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## **SPECIFICATION**

### **FOR**

### **HEALTH, SAFETY AND ENVIRONMENT (HSE)**

#### **1.0 SCOPE**

This specification establishes the Health, Safety and Environment (HSE) management requirement to be complied with by the Contractors during construction.

Requirements stipulated in this specification shall supplement the requirement of HSE Management given in relevant Act(s)/ legislations, General Condition Contract (GCC). Special Conditions of Contract (SCC) and job specification where different documents and requirements are specified. In case of contradictions, the more stringent of the requirements shall automatically be binding and adopted by the contractors for compliance.

#### **2.0 REFERENCES**

This document should be read in conjunction with following.

- General Conditions of Contract (GCC)
- Special Condition of Contract (SCC)
- Scope of work.
- Relevant IS Codes (refer annexure-I)
- HSE plan format.

#### **3.0 REQUIREMENTS OF HEALTH, SAFETY & ENVIRONMENT (HSE) MANAGEMENT SYSTEM TO BE COMPLIED BY CONTRACTORS.**

##### **3.1 MANAGEMENT RESPONSIBILITY**

- 3.1.1 The Contractor to comply with HSE requirement at Construction sites as enclosed to cover commitment of their organization to ensure health, safety and environment aspects in their line of operations.
- 3.1.2 The HSE management system shall cover the HSE requirements including but not limited to what is specified under Para 1.0 and para 2.0 above.



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- 3.1.3 Contractor shall be fully responsible for planning and implementing HSE requirements. Contractor as a minimum requirement shall designate / deploy one safety Supervisor.

Contractor shall indemnify & hold harmless Owner/ BHEL & their representatives free from any and all liabilities arising out of non- fulfillment of HSE requirements.

- 3.1.4 The Contractor shall ensure that the Health, Safety and Environments (HSE) requirements are clearly understood & faithfully implemented at all levels at site through HSE plan.

- 3.1.5 The Contractor shall arrange suitable first aid measures such as First Aid Box, trained personnel to give First Aid and install fire protection measures such as adequate number of steel buckets with sand and water to the satisfaction of BHEL/Owner.

- 3.1.6 Non-Conformance on HSE by Contractor (including his Sub-Contractors) as brought out during review / audit by BHEL / Owner representative shall be resolved forthwith by Contractor. Compliance report shall be provide to BHEL.

- 3.1.7 The Contractor shall ensure participation of his Resident Engineer/ Site-In-Charge in the Safety Committee/ HSE Committees meetings arranged by BHEL / Owner. The compliance of any observations shall be arranged urgently. He shall assist BHEL/ Owner to achieve the targets set by them on HSE during the project implementation.

- 3.1.8 The Contractor shall adhere consistently to all provisions of HSE requirements. In case of non-compliance or continuous failure in implementation of any of HSE provisions; BHEL/Owner may impose stoppage of work without any Cost & Time implication to BHEL/ Owner and / or impose a suitable penalty for non-compliance with a notice of suitable period, upto a cumulative limit of 1.0% ( one percent ) of Contract value. This penalty shall be in addition to all other penalties specified else where in the contract. The decision of imposing stoppage of work, its extent & minority penalty shall rest with BHEL/ Owner & binding on the Contractor.



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3.1.9 Fatal accidents if any and all other personnel accidents shall be investigated by a team of Contractor's senior personnel for root cause & recommended corrective and preventive actions. Findings shall be documented and suitable actions taken to avoid recurrences shall be communicated to BHEL/Owner. BHEL/ Owner shall have the liberty to independently investigate such occurrences and Contractor shall extend all necessary help and co-operation in this regard.

### 3.2 **HOUSE KEEPING**

3.2.1 Contractor shall ensure that a high degree of house keeping is maintained and shall ensure interalia; the following.:

- a) All surplus earth and debris are removed/ disposed off from the working areas to identified locations (s).
- b) Unused /Surplus Cables, Steel items and steel scrap laying scattered at different places within the working areas are removed to identified location(s).
- c) All wooden scrap, empty wooden cable drums and other combustible packing materials, shall be removed from work place to identified location(s).
- d) Roads shall be kept clear and materials like: pipes, steel sand boulders, concrete, chips and brick etc., shall not be allowed on the roads to obstruct free movement of men & machineries.
- e) Fabricated steel structurals, pipes & piping materials shall be stacked properly for erection.
- f) Water logging on roads shall not be allowed.
- g) No parking of trucks/ trolleys, cranes and trailers etc., shall be allowed on roads which may obstruct the traffic movement.
- h) Utmost care shall be taken to ensure over all cleanliness and proper upkeep of the working areas.
- i) Trucks carrying sand, earth and pulverized materials etc. shall be covered while moving within the plant area.

In case of non-compliance of any of above, BHEL shall have the liberty to get it done from some other agency at their risk and cost.



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### 3.3 **HEALTH, SAFETY AND ENVIRONMENT**

- 3.3.1 The Contractor shall provide safe means of access to any working place including provisions of suitable and sufficient scaffolding at various stages during all operations of the work for the safety of his workmen, and BHEL/ Owner. Contractor shall ensure deployment of appropriate equipment and appliances for adequate safety and health of the workmen and protection of surrounding areas.
- 3.3.2 The contractor shall ensure that all their staff and workers wear Safety Helmet and Safety shoes. Contractor shall also ensure use of safety belt, protective goggles, gloves etc. by the personnel as per job requirements. All these gadgets shall conform to relevant IS specifications equivalent.
- 3.3.3 The Contractor shall assign to his workmen, tasks commensurate with their qualification, experience and state of health for driving of vehicles, handling and erection of materials and equipments. All lifting equipments shall be tested certified for its capacity before use. Adequate and suitable lighting at every work place and approach there to, shall be provided by the Contractor before starting the actual operations at night. It is mandatory for contractor to get his workmen medically examined/ checked for fitness of work assigned once a year and furnish the certificate to that effect from a RMP / Govt. Hospital.
- 3.3.4 Hazardous and / or toxic materials such as solvent, coating or thinners shall be stored in appropriate containers.
- 3.3.5 All hazardous materials shall be labeled with the name of the materials the hazards associated with its use and necessary precautions to be taken.
- 3.3.6 Contractor shall ensure that during the performance of the work, all hazards of the health of personnel, have been identified, assessed and eliminated.
- 3.3.7 Chemical spills shall be contained & cleaned up immediately to prevent further contamination.
- 3.3.8 All personnel exposed to physical agents such as ionizing or non- ionizing radiation, ultraviolet rays or similar other physical agents shall be provided with adequate shielding or protection commensurate with the type of exposure involved.
- 3.3.9 Where contact or exposure of hazardous materials could exceed limits or could otherwise have harmful effects, appropriate personnel protective



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equipments such as gloves, goggles, aprons, chemicals resistant clothing and respirator shall be used.

- 3.3.10 All persons deployed at site shall be knowledgeable of and comply with the environmental laws, rules & regulations relating to the hazardous materials substances and wastes. Contractor shall not dump, release or otherwise discharge or dispose off any such materials without the express authorization of BHEL/Owner.

#### **4.0 DURING JOB EXECUTION**

Implement Health, Safety and Environment requirements including but not limited to as brought out under para 3.0. Contractor shall ensure to:

- (i) Arrange workmen compensation insurance, registration under ESI Act. third party liability insurance etc. as applicable.
- (ii) Arrange all HSE permits before start of activities (as applicable) like hot work, confined space, work at heights, storage of chemical/ explosive materials and its use and implements all precautions mentioned therein.
- (iii) Submit timely the complete checklist on HSE activities, Monthly HSE report, accident reports, investigation reports etc. as per BHEL/ Owner requirements. Compliance of instructions on HSE shall be done by Contractor and informed urgently to BHEL/Owner.
- (iv) Ensure the Resident Engineer/ Site-Incharge of the Contractor shall attend all the Safety Committee/ HSE meeting arranged by BHEL/ Owner. In case of his absence from site that a second senior most person shall be nominated by him in advance and communicated to BHEL/ Owner.
- (v) Display at site office and work locations caution boards, list of hospital, emergency services available.
- (vi) Display posters, banners made available by BHEL for safe working to promote safety consciousness.
- (vii) Assist in HSE audits by BHEL/ Owner and submit compliance report.
- (viii) Generate & submit HSE records / report as per HSE plan.
- (ix) Appraise BHEL/ Owner on HSE activities at site.



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## ANNEXURE-I

### RELEVANT IS – CODES FOR PERSONAL PROTECTION

IS:2925-1984	Industrial Safety Helmets.
IS:4770-1968	Rubber gloves for electrical purposes.
IS:6994, 1973(Part-I)	Industrial Safety Gloves (Leather & Cotton Gloves)
IS: 1989-1986(Part-I & III)	Leather safety boots and shoes.
IS: 3738-1975	Rubber knee boots.
IS:5557-1969	Industrial and Safety rubber knee boots.
IS:6519-1971	Code of practice for selections, care and repair of Safety footwear.
IS:11226-1985	Leather Safety footwear having direct moulding sole.
IS:5983-1978	Eye Protectors
IS:9167-1979	Ear Protectors
IS:3521-1983	Industrial Safety belts and harness.