drugs and alcohol
 - limitations on places for eating and drinking
 - housekeeping standards
 - prohibition of the use of solvents, chemicals and oil products for any purpose, unless specifically authorized
 - dangers and handling procedures for any noxious or hazardous substances
 - hazards of excavation operations, e.g. damaging underground cabling or piping
 - use of safety equipment such as personal protective equipment, fire extinguishers and life-saving devices
 - action in the event of discovering fire or loss of containment
 - Action in the event of an accident.

At these briefings this plan shall be explained and the Personal HSE Handbook shall be handed over. All sub-contractors shall be requested to carry out similar induction exercises with their new intake.

3.2 Additional Training

When required, the Site HSE Officer shall organize additional training, especially when critical tasks are going to be performed.

3.3 Personal HSE Handbook

WPPCO shall issue a personal HSE Handbook, in Arabic, which provides information on HSE and emergency procedures for all personnel working on the project.

4.0 Meetings

HSE meetings are the main means for dissemination of information and discussion of HSE matters at the site. The following meetings will be held at regular basis:

4.1 General

Safety at site shall be the first subject during all meeting of the Construction Management Team and also at the co-ordination meeting(s) with the sub-contractor(s).

4.2 Site Management Safety Meetings

Site Management will convene weekly. The Site Manager will chair the meeting. The agenda for these meetings will cover reports/recommendations from audits and HSE matters related to ongoing and planned activities. The meeting will also be used as a forum for Site Safety Officers to present and discuss safety practices and guidelines on appropriate topics.

4.3 Sub-Contractors Safety Meetings

A weekly HSE meeting will be held with all sub-contractors and their safety representatives on site.

The objectives are to raise and resolve general HSE requirements, to check the progress made by the sub-contractors on HSE action points and to discuss HSE matters raised by the sub-contractors.

The agenda of such a meeting shall typically include:

- Confirmation that all personnel on site implement safety regulations and follow procedures as applicable for the project.
- Discussions on incidents, injuries, and 'near misses' as reported in the past period.
- Discussions of recommendations, measures to be taken etc. to maintain or improve HSE awareness.
- Risk assessment for work to be conducted the following week.

5.0 Reporting system

5.1 General

The Safety Officer shall carry out HSE inspection at each worksite. This will involve local inspection and surveillance of the work or site and its workforce. The purpose of the reporting will be to: identify hazards, including possible incident or accident areas

- assess the preventative measures in place

- review Emergency Situations and evaluate risk to personnel
- assess incident and accident reports
- plan remedial action and ensure the timely and effective close out of the safety related non conformances

5.2 Monthly Reporting

As part of regular monthly reporting, **WPPCO** shall provide a monthly report with a summary of site HSE related activities during the month such as audits, inspections, HSE motivation and training, etc. Compliance with established HSE goals shall also be measured and reported.

6.0 Inspection and audits

6.1 General

Systematic inspection and auditing of work in progress to check for unsafe conditions is the principal means by which site supervisors will manage HSE on an ongoing basis. Unsafe practices will be discouraged by regular inspection at the work site. The operational condition of safety equipment and the reliability, serviceability and maintenance of work tools and equipment shall be established by unannounced spot checks.

6.2 Inspection Schedule

6.2.1 Daily Routine Inspection

Routine inspections will be carried out daily by the Safety Officer for the following activities:

- Procedures
- Use of tools and equipment
- Use of protective equipment
- Excavations
- Mechanical handling and lifting

6.2.2 Weekly Inspections

A schedule of audits will be prepared weekly by the supervisors for the areas under their supervision and agreed with the Site Manager. The schedule should cover the following activities:

- Vehicle use
- Construction operations
- Tunneling operations
- Road works
- Fire precautions and emergency response

Inspections and audits will be carried out by two-man teams – the relevant supervising engineer plus one other. A 30-minute audit will be made during which the two-man team will look for unsafe acts including procedure violations, mishandling of tools and equipment, reckless behavior by workforce and general unwritten sense HSE items.

It is essential that observation concentrates solely on HSE and other factors such as progress or technical quality should not be considered simultaneously. In conducting the audit, the team should avoid giving the impression of a formal inspection.

At the end of the audit, the team should immediately check results and agrees recommendations. An audit report should be prepared listing unsafe acts and unsafe conditions and summarizing recommendations.

All audit reports will be forwarded to the Site Manager. Recommendations will be discussed at site safety meetings and sub-contractors meetings. The supervisor for the area is the responsible parties for ensuring necessary corrective actions are taken. Progress on corrective actions taken should be reported in monthly meetings, until all actions have been completed.

7.0 Incident Reporting

This section defines the requirements for investigation and reporting of incidents for all employees and other specified personnel working on sites.

7.1 Incident Recording and Reporting Requirements

In addition to the Reportable Incidents detailed below, First Aid Cases, Near Misses and non-injurious Incidents should also be recorded.

7.1.1 Reportable Incidents

The following incidents shall be reported:

- Fatalities
- Personal Injuries
- Occupational Illness
- Explosion/Fire
- Spill
- Equipment Failure
- Equipment Damage
- Property Damage
- Material Loss
- Vehicle Accidents
- Security
- Near Miss
- Act of Nature, etc.

7.1.2 Categorization for Incidents and Accidents

Accidents are categorized as follows according to the seriousness of the consequences:

Category I:	§ Fatalities (including third parties) § Damage in excess of SR 700,000 (inclusive).
Category II:	§ Serious injuries that result or may result in Permanent Partial / Total Disabilities, Lost Workday Cases § Damage more than SR 35,000 (inclusive) but less than SR 700,000.
Category III:	§ Restricted Work Cases § Medical Treatment Cases (no lost time) § Near Misses § Damage less than SR 35,000.

7.1.3 Procedures for Notifying Reportable Incidents and Accidents:

An immediate report is issued to the first Line Management of any accident injury, near miss, unsafe act or unsafe condition and any adverse effect on the environment. The first Line Manager informs the Line Department Manager who informs the QA & HSE Manager. Within 24 hours after the occurrence, an initial report shall be drafted and issued to the construction manager and copied to the client.

For category I or category II accidents, arrangement for an immediate report to:

- Chairman and General Manager
- Corporate QA & HSE Manager
- Line Department Manager
- Client

7.1.4 Accident Investigation Reports

- For all accidents categories, a first level accident investigation by first Line Management, Section Manager and Sub-Contractor Site Manager (if applicable) in order to identify cause and implement the necessary corrective action to prevent recurrence.
- For category I and category II accidents, a second level accident investigation by the HSE Manager and the Line Department Manager.
- A report to be compiled within 7 working days by the Line Department Manager and issued to the QA & HSE Manager.
- Follow up within 15 days by the Line Department Manager to ensure corrective action is implemented.

7.1.5 Assessment of Hours as Exposure Hours

Exposure hours are hours worked including overtime and training but excluding leaves, sickness and other absences. There are a number of situations where this definition may prove insufficient to ensure a consistent approach.

7.1.6 Violent Assault

If an assault is conducted against a person for a work-related reason or because there is intent to damage company property or remove property from company premises, then the assault is a Reportable Incident. If the assault can be shown, without reasonable doubt to be a private, non-work related matter then it is not recordable for Accident statistics.

7.1.7 Medical Treatment and First Aid Classification

Medical Treatment Cases and First Aid Cases are Injuries that do not result in disability, lost time or restriction of work. The distinction between them is one of severity. Medical treatment includes some forms of treatment, which are normally required to be administered by a physician, but not generally the simple or one-time treatments, which are or could be given by a first aider.

7.2 Responsibilities

It is the responsibility of Line Management to ensure that all personnel are aware of this procedure and strictly adhere to it. Any person involved in or witnessing a near miss or accident shall take immediate and appropriate action to avoid re-

occurrence, minimize consequences and prevent escalation. Furthermore they shall inform their direct supervisor(s). The supervisor shall inform the site HSE officer immediately.

7.3 Investigation

- All incidents shall be investigated and analyzed to establish the area and type of injury trends and practices. The composition of the incident investigation team shall depend on the classification of the incident.
- For all accidents categories, a first level accident investigation by first Line Management, Section Manager and Sub-Contractor Site Manager (if applicable) in order to identify cause and implement the necessary corrective action to prevent recurrence.
- For category I and category II accidents, a second level accident investigation by the HSE Manager and the Line Department Manager.

7.3.1 Incident Report

A report to be compiled within 7 working days by the Line Department Manager and issued to the QA & HSE Manager. The construction manager is responsible for further action and follows up.

7.3.2 Follow Up

Follow up within 15 days by the Line Department Manager to ensure corrective action is implemented.

7.3.3 Near Miss Investigation and Reporting

All high potential incidents (near miss) will be reported and discussed at regular safety committees.

This will be encouraged by the operation of a no blame attitude to person's reporting events that they may be involved in.

8.0 Safety Equipment & Personal Protective Equipment

WPPCO shall provide adequate first aid equipment, fire extinguishers and other safety equipment and shall maintain this equipment in a professional manner as dictated by legal and industry standards. In addition, **WPPCO** shall keep up-to-date records of all said equipment.

8.1 First Aid Boxes

First-aid boxes shall be provided for at all work areas. Boxes shall be clearly identified as first-aid containers and kept in accessible places, which should be made known to every employee of that location. Sufficient quantities of each item shall always be available in every first-aid box, and shall be replaced as necessary. Contents shall be checked regularly for expiry dates.

Each first-aid box shall contain the following as a minimum:

- 12 small sterilized dressings
- 6 medium sterilized dressings
- 6 large sterilized dressings
- 24 adhesive wound dressings
- 4 triangular bandages
- 1 x 10yds zinc oxide plaster
- 2.5oz sterilized cotton wool

- 4 sterilized eye pads
- 1 rubber pressure bandage
- 1pkt safety pins
- Waterproof dressings and plasters
- 2 Lateral-type pocket masks
- 8 pairs PVC gloves
- 4 PVC aprons
- 1 pair eye protection (glasses/goggles)

8.2 Personal Protective Equipment:

WPPCO shall supply its personnel with adequate protective clothing and equipment as required in connection with the safe performance of the work. The personal protective clothing and other protective equipment shall be maintained in good condition, and shall be worn on all relevant occasions as indicated by notices, instructions, work permits, safety regulations and good practice. **WPPCO** supplies all personnel at construction sites with:

- Safety helmets
- Safety boots
- Protective clothing
- Gloves
- Safety glasses

Furthermore, special equipment (e.g. leather gloves, protective full face welding mask and leather safety shoes for welders) is provided on an as-needed basis.

WPPCO shall ensure that all sub-contractors supply protective clothing and equipment to their employees.