

Specification for SHE & Site Requirements (June 2002)

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1. Preliminary

1.1 Purpose of this document

This document details the Safety, Health, and Environment (SHE) requirements to be observed by Contractor working at GBG Premises. This document shall be deemed to be a part of the Specification but shall not relieve the Contractor from any of his obligations or responsibilities under the Contract.

1.2 Definition

Unless otherwise specified, terms and expressions used in this document shall have the same meaning as assigned to them in the Conditions of Contract.

"Site" shall mean the actual place where work is to be done by the Contractor.

"Premises" shall mean power stations and Black Point Project Office, or a Site if it is outside the physical boundaries of power stations and the Project Office, which are managed by Generation Business Group in Hong Kong.

"Contractor" shall mean the tenderer whose tender has been accepted by the Company, and shall include all its employees, agents, sub-contractors, and all other personnel that the Contractor have brought to the Premises.

"Company" shall mean CLP Power.

"Responsible Officer" shall mean the Contract RO or the Site RO nominated by the Company.

2. SHE environment of power stations

2.1 The Company's SHE policies and standards

Safety, Health and Environment

The Company are committed to providing quality power supply and services to our customers in a manner that ensures a safe, healthy and clean business environment for our employees, customers and the public. Our goals are "Zero Accident", "Zero Non-compliance" and "World Class Products and Services"

The Company will continue to systematically identify, monitor, review and control our safety and health risks as well as environmental impact to ensure ongoing improvement.

The Company therefore enforces strict SHE standards that the Contractor must comply with at all times. These standards include regulatory requirements, CLP internal policies and practices, etc. (which are outlined in clause 3 - Contractor's obligations to comply with statutory and CLP requirements). In some areas, the

Company has instigated more stringent SHE requirements. These requirements are elaborated in following clauses.

2.2 Operating permits from Environmental Protection Department

Power stations are operating under various environmental protection permits. In addition to other statutory regulations, these permits stipulate operating limits for the power stations in noise level, air pollution, quality of flue gas and effluent discharges during normal operations. The Contractor shall ensure all such permits are available on Site and copies should send to Responsible Officer for record purpose.

Before commencement of Works, where necessary, the Contractor shall apply to EPD a Construction Noise Permit for the tools and equipment to be used on Site. In addition, the Contractor shall ensure that all plant and equipment to be used on the Site are properly maintained in good operating condition, and noisy construction activities shall be effectively sound-reduced by means of silencers, mufflers, acoustic linings, acoustic sheds or screens or other means.

2.3 Factories and Industrial Undertakings (F&IU) Ordinance

The Contractor shall be aware that under the F&IU Ordinance, the Site is defined as a Construction Site and is hence governed by the provisions stipulated in the Construction Site (Safety) Regulations and other F&IU subsidiary regulations, including the F&IU (Safety Management) Regulation.

When the Contractor is required by law to submit to the Labour Department any document, notification, etc., relevant to the works, such as 'Notification of Construction Work', 'Safety Audit Report', he should send a copy to the Responsible Officer at the same time.

2.4 Submission of Safety Plan / Document

Safety Plan & Project Safety Plan –

Tenderers shall submit a Safety Plan together with their tenders. The Company may reject any tenders that fail to submit the Safety Plan. The Safety Plan means the plan or document, including any revised or updated version, outlining in adequate details the essential elements, including SHE policies, organization, performance targets, training, risk assessment, etc., to be managed to ensure that the project will be executed in a safely and environmental friendly manner in accordance with the statutory requirement and consistent with CLPP practices.

Upon acceptance of the tender, the Contractor shall immediately arrange and hold an ad hoc meeting, if necessary, with the Company representative to discuss the Safety Plan. Where the Company representative is of the opinion that the Safety Plan does not meet or contains specific information to the requirements of the contract, the Contractor shall amend and re-submit another project specific safety plan – Project Safety Plan. Generation Project Department has develop a set of guideline for writing

a Project Safety Plan, which can be taken as a reference and available from the RO upon request. The Contract shall re-submit 3 copies of the Project Safety Plan at least one week prior to the Kick-off meeting and shall continue to update the Project Safety Plan throughout the project execution when necessary.

Method Statement, Job Safety Analysis and Written Safe Working Procedure -

The Contractor shall prepare a Method Statement describing the methodology they would adopt for delivering and completing the Works. The Method Statement shall be submitted in the prescribed form. The format is provided in the Appendix 1. The Contractor should note that the Company has adopted a Job Safety Analysis (JSA) system for assessing risks associated with each job. The Contractor shall develop a JSA system and to practise it during the execution of the Works. Any hazardous operations, as listed in the SHE Hazard Checklist provided in Appendix 2, for the project shall not commence unless a JSA report has been submitted to the Responsible Officer and consent have been obtained. The format for the JSA is attached in Appendix 3.

Based on the JSA result, the hazards identified and the appropriate safety precautions will be specified in a working procedure in the prescribed form as the Written Safe Working Procedure (WSWP). The contractor will ensure that systems are set up to disseminate the information of the WSWP to all his workers, such as daily safety briefing, tool box talk, safety committee.

The Safety Plan and Method Statement can be written in Chinese or English, and WSWP is preferably written in the language that all workers can understand.

The Tenderers shall be aware that they will be required to submit the Method Statement together their tenders. The Company may reject any tenders that fail to submit the Method Statement.

3. Contractor's obligations to comply with statutory and CLP requirements

The Contractor is required to observe all the relevant statutory requirements of Hong Kong SAR to which the Works are subjected. The Contractor shall clarify any doubt or queries with the Responsible Officer and ensure that all the Contractor's personnel are aware of and comply with all applicable legal requirements imposed by the Hong Kong Laws, relevant Codes of Practice and the SHE standards of the Company while they are in the Premises.

The Contractor shall indemnify and hold the Company harmless from any liability and claims resulting from the Contractor's violation of or failure to comply with any requirements of such laws, ordinances, rules and regulations. Any liabilities including penalties and its interest arising from any non-compliance on the part of the Contractor shall be absolutely borne by the Contractor.

Particularly, Contractor shall not discharge, cause or permit any trade effluent, foul or contaminated water, other than storm water, to run into storm water drain or sea. The Contractor shall make reference to the 'Contractor Site Drainage' Practice Note issued by EPD in the course of Works. Where necessary, sand and silt removal facilities such as sand trap, silt traps and sediment basins, shall be installed. However, such facilities, if required to be installed, will be specified in the technical specification.

Apart from its statutory obligations, no hazardous work on the Premises is allowed without the approval of the Responsible Officer, and the Contractor shall pay particular attention to the following standards of the Company, which are mandatory for its employees and contractors.

Summarised requirements of these standards are related to-

- ? Prohibition for the use of alcohol and drug
- ? Employment of Safety Supervisor and Safety Officer
- ? Handling of hazardous substances and dangerous goods
- ? Disposal of chemical wastes and debris
- ? Erection and dismantle of scaffolds
- ? Use of Ladders and Working at Height
- ? Removal of flooring and handrails
- ? Permit-To-Work System
- ? Controls for Hot Work
- ? Safety Precautions for working on natural gas
- ? Confined Space Work
- ? Use of Lifting Appliance and Lifting Gear
- ? Use of Compressed Gas Cylinders

All reference documents can be obtained from Responsible Officer.

3.1. Prohibition for the use of alcohol and drug

The Contractor shall not perform the Works while under the influence of alcohol or any controlled substance. The Contractor shall not use, possess, distribute or sell alcoholic beverages, illicit or un-prescribed controlled drugs, drug paraphernalia, or misuse legitimate prescription drugs while in the Premises or while performing the Works.

The Contractor shall establish its own policy to assure a drug and alcohol-free workplace while performing the Works at the Premises.

The Contractor shall remove any of their employees from performing Works any time when there is suspicion of alcohol or drug use, possession, or any time an incident occurs where drug or alcohol use could be a contributing factor. The Company has the right to require the Contractor to remove employees from performing Works any time when a cause exists to suspect alcohol or drug use. In such cases, the Contractor's employee may only be considered for return to work after the Contractor certifies as a result of an alcohol and drug for-cause test, conducted immediately following removal, that the said employee was in compliance with this contract.

The Company may, without prior notice, search the person, possessions, and vehicles of the Contractor's employees, agents, and subcontractors that are on the Premises. Any person who refuses to consent such search will be removed from the Premises or Site and will not be allowed to return. The Contractor shall replace at their own expense, any of its employees, agents, or subcontractors at the Company's request.

CLP shall have the right, but not the obligation, to perform unannounced audits of the Contractor's alcohol and drug program to verify that the Contractor's policy and its enforcement are acceptable to the Responsible Officer.

3.2. Employment of Safety Supervisor and Safety Officer

The Contractor should nominate at least one Qualified Safety Supervisor in writing on the prescribed form (Appendix 4). The Site Supervisor (as required under the Condition of Contract) shall not act as the Safety Supervisor if the Contractor's workforce exceeds 20 people on Site. The number of full time Safety Supervisors to be provided shall be increased by one for every additional 50 workers on the works or in connection with the contract, whether or not the workers are employed directly by the Contractor.

The Safety Supervisor must have completed relevant training courses organised by recognised institutions. Proof of such training must be submitted with the tender. The Safety Supervisor shall undertake the duties as stipulated in the F&IU (Safety Officers and Safety Supervisors) Regulations and shall attend the Contractor meetings convened from time to time by the Company's Safety Officer/Engineer. All safety matters regarding the Works shall be discussed and reviewed at the safety meetings.

The company may stipulate higher requirement in the contract specification than that under the laws of Hong Kong. Without such stipulated clause, and whenever the F&IU (Safety Officers and Safety Supervisors) Regulations are applicable, the Contractor should provide at least one full time Safety Officer on Site. The credentials of the Safety Officer should be submitted to the Responsible Officer.

The Safety Officer / Safety Supervisor shall perform the specific duties as provided by the relevant Regulations. The relevant reports prepared, including weekly safety inspection, monthly safety inspection, safety audit report, job safety analysis, accident investigation, etc., should be copied to the Company within 7 days.

If the Safety Officer / Safety Supervisor is unable to perform his duties for any reason, the position shall be replaced within 14 days. In any case, the Safety Officer / Safety Supervisor cannot be replaced without consent by the Responsible Officer.

In addition to the Safety Officer / Safety Supervisor, the Contractor shall appoint the foreman or ganger of each labour group or team working on the Site to act as Safety Representatives. The duty of a Safety Representative shall be made known to him, including that ensuring the directives from the Company, the Contractor, the Safety Officer / Safety Supervisor on SHE matters are duly carried out, safety practices

adopted and protective clothing and equipment are properly used by the work force at all time during work

The Company reserves the right to make access and audit all statutory reports prepared by Contractor's Safety Officer and Safety Supervisor.

3.3. Handling of hazardous materials

The Contractor shall ensure that they only bring in hazardous materials required for the Work, and that all the hazardous materials, including compressed gas and oxygen-acetylene cylinders, brought to the Premises are properly labeled and stored according to statutory requirements. The Contractor shall submit a list of hazardous materials to be used on Site, if any, and supplement the list with the relevant material safety data sheets (MSDS). The list shall be submitted in the prescribed form. The format is provided in the Appendix 5.

Prior to bringing into the Site, any storage cabinets for the hazardous materials or compressed gas cylinders must be registered by the Company. The Contractor shall inform the RO for the arrangement and make the MSDS readily available for inspection.

The Contractor shall not use any CFC or Ozone depleting substances on Site, unless agreed in writing by the Responsible Officer.

Asbestos, or materials containing asbestos shall not be used on Site without the prior approval of the Responsible Officer. The Contractor may be requested by the Responsible Officer to prove that the material used for the Works is asbestos-free.

3.4. Disposal of chemical wastes and debris

Contractor should pay particular attention to the Waste Disposal Ordinance (Chapter 354), associated Regulations, relevant Codes of the Practices in force at the time, and the environmental management system of this Company, in particular, GBG Procedure 8.10 – Handling and Disposal of Chemical Waste.

The Contractor shall be responsible for handling the chemical wastes arising from the Works and shall discuss with the Responsible Officer on the handling of chemical wastes, which may be generated on Site. Improper dumping or disposal of these materials at the Premises is strictly prohibited. Containers, which contain residues of chemical wastes, should be properly handled and cleared from the Site by the Contractor.

There are central chemical waste storage facilities on the Premises, the Contractor may dispose of the chemical wastes generated from Works to these facilities subjected to the prior approval of Responsible Officer.

3.5. Erection and dismantle of scaffolds

The Contractor shall erect all necessary scaffoldings where work is carried out over 2 metres above ground or permanent structure and dismantle after work completion. All working platforms/ scaffold shall be of good quality tubular steel, free from defects, properly designed and maintained in accordance with accepted good practise as provided in the 'Construction Sites (Safety) Regulations' and the 'Code of Practice for Metal Scaffolding Safety'. Under the GBG requirements, any scaffolds must be registered, and -

Unless otherwise agreed in writing by the Responsible Officer the design shall be certified safe with structural calculation by a local registered structural / civil engineer prior to the erection, and all scaffolding works in accordance with the certified design must be carried out by Competent Scaffolders who are nominated by the Contractor.

The Contractor shall notify the Responsible Officer of the name of the Competent Scaffolders in writing on the prescribed form (appendix 6). The Competent Scaffolders must have received recognized training and has relevant experience and sufficient knowledge in the erection of scaffolds, working platforms and their related safety practices.

All scaffolds shall be examined by a Scaffold Inspector who has been nominated according to the GBG Procedures. No scaffold shall be used by any person unless it has been examined by a Scaffold Inspector who should certify that the scaffold is safe to work on. The certification is by means of a Scaffold Inspected Notice (SIN) that should be displayed at the prominent position of the scaffold. A SIN is valid for 7 days and subject to renewal upon expiry. The SIN is a non-transferable document certifying that the scaffold is safe for use. Tampering with the notice is strictly prohibited.

The Competent Scaffolders should ensure that the Company's procedures and the statutory regulations are strictly followed in all scaffolding work. The main requirements of the Company's scaffolding procedures are listed below for the ease of reference :-

- (a) All scaffoldings of load-bearing members shall be constructed of 4mm thick tubings.
- (b) Bamboo or wooden scaffold frames, boatswain chair or similar rope-hung are not allowed to be used.
- (c) The Scaffolders Inspector shall complete a relevant Statutory Form for erecting any scaffold/s and submit to the Responsible Officer immediately after a scaffold has been erected.
- (d) Each scaffold shall be examined every time after a heavy rainstorm or any alternation to the scaffold, or at least once every 7 days by the Scaffold Inspector.

- (e) The company may require the removal and reinstallation of some scaffolds of wind-bearing nature for typhoon conditions.

3.6 Use of Ladder and Working at Height

No wooden, damaged and defected ladder shall be used in GBG Site. Metal ladder must have insulated footing. The most suitable type of ladder should be chosen according to the nature of work to be performed. Ladders chosen should meet internationally recognized standard. Each ladder should carry an identification mark and registered in contractors' control sheet on which to record details of inspections, defects, repairs and destroyed. Each ladder should be regular inspected by a trained person nominated by the Contractor.

Whenever working at height, if the workman has not been provided a safe working platform or he is exposed to a falling hazard, he should wear approved type of safety harness anchored to a suitable anchorage.

3.7 Removal of flooring and handrails

The Contractor should not remove any floor grating, floor slab, cable and pipe trench covers, handrail, etc. on Site unless prior writing approval has been granted by the Responsible Officer.

When flooring or handrails are removed, the Contractor should immediately set up appropriate fencing to guard against falling of people. All such removed items should be reinstated to their original configuration immediately when access is no longer required. Adequate warning lights should be provided in dark environment.

3.8 Permit-To-Work System

The Company adopts a sophisticated safety documents system, which is meant to ensure that plants released for work are safe to be worked on. Before commencement of the Works, the Contractor should confirm with the Responsible Officer that safety documents are in force, and that the coverage of the safety documents are appropriate and adequate for the Works. The safety documents used on Site shall include, but not be limited to, Permit to Work (PTW), Limited Work Certificate (LWC), Hot Work Permit and Confined Space Safe Entry Certificate. Any queries regarding safety documents should be raised with the Responsible Officer.

3.9 Controls for Hot Work

Hot Work includes flame cutting, welding, heat treatment, metal spraying, forging, grinding and any similar work that generates heat, flame or sparks. Under the CLPP Corporate Instruction, hot work will be classified in 2 categories, 1 & 2. Cat. 1 is the Hot Work without flame generated and Cat. 2 is the Hot Work with flame generated.

Contractor shall appoint a Person in Charge (PIC) to be responsible for any hot work, who has attended the required training conducted by the Company and such nomination record should be sent to Responsible Officer. PIC shall complete the specific check sheet and obtain Hot Work Permit if necessary from Hot Work Responsible Person appointed by the Company. The PIC must ensure there is at least one trained person can use the fire fighting equipment at the workplace.

The Contractor is not allowed to carry out Cat. 2 Hot Work at Site unless the Responsible Officer has granted approval. The approval shall be in the form of a Hot Work Permit, which must be displayed at a prominent position at Site.

3.10 Safety Precautions for working on natural gas

There are areas classified as Natural Gas Control Area (NGCA) in the Premises. Contractor shall follow control procedures to access the NGCA. No work should be carried out on or in close proximity to the NGCA unless approval from the Responsible Officer has been obtained.

All Contractors' personnel shall attend a Gas Awareness Course conducted by the Company before they are allowed to enter or work in the NGCA. Their attendance shall be kept in the Company register.

3.11 Confined Space Working

When work is required to be carried out in a confined space, a relevant risk assessment (RA) must be conducted by the Contractor's qualified personnel. The RA will be submitted for further assessment by a CLP authorized person. Confined Space Entry Certificate will be issued by CLP after all safety precautions listed on the RA have been completed and all workers have been explained of the potential risk. All workmen must attend a "bridging course" conducted by the Company and obtain a valid confined space work certificate. In addition, the contractor must ensure that work will be carried out in accordance with the statutory requirement and CLP Corporation Instruction.

3.12 Use of Lifting Appliance and Lifting Gear

All lifting appliances and lifting gears (including the eyebolt or selected anchorage) used on Site must have valid certificates issued by a competent examiner with SWL marked on. A lifting set up with the use any LALG shall also be certified by a competent examiner. All cranes and hoists used on the Site shall be fitted with automatic overload warning device. All crane hooks and other lifting devices used on or around the Site shall be fitted with safety catch or other device. During lifting operation with mobile crane, the outriggers must be fully extended and securely pinned on ground.

Inspection before work is a must to ensure the condition of the gear is good and safe. Crane must be operated by a licensed operator. The operator may be required to have a health check under the CLP A&D program at the cost of Contractor, if required, and the name shall be registered in relevant department.

3.13 Use of Compressed Gas Cylinders

The Contractor shall include the quantity and type of compressed gas cylinders in the list of hazardous materials to be used on Site, if any, and supplement the list with the relevant material safety data sheets (MSDS). All compressed gas cylinders shall be properly labeled, registered and prior inspected by the Company before they can be used on GBG premises.

For oxygen-acetylene gas cylinders, the contractor must conduct a pre-use and / or bi-weekly safety check, where applicable, and submit record to the Responsible Officer.

4. SHE training

Contractor's workmen must have attended a Construction Basic Safety Training and obtained a "Green Card" recognised by the Labour Department of the Government of the HKSAR before they commence work on Site.

All contractor's personnel work on Site for three days or more shall attend an one-hour SHE induction course conducted by the Company. For those who work on Site for less than three days shall attend a video briefing session at the gatehouse on their first arrival.

All contractor's personnel shall also attend an one-hour monthly contractor SHE briefing conducted by the Company. The time, date and venue will be announced by the Responsible Officer. Upon request by the Responsible Officer, the Contractor shall nominate the working personnel to attend some in-house safety training conducted by the company prior to the commencement of some hazardous work on the Premises.

In addition, the Contractor shall provide a daily safety briefing to all working personnel, which explains the related project operation, safety knowledge, and SHE hazards and the necessary control measure for the operation.

5. SHE and general requirements for Contractor's personnel

The Contractor's workmen must be eligible for working in Hong Kong SAR under the laws prevailing at that time. The ability to understand Cantonese and/or English is essential. All Contractor's workmen shall be physically fit and skilled for the intended Works. The Responsible Officer may request them to demonstrate that they possess the required knowledge and skill to carry out the Works.

The Contractor shall report daily to the Responsible Officer an attendance record for all Contractor's personnel on Site. This record will be used for roll out check at the Muster Point in case of emergency evacuation.

Gambling, illicit or un-prescribed controlled drugs, alcohol and spirits are not allowed anywhere in the Premises. Smoking is only allowed at the designated smoking areas.

5.1 Site Supervisor

The Contractor shall nominate a Site Supervisor who can speak, write and understand English and Cantonese. The Site Supervisor shall be on Site at all times when the Works are being undertaken. He/she shall also attend work progress meetings and safety meetings convened from time to time by the Responsible Officer. The nomination shall be in writing on the prescribed form (Appendix 7), and be subjected to approval by the Responsible Officer before Works commence.

Unless specified to the contrary, oral and written instructions given to the Site Supervisor by the Responsible Officer shall be deemed to have delivered to the Contractor.

5.2 Registered Electrical Workers

The Contractor shall employ Registered Electrical Workers for carrying out all electrical part of the Works. The Registered Electrical Workers shall be registered under the Electricity Ordinance (Cap. 406) or its revisions or substitutes in effect from time to time throughout the contract period. The Contractor shall advise details of the Registered Electrical Workers in the prescribed form (Appendix 8), and provide a copy of the registration certificate of the Registered Electrical Workers to the Responsible Officer.

5.3 Staff with Particular Operating Function

The Company has established safety systems for the operation of critical systems, having stipulated special procedure for authorization of designated person in issuing or receiving work permit, supervising work, inspecting equipment or carrying out specific critical operations. Critical operation include work on power systems and mechanical systems of the Power Stations, erection and inspection of scaffold, entry to confined spaces, work in Natural Gas Zone, supervising / conducting hot work, etc.

The Contractor shall clarify any doubt or queries with the Responsible Officer and ensure that all his designated staff of particular operating function will comply with the established system and authorization procedure.

6. SHE requirements for Contractor's tools, equipment and materials

The Contractor shall ensure that all materials, tools and equipment they brought to the Premises are in full compliance with the relevant statutory requirements and are properly maintained in a good working condition. Copy of the required documents/certificates substantiating the statutory compliance and maintenance work should be submitted to the Responsible Officer for approval, prior to the materials, tools and equipment can be used on Site. The Company reserve the right to refuse or order the removal of any unfit or sub-standard tools and equipment.

The Contractor shall submit to the Responsible Officer before the commencement of the Works an inventory list of the lifting equipment, tools and equipment to be used on Site. Copies of the relevant maintenance record for electrical, mechanical and pneumatic appliance substantiating the proof of proper maintenance should be submitted to the Responsible Officer for approval, prior to use on Site. The Contractor should give prior notice to the Responsible Officer when his equipment will be delivered to Site.

Lifting equipment to be used on Site must have been tested and examined to comply with the F&IU (Lifting Appliances and Lifting Gear) Regulations with the valid examination certificates ready on Site at any time for audit by the Responsible Officer.

For safety reasons, the Company requires that 110V AC portable tools/equipment be used in certain specific plant areas. The Contractor should confirm with the Responsible Officer such tools requirement. Extra low voltage and spark-proof hand tools are sometimes required for the Works in specific plant areas. Such requirement will be stipulated specifically in the detailed work specification.

7. Provision of Personal Protective Equipment to Contractor's personnel

The Contractor should equip each of his workmen with adequate Personal Protective Equipment (PPE), and ensure that they are properly used. The standard of the equipment should conform to that provided by the Company for its workforce, and is subject to approval by the Responsible Officer. The Responsible Officer may require the Contractor to submit their equipment for inspection before allowing them to be used on Site.

PPE shall include, but not limited to, safety helmet, safety shoes, protective overalls, protective goggles, facemasks, ear protection plugs, and safety harness, etc. as required for the Works. The Contractor should adopt a unique colour or system for helmets and overalls for ease of identification.

The Contractor should maintain at all times their PPE in good condition. The Company has the right to remove Contractor's personnel from Site any time if the Responsible Officer considers that the PPE is inadequate or improper for the Works.

8. Action in case of fire and emergency

If a Contractor discovers a fire or other emergency event, he should activate the fire alarm in the vicinity and dial the Site's emergency telephone number. Tags bearing the emergency telephone number are attached to all company telephones.

If the Contractor has been trained to use portable fire fighting equipment, he may use the equipment in the vicinity to combat the fire. However, the fixed fire fighting systems must not be used. The Contractor should report the use of portable fire extinguishers to the Responsible Officer. Unless in an emergency, the Contractor should not remove or alter the position of any fire extinguisher.

When the Site's evacuation signal is initiated, Contractor shall immediately move to the designated Muster Point. The Contractor's Site Supervisor shall take a roll-call and report the situation to the Responsible Officer at the Muster Point.

9. Incident Reporting and Investigation

For any incident involving the Contractor's personnel on Site, including those without causing property damage or personal injury, the Contractor must inform the Responsible Officer immediately, and, additionally, submit a written report to the Responsible Officer within 48 hours for any accident that has resulted in property damage or personal injury.

The Contractor should be aware that this report shall not relieve its statutory obligations in regard of industrial accidents.

At the Company's discretion, any Contractor's incident may be further investigated by the Company with the Contractor's co-operation. Such investigation is intended to determine the cause of the incident and identify measures that could prevent a recurrence.

10. First Aid facilities

The Contractor shall ensure that adequate first aid facilities are immediately available on Site and establish a system for reporting the use of first-aid facilities to the Responsible Officer. The Contractor should also note that a site clinic is provided in CPPS and BPPS respectively, the contractor must make use of these facilities in an emergency.

11. Remedial action for non-compliance to SHE requirements

When, in the opinion of the Responsible Officer, the Contractor has failed to comply with any SHE provisions stipulated in this document, the Responsible Officer shall have the right to require immediate correction to rectify such non-conformance. The

Contractor shall be responsible for the time delay in Works and costs required to rectify such non-conformance.

Repeated non-conformance, or serious offense in SHE requirements, will lead to temporary Works suspension or termination. The Company shall have the right to claim losses or to recover expenses arising out of these non-conformance

12. Execution of Works

12.1 Site Visit

Whenever requested by the Company or considered necessary by the Tenderers, the Tenderers should attend a Site visit before submitting their tenders. Any queries regarding the Works and the Site should be clarified at the Site visit.

12.2 Working Hours

The normal working hours on Site is from 0800 hours to 1700 hours, Monday to Friday. The Contractor shall specify in their tenders working hours for the Works if it differs from the normal working hours.

Working hours during plant overhaul period and emergency repairs will be different, the Responsible Officer will agree with the Contractors the working hours in advance.

No Contractor's personnel on Site is allowed to work continuously for more than 24 hours.

12.3 Site Clearing

The Contractor shall at all times maintain the Site in a clean condition to a standard acceptable the Company's standards.

Within 48 hours from completion of the Works, or when the Responsible Officer considers necessary, the Contractor shall remove from Site all materials, equipments, machineries, temporary structures and rubbish arising out of, or in the course of, the execution of the Works. Should the Contractor fail to clear the Site within the specified period, the Company shall be entitled to make such other arrangements for Site clearing and reimburse the cost from the Contractor or deduct the same from the Contract Price.

The Contractor shall be aware that Site clearing after Works is considered to be part of the Works. Acceptance of Works by the Responsible Officer shall not be granted unless the Site has been rendered clean, tidy and safe.

12.4 Works Deviation

The Works shall be executed in accordance with the provisions in the Specification and Method Statement. The Contractor shall obtain Responsible Officer's prior

written approval for any proposed deviation from these provisions, otherwise the Responsible Officer may refuse to issue the Acceptance of Works to the Contractor.

13. Site Supplies

13.1 Electricity, Water, and Compressed Air

The Company may, with prior agreement, provide necessary supply of electricity, water, and compressed air to the Contractor free of charge for Works execution. The Responsible Officer shall indicate to the Contractor the terminal/tap points for electricity, water, and compressed air supplies. The Contractor shall ensure that the equipment brought to Site is fitted with proper connections/adaptors appropriate for the terminal/tap points. In all cases, the Contractor shall obtain agreement with the Responsible Officer before any connection/tapping is made.

- (a) The electricity supplies on Site are 110V and 240V single phase and 415V three phase sockets.
- (b) Both town water and seawater are available on Site, except in the Penny's Bay Power Station
- (c) General Service Compressed air is available on Site for small pneumatic tools and equipment. All designated supply points are equipped with quick release adaptors.

***Warning: The Contractor shall not use compressed air for the removal of dust/dirt.
The Contractor shall not connect his tools and equipment to the Instrument Air supply system.
The Contractor shall not use fire services supply to any work activities.***

13.2 Temporary Site Office

Where the Contractor finds it necessary, for the execution of the Works, to deploy at Site a standard container office, he must state such requirement clearly in the tender document. Approval of such request shall be subject to the Responsible Officer's agreement.

The container office shall not be used as a catering, workshop or living facility. The Contractor shall be fully responsible for the safety and house keeping associated with the container office.

The Contractor shall produce a Work Completion Certificate (WR1) to the Responsible Officer to demonstrate that the fixed electrical installation of the temporary site office has been inspected, tested and certified by a registered electrical worker in accordance with the Electricity Ordinance before power supply is provided to the temporary site office.

13.3 Catering Services

Contractors' personnel may take their meals at a specific area on site, normally it will be the Station Canteen. The Company shall designate a specific area for such purpose. Unless otherwise specified in the Specification, all meals shall be provided by the Contractor at his/her own cost.

13.4 Hygiene Facilities

Premises will have adequate latrine and washing conveniences facilities. Contractor should cooperate to keep these facilities clean and tidy.

14. Site Security

14.1 Entry Pass

Entry passes will be issued by the Responsible Officer to the Contractor's personnel involved in the Works on Site, subject to the satisfactory attendance and pass of the SHE induction training provided by the Company. For preparation of the entry passes the Contractors are required to submit to the Responsible Officer at least three days before the commencement of the Works documents to verify the identity of their workmen and their permission for working in Hong Kong SAR under the relevant legislation in force at that time. Every staff working within the Premises must carry / wear the pass at all time.

14.2 Materials Gate Pass

The Contractor shall ensure that the materials, tools and equipment brought to Site are registered at the gatehouse. Failing to do so may lead to delay in retreat of materials and tools from Site after the Works are completed.

14.3 Control of Vehicle Access

The Site enforces strict control over vehicle access. Normally, vehicles will only be allowed on Site for dropping off or collecting materials and equipment. Unless otherwise approved by the Responsible Officer, vehicles will not be permitted to enter Site to drop off passengers.

All Contractors' drivers must strictly observe the road regulations and driving speed limit of the Site, which is 25 km per hour. Failure to do so may result in refusal to re-entry.

The Contractor shall not bring bicycles for riding on Site. Any bicycle found on Site may be confiscated by the Company.

- END -

SHE Hazards Checklist

Please note that the checklist is intended to –

- ? Be used for GPD's projects;
- ? Assisting the project Responsible Officer and the contractor concerned in hazard identification;
- ? Be used before any site work will commence;
- ? Pinpointing the need for conducting detailed risk assessments and "written safety working procedures"(WSWP);
- ? Outlining the associated safety risk and the basic safety requirements for working in the CPPS and BPPS; and
- ? Providing a reference for instigating the necessary safety measures.

Responsible Officer of a project, at or before a project kick off meeting, should require the provision of "Job Safety Analysis" and "Written Safety Working Procedure" for all hazardous work to be carried out by a contractor. To facilitate for listing and pinpointing hazardous work process, the SHE Checklist can be studied and taken as a reference. The users should also understand that SHE hazards and risks contained in the checklist are by no means comprehensive. Unforeseen safety hazards and risks may arise in similar work under different locations and situations. If in doubt, advice should be sought from personnel of the SHE Department.

SHE Hazards Checklist

(Yes / No)	Hazards	Risk	<u>Works examples</u>	Statutory or GBG reference
	1. Demolition	Collapse of structure; Fall from height; Falling objects.	Building / Structure redevelopment	F&IU Ord. Cap. 59 – Demolition plan and supervision.
	2. Excavation	Collapse of trench; Fall from height; Trip and fell; Falling object.	Cable / pipe Work requiring trench opening	Construction Site (Safety) Reg. Cap. 59 I – Safe access, fencing, covering of opening, Shoring and weekly inspection.
	3. Roof work	Fall from height; Falling object.	Building / Structure repair	Construction Site (Safety) Reg. Cap. 59 I – Safe access, crawling board and fall protection.
	4. Use of lifting appliance / gear	Collapse of lifting appliance / gear; Falling object.	Transporting or conveying heavy equipment / material.	Construction Site (Safety) Reg. Cap. 59 I; F&IU (LALG) Reg. Cap. 59 J; GBG 13.10 & 17.8.1 - Certification and regular inspection of LALG, fence off area, trained & authorized operative (by CLP) and subject to CLPP “D & A” policy.
	5. Use of suspended working platform	Collapse of suspended working platform; Fall from height; Falling object.	Working in gondola	F&IU (Suspended Working Platform) Reg. Cap. 59 AC & GBG 17.8.1 – Certification, inspection, trained operator, fence off area.
	6. Use of overhead crane	Collapse of lifting appliance / gear; Falling object.	Transporting or conveying heavy equipment / material.	Construction Site (Safety) Reg. Cap. 59 I; F&IU (LALG) Reg. Cap. 59 J; & GBG 13.10 - Certification and regular inspection of LALG, fence off area, trained & authorized operative.
	7. Operation of machinery	Forearm / finger entanglement or injury.	Metal cutting, heavy drilling.	F&IU (Guarding and Operation of Machinery) Reg. Cap. 59 Q & GBG 17.8.1 – Proper guarding and warning sign.
	8. Abrasive wheels	Disintegration of wheel; Forearm / finger injury.	Metal cutting / polishing; sharpening	F&IU (Abrasive Wheels) Reg. Cap. 59 L & GBG 17.8.1 –

(Yes / No)	Hazards	Risk	<u>Works examples</u>	Statutory or GBG reference
			tool / metal; de-rusting.	Competent and designated person for wheel mounting; and provide warning sign.
9.	Working near overhead line	Electrocution; Damage to overhead line.	Use of crane / excavator near power overhead line.	Electricity Ord. Cap. 406 & Construction Site (Safety) Reg. Cap. 59 I – Warning signs; and Provide score posts.
10.	Working at height	Fall from height; Falling object.	Building / plant / structure refurbishment / repair / survey work	Construction Site (Safety) Reg. Cap. 59 I, GBG 8.10, 8.11 & 17.7.14 – Provide scaffold; Trained scaffolder; Weekly CP inspection; and Use of harness.
11.	Working over water	Drowning.	Refurbishment or repair work near Pier or over water.	Construction Site (Safety) Reg. Cap. 59 I – Provide rescue equipment & fencing.
12.	Confined space working	Suffocation; Fire and explosion; Drowning; Muscular strain.	Work carried out in flue, chamber, tank, vat, pit, well, sewer, tunnel, pipe, boiler, pressure receiver, hatch, caisson, shaft or silo	F&IU (Confined Space) Reg. Cap. 59 AE; Corp guide p.15.8, GBG 13.10 & 15.4 – Certified workers and authorized by CLP; Conduct risk assessment and report; and Permit to work system.
13.	Hot work – welding	Fire and explosion; Burns to skin and eyes; Inhalation of metal fume.	Work involves gas or arc welding.	F&IU (Gas Welding and Flame Cutting) Reg. Cap. 59 AI & Corp guide, GBG 15.02 & 13.10 – Trained worker; Supervision by authorized (by CLP) person, register and identification of compressed gas cylinders; and Permit to work.
14.	Work involve ACM	Inhalation of asbestos dust.	Work require tampering, removal or encapsulation of asbestos containing material, e.g.,	F&IU (Asbestos) Reg. Cap 59 AD & GBG 08 & 11.3.3 – Area isolation, PPE, air monitoring, special waste disposal arrangement.

(Yes / No)	Hazards	Risk	<u>Works examples</u>	Statutory or GBG reference
			identified pipework, gaskets, insulation boards, etc.	
	15. Dangerous goods / materials	Fire and explosion; Skin burns; Spillage and pollution; Ingestion and intoxication; Inhalation.	Use and storage of fuel for plant	Dangerous Goods Ord. Cap. 295; F&IU (Dangerous Substances) Reg. Cap. 59 AB; GBG 11.01/04/05 – Submission of MSDS, Proper labeling, Legal limit of storage quantity; Provide label & MSDS; and Ensure the use of PPE.
	16. Chemical waste	Fire and explosion; Spillage and pollution; Ingestion and intoxication; Inhalation.	Refurbishment / repair of plant; Painting work; Metal work; Lubrication of machinery.	Waste Disposal Ord. Cap. 354 ; GBG 08 – Waste management system.
	17. Noise hazards (over 85 dBA)	Hearing loss; Loss of concentration	Work in turbine room; Use of pneumatic machine in building / civil work; Air compressor.	F&IU (Noise at Work) Reg. Cap. 59 T– Noise assessment; and Hearing protection zone, ear protectors.
	18. Gas (supply) safety	Damage to pipeline; Fire and explosion.	Construction work near gas pipe; Repair work to gas appliance.	Gas Safety (Gas Supply) Reg. Cap. 51 B - Qualified and registered personnel.
	19. Boiler and pressure vessels – portable air compressor / receiver	Explosion; Hearing damage; Electrocution; Body injury by moving part.	building / civil work; diving.	Boilers and Pressure Vessels Ord. Cap. 56 – Certification; and Regular inspection.
	20. Compressed gas cylinders	Fire and explosion; Muscular strain; Body injury.	Gas welding; Diving.	Dangerous Goods Ord. Cap. 295 & GBG 11.6 – Legal limit of quantity; and

Generation Business Group
Specification for SHE & Site Requirements (June 2002)

(Yes / No)	Hazards	Risk	<u>Works examples</u>	Statutory or GBG reference
				Register cylinder, user identification.
	21. Work at natural gas zone	Fire and explosion;	Any work to be carried out in the zone	GBG 13.10 & 14.5.1/2/4 – workers are required to attend an awareness training and to be authorized.
	22. High voltage electricity	Electrocution; Equipment damage.	Any work to be carried out on or near high voltage plant.	Electricity Ord. Cap. 406 ; GBG 13.10 & 17.7.2 – CP & SAP requirement; Authorised worker (by CLP); and Permit-to-work system or Limited Work Certificate.
	23. Sewage work	Disease due to bacteria.	Any work to be carried out on or in the domestic sewage treatment plants.	GBG 11.3.7 – Special hygiene requirements.
	24. Radiographic work	Biological injury.	Any work to be carried out in the zone	GBG 17.8.7 – Those require access to specified locations must give prior notification to GBG.
	25. Sandblasting	Inhalation of dust; Emission of dust;	Structure refurbishment or surface polishing work	F&IU (Sandblasting) Reg. Cap. 59 C– Restricted use of sand or silica-containing material; and Provide protective and approved type of helmet with air supply of minimum 170 litres / min.
	26. Diving	Drowning; Divers hit by vessels.	Cool water intake cleaning; Under water pipe work.	F&IU Ord. Cap. 59 – Medical fitness cert. of divers; Breathing and lifeline for divers; Decompression chamber requirement; and Emergency planning.

(Yes / No)	Hazards	Risk	<u>Works examples</u>	Statutory or GBG reference
	27. New, unusual or hazardous work	Causing permanent changes to operations, procedures, site standards and facilities or equipment; Unsafe process or human error causing injury or pollution including – ? air pollutants, gas, odor emission ? toxic / chemical vapour emission ? effluent discharge ? chemical spillage ? solid / industrial wastes generation and their disposal ? liquid and solid chemical wastes generation and their disposal ? energy, utility and material usage ? electromagnetic field emission ? others	Use of new technique or unusual equipment; Non-presidential work.	F&IU (Safety Management) Reg. Cap. 59 AF; GBG 16.01 & 03; 17.7– Conduct JSA, WSWP, tool box talk and PJO; Conduct identification, authorization, implementation and close-out process.

**Generation Business Group
Nomination of Safety Supervisor**

(To be completed and returned by the tenderer)

1. Name of Safety Supervisor
2. Contact Tel./Pager No.
3. Academic/Technical Qualification

<u>Education</u>	<u>From</u>	<u>To</u>	<u>Certificate held</u>
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4. Employment History

<u>Company</u>	<u>Position Held</u>	<u>From</u>	<u>To</u>
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5. Relevant Safety/Environmental Training

<u>Training Institution</u>	<u>From</u>	<u>To</u>	<u>Certificate Held(Copy enclosed)*</u>
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Company Name of Tenderer :

Authorised Signature :

Generation Business Group
Hazardous Materials to be used on Site

(To be completed and returned by the tenderer)

Tenderers are required to indicate at **tender stage** Hazardous Materials to be used on Site during the Contract, and to provide relevant Material Safety Data Sheets.

<u>Item</u>	<u>Description</u>	<u>Estimated Quantity</u>
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Encl : Material Safety Data Sheets

Company Name of Tenderer :

Authorised Signature :

**Generation Business Group
Nomination of Site Supervisor**

(To be completed and returned by the tenderer)

1. Name of Site Supervisor

2. Contact Tel./Pager No.

3. Academic/Technical Qualification

<u>Education</u>	<u>From</u>	<u>To</u>	<u>Certificate held</u>
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4. Employment History

<u>Company</u>	<u>Position Held</u>	<u>From</u>	<u>To</u>
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5. Relevant Safety/Environmental Training

<u>Training Institution</u>	<u>From</u>	<u>To</u>	<u>Certificate Held</u> (Copy enclosed)*
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Company Name of Tenderer : _____

Authorised Signature : _____

**Generation Business Group
Nomination of Registered Electrical Worker**

(To be completed and returned by the tenderer)

1. Name of Registered Electrical Worker:

2. Academic/Technical Qualification:

<u>Education</u>	<u>From</u>	<u>To</u>	<u>Certificate Held</u>	<u>Date Issued</u>
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3. Employment History:

<u>Company</u>	<u>Position Held</u>	<u>From</u>	<u>To</u>
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4. Registered Electrical Worker Registration Certificate:

Hong Kong SAR Govt. <u>Registration No.</u>	<u>From</u>	<u>To</u>	Certificate <u>Copy attached*</u>
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Company Name of Tenderer : _____

Authorised Signature : _____

**Generation Business Group
Nomination of Site Supervisor**

(To be completed and returned by the tenderer)

1. Name of Site Supervisor
2. Contact Tel./Pager No.
3. Academic/Technical Qualification

<u>Education</u>	<u>From</u>	<u>To</u>	<u>Certificate held</u>
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4. Employment History

<u>Company</u>	<u>Position Held</u>	<u>From</u>	<u>To</u>
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5. Relevant Safety/Environmental Training

<u>Training Institution</u>	<u>From</u>	<u>To</u>	<u>Certificate Held</u> (Copy enclosed)*
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Company Name of Tenderer : _____

Authorised Signature : _____

Method Statement

(To be completed and returned by the tenderer))

Company :

Date :

Plant Location :

Issued By:

Work Start Date:

Completion Date:

Responsible Person:

? Purpose
? Equipment
? Demarcation of Goods
? How Goods is to be removed and how to preserve / support the remaining
? Emergency & Safety Measure
? Risk Assessment and Control
? Others

Stages of Job Safety Analysis (JSA)

1. Select job to be analysed.
2. Break job down into steps.
3. Identify the hazards or potential accidents in each step.
4. Develop solutions for the potential hazards.
5. Review and update J.S.A. at completion of job.