

TECHNICAL SPECIFICATION FOR LABOUR COLONY

SPECIFICATION NO: PS-SR-PMX-CVL

LABCOL/02

REV NO: 01 DATE: 28.12.2018

<u>SHEET: 1 OF 8</u>

TECHNICAL SPECIFICATION FOR LABOUR COLONY



Bharat Heavy Electricals Limited

Project Management Department

Power Sector – Southern Region

690, Anna Salai, Nandanam

Chennai - 600 035



TECHNICAL SPECIFICATION FOR LABOUR COLONY

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SHEET: 2 OF 8

1 BROAD DESCRIPTION OF WORK

Providing labour colony is in the scope of the bidder. The labour colony area is divided in to various blocks and Bidder shall be allotted the blocks according to the size of the man power planned for mobilisation of the awarded work. The following are the broad description of the labour facilities to be provided by the bidder.

- 1. Pre-Fabricated shed of Standard size of 40m x 11 m consisting 10 Nos of rooms sizing 4mx4m each as per the specification/drawing No. BHEL/PSSR/CVL/LABCOL/03, Rev-00. Bidder may alter size of the shed according to the size of the manpower.
- 2. Toilet blocks, each sizing 1.5m x 1.5m as per the specification/drawing No. BHEL/PSSR/CVL/LABCOL/02, Rev-00
- 3. Washing Area & Bathing Area as per the specification/drawing No. BHEL/PSSR/CVL/LABCOL/02, Rev-00
- 4. Cooking cum Dining Area as per the specification/drawing No. BHEL/PSSR/CVL/LABCOL/02, Rev-00

2 FACILITIES PRVIDED BY BHEL

- A. Land for labour colony shall be allotted by BHEL
- B. BHEL shall provide water at one point in the Plant Premises. Further tapping the water from for the labour colony shall be under the scope of the bidder.
 - In case of non-availability of water, the contractor shall make his own arrangements of water suitable for labours at their own cost. No separate payment shall be made for any contingency arrangement made by contractor, due to delay / failure for providing water supply.
- C. Power will be provided to the contractor free of cost at one single point within the labour colony area. The contractor shall make his own arrangement for further distribution with necessary isolator/LCB etc. Necessary "Capacitor Banks" to improve the Power factor to a minimum of 0.9 shall be provided by the contractor at his cost.



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Penalty if any levied by customer on this account will be recovered from contractor's bills. Any duty, deposit involved in getting the Electricity shall be borne by the bidder. Provision for distribution of electrical power from the given single central common point to the required places with proper distribution boards, approved cables and cable laying including supply of all materials like cables, switch boards, pipes etc., observing the safety rules laid down by electrical authority of the State / BHEL / their customer with appropriate statutory requirements shall be the responsibility of the tenderer / contractor. BHEL is not responsible for any loss or damage to the contractor's equipment as a result of variations in voltage / frequency or interruptions in power supply. As there are bound to be interruptions in regular power supply, power cut/ load shedding in any construction sites, contractor should make his own arrangement for alternative source of power supply through deployment of adequate number of DG sets at their cost during the power breakdown / failure to get urgent and important work to go on without interruptions. No separate payment shall be made for this contingency.

- D. Bidder shall provide toilet blocks with necessary septic tanks and soak pits as mentioned in the layout drawing. Bidder shall be responsible for clearing the septic tank at regular intervals.
- E. Main Roads and Drains shall be constructed by BHEL, further interconnection to main road and drain shall be done by the vendor.
- F. Lighting in the roads shall be provided by BHEL, further lighting within the areas allocated to the Bidders shall be taken up by the bidder. The bidder shall provide suitable lighting in their areas.
- G. The layout, specification including dimensions of the facilities of the labour colony as provided in the bid drawings shall be strictly followed.

3.0 <u>FACILITIES TO BE PRVIDED BY BIDDER</u>

3.1.1.1 Labour sheds as per the layout, specification shall be provided by the bidder as per the bid drawing including foundations.



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3.1.1.2 Toilet, Bath and wash area shall be provided as per the layout and specification provided in the bid drawing including foundations.

- 3.1.1.3 Kitchen cum dining room as per the layout, specification shall be provided by the bidder as per the bid drawing including foundations.
- 3.1.1.4 Electrification all the rooms and the Utility areas like toilet, bath area and kitchen.
- 3.1.1.5 Minimum 2 Nos. of ceiling fans shall be provided per room of the labour shed.
- 3.1.1.6 Paving shall be provided around labour sheds to avoid stagnation of rain water.
- 3.1.1.7 The specification/ drawings for the labour shed, attached herewith, are typical arrangements. However, allocation of land, number of sheds and number of rooms in a shed shall be as per the requirement of workmen to be deployed for the scope of work mentioned in the contract in adherence to the schedule of work and meeting to HSE norms of BHEL.

4.0 SPECIFICATION FOR THE LABOUR SHED

4.1 MAIN STRUCTURE & WALLS:

• The Structural walls shall be made out of tubular sections. 50mm thick AEROCON panels or equivalent for walls using 1mm thick GI channels, Colour Coated Sheet roof Supported with steel columns, Trusses & Purlins Inclusive of MS Door frames with flush shutters of Size 3' X 7' X 20 Rooms. MS Window frames with 4mm thick Plain glass of Size 4' X 4' X 20 No's, Painting.

4.2 WALLS:

Pre-fabricated Sandwich Panel 'AEROCON' or equivalent of 50 mm thick Made up
of two fiber Reinforced cement sheets on either Side of a lightweight concrete core
composed of port land Cement, binders, Siliceous and micaceous material aggregate
with tongue & groove arrangement.



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4.3 ROOF:

• Roofing with 0.45MM thick Colour coated Sheets of Required size fixed to the purlins in gable Shape with self tapping Screws. The Roof shall either thermal insulated or provided with false ceiling.

4.4 CHANNELS:

• Galvanized iron top & bottom channels of size: 38 x 50 x 38 in 1 mm Thickness.

4.5 STEEL STRUCTURE:

- Fabricated structural steel for Columns with 72 X 72MM MS Square Box.
- Trusses with 50 NB MS Pipes for outer frame and 32 NB MS Pipes for internal bracings, & Purlins with 50 NB MS Pipes, Joint Plates 8MM thick, bolts, including one coat of Red- oxide primer.

4.6 COMPONENTS:

• Ridge covers on the roof ridge with plain CGI sheet, all four corners covered with MS Corner covers all fixed with the help of bolts, Nuts, Anchor fasteners, screws etc.

4.7 PAINTING

- (A) Interior: Painting of AEROCON or equivalent internal walls with one coat of cement Primer and two coats of Synthetic/Acrylic paints. (Oil bond distempers) of Asian / ICI make.
- (B) EXTERIOR: Painting of AEROCON or equivalent external walls with one coat of cement Primer and two Coats of exterior plastic emulsion of Asian / ICI make.

4.8 DOOR FRAME:

• Supply & fixing of 1.2 mm thick cold-rolled steel Sections of Size 40 x 50 x 40mm with three mild steel Hinges duly welded on one side as a complete Item of work.

4.9 DOOR SHUTTER:

Supply & fixing of 30-mm hard core Flush door of boiling Waterproof Grade [BW Grade] including one Al drop, one doorstopper, two handles, one latch in chrome Plated steel.



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4.10 WINDOW FRAME:

- Supply & fixing of 1.2 mm thick cold-rolled Steel sections
- In size: 40 x 50 x 28mm 10mm Burglar bars at every 100 mm Center.

4.11 WINDOW SHUTTERS:

- Supply & fixing of mild steel Z section of size: 25 x 25 mm fixed with two
- Hinges and two handles, two Stay rods as Pre required Size with 4mm thick glass In the MS Shutter.

4.12 ELECTRICAL:

- All light points will be connected with 1/18 wire with PVC casing.
- All power points will be connected with 3/20 gauge Wire & 1/18 earth, all the Cables will be Properly
- Conduited The wire will be any ISI mark, switches shall be Anchor or equivalent make. (Points only without fixtures)
- (Each Room Light Points = 2 No's, Fan Points = 2 No minimum, 5Amp Sockets = 4 No's)

4.13 TOILET, BATH AND KITCHEN AREA:

• The toilet, Bath and kitchen shall be of masonry structures and each toilet shall contain Indian Water Closet (IWC) with self-flushing mechanism, Along with suitable required taps. No of toilets shall be apprx. Minimum 1 No for every 5 persons.

4.14 WATER SUPPLY:

• Sintex/other water tanks shall be placed at suitable heights on top steel structure provided by the bidder for distribution of drinking water and service water. The water tank shall be connected to all taps for continuous supply of water. Measures shall be taken to install water saving devices and to prevent water wastage.

4.15 SEWAGE CONNECTION:

• Sanitary fitting along with sewage pipe shall be provided up to septic tank and soak pit. All internal and external plumbing (from water tank to distribution system like toilet and pantry) shall be provided by bidder.



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• The waste water out of bathing shall be let out to nearest drain through masonry drain and stagnation of the waste water is strictly prohibited

• The septic tank and soak pit shall be designed by the bidder to accommodate the labour strength planned by them for mobilisation.

4.16 ELECRICAL WORKS:

Each Room in the prefabricated building shall contain the below mentioned fittings:

- Open Tube light 2 x 36 W
- 4Nos of 5 Amps Power socket
- Min 2 Nos of Ceiling Fan point with Fan
- The building should also contain DB's, Earth Pits, Outside light fittings and lights
- Suitable lighting shall be installed to illuminate the entire place using LED Sodium Vapour Lamps. Suitable motor room with water pump for pumping water from BHEL point to vendor Tank

4.17 KITCHEN & DINNING HALL:

- Kitchen shall be of masonry or pre-fabricated structures
- Space nearer to the labour shed shall be allocated for kitchen and dining hall which is exclusive for the particular bidder of the package awarded.
- Dining hall shall be common for all the labours of belongs to the bidder executing a particular package of work of BHEL.
- Dining hall shall be semi closed prefabricated structure shed with sides open and brick wall up to 1m from FFL of the shed
- Dining hall shall be provided with the seating arrangements made of wooden/plastic.
- Dining hall shall be provided with adequate lights, Fans
- All design work of prefabricated buildings, foundations, lighting, fittings, etc. shall be as per the latest Indian Standard Codes and in the scope of bidder.



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• The waste water out of utensil cleaning shall be let out to nearest drain through masonry drain and stagnation of the waste water is strictly prohibited

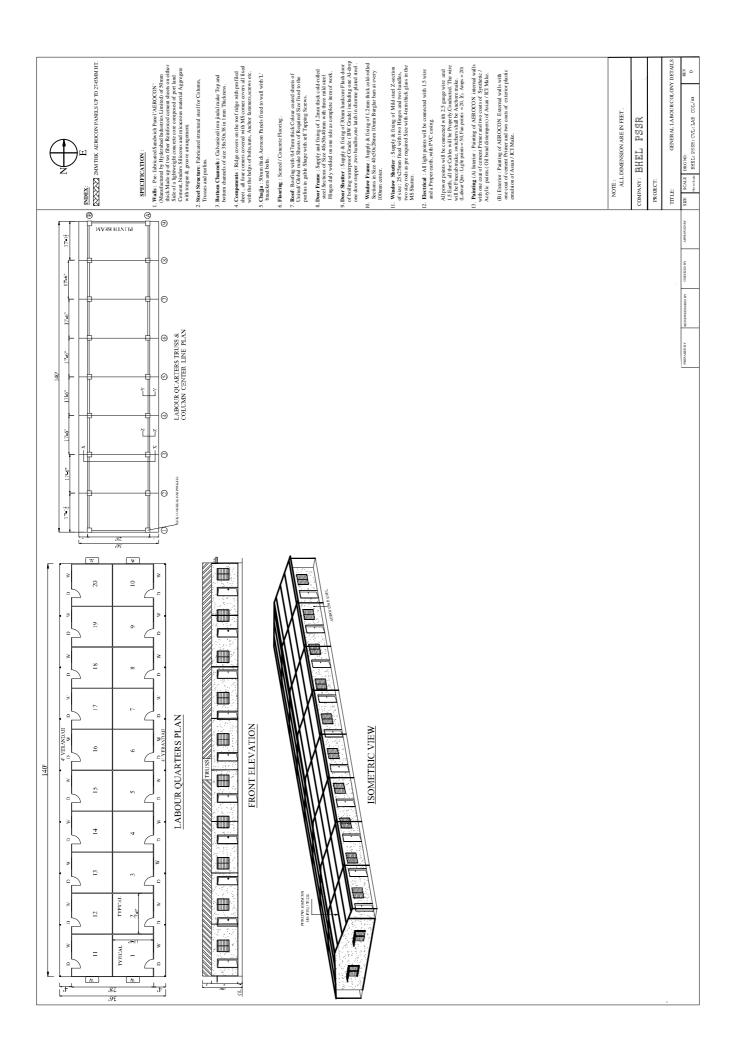
4.18 SALIENT TECHNICAL REQUIREMENTS:

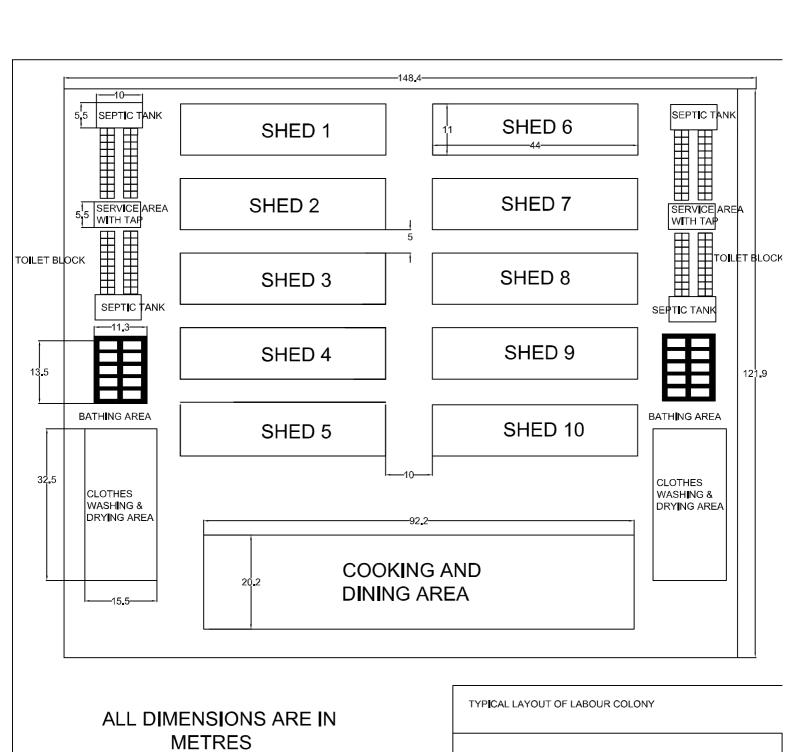
- All design work of prefabricated buildings, foundations, lighting, fittings, etc. shall be as per the latest Indian Standard Codes.
- All designs have to be carried out as per relevant IS/International codes.
- Agency shall submit two sets of proposed drawings of labour colony with foundation, Electrical, Plumbing & other fittings etc., to BHEL-Site for approval within fifteen days from the receipt of LOI.
- Bidders should take care of all Indian site conditions, prevailing local laws etc. No claim shall be entertained to lack of knowledge of site condition.
- Hygienic activities of toilets, bath rooms and kitchen area shall be strictly followed by the bidder.
- Transport from Labour colony to work site shall be provided by the bidder daily.

5.0 DRAWINGS & OTHER ENCLOSURES

Following drawings are enclosed strictly for the guidance of the Bidders:

- Standard Layout of Labour Colony (Typical) Drawing No-BHEL/PSSR/CVL/LABCOL/02, Rev-00
- 2. Standard drawing of pre-Fabricated Building(Typical) Drawing No-BHEL/PSSR/CVL/LABCOL/03, Rev-00





CUSTOMER: BHEL

DRAWING NO: BHEL -PSSR-CVL-LABCOL-02 REV 00

NO DEVIATION CERTIFICATE

(To be typed and submitted in the Letter Head of the Company/Firm of Bidder)

To, (Write Name & Address of Officer of BHEL inviting the Tender)

Dear Sir,

Sub: No Deviation Certificate

Ref: 1) NIT/Tender Specification No:.....,

2) All other pertinent issues till date

We hereby confirm that we have not changed / modified / materially altered any of the tender documents as downloaded from the website/ issued by BHEL and in case of such observance at any stage, it shall be treated as null and void.

We also hereby confirm that we have neither set any Terms and Conditions and nor have we taken any deviation from the Tender conditions together with other references applicable for the above referred NIT/Tender Specification.

We further confirm our unqualified acceptance to all Terms and Conditions, unqualified compliance to Tender Conditions, Integrity Pact (if applicable) and opening of price bid submitted in the E-tendering portal https://eprocurebhel.co.in.

We confirm to have submitted offer in accordance with tender instructions and as per aforesaid references.

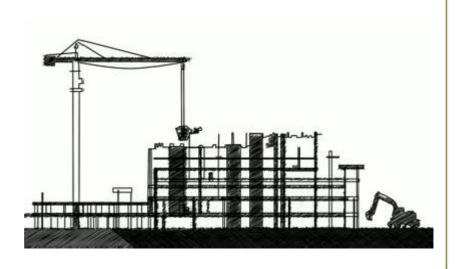
Thanking you,

Yours faithfully,

(Signature, date & seal of authorized representative of the bidder)







HEALTH,
SAFETY and
ENVIRONMENT
PLAN

for

SITE OPERATIONS

by

SUB-CONTRACTORS

HSE PLAN FOR SITE OPRATIONS BY BHEL'S SUBCONTRACTORS

AT A GLANCE

BEFORE START

SIGNING OF MOU

Agree to comply to HSE requirement- Statutory and BHEL's

HSE ORGANISATION

Manpower

- 1 (one) safety officer for every 500 workers or part thereof
- 1(one) safety-steward/ supervisor for every 100 workers

Qualification

As per Cl. 7.1

HSE Roles and responsibilities

- Site In-charge- As per clause 7.2.1
- Safety officer- As per clause 7.2.2

HSE Planning

for Man, Machinery/Equipment/Tools & Tackles

HSE INFRASTUCTURE

- **PPEs**
- **Drinking Water**
- **Washing Facilities**
- **Latrines and Urinals**
- Provision of shelter for rest
- Medical facilities

- Canteen facilities
- **Labour Colony**
- **Emergency Vehicle**
- Pest Control
- Scrapyard
- Illumination

HSE TRAINING, AWARENESS & PROMOTION

Training

- Induction training
- Height work and other critical areas
- Tool Box talk & Pep Talk

Awareness & Promotion

- Signage
- Poster
- Banner
- Competition
- Awards

Incident Reporting

- Accident- Fatal & Major
- Property damage
- **Near Miss**

HSE COMMUNICATION Event Reporting

- Celebrations
- **Training**
- Medical camp

EXECUTE SAFELY

CHECKS

OPERATIONAL CONTROL PROCEDURES

PERMIT TO WORK

Height work (above 2 metres), Hot Work, Heavy Lifting, Confined Space, Radiography, excavation (More than 4 metres)

SAFETY DURING WORK EXECUTION

- Welding
- Rigging
- Cylinder- storage & Movement
- Demolition work
- T&Ps
- Chemical Handling
- Electrical works

- Fire
- Scaffolding
- Height work
- Working Platform
- Excavation
- Ladder
- Lifting
- Hoisting appliance

HOUSE KEEPING

WASTE MANGEMENT

TRAFFIC MANAGEMENT

ENVIRONMENTAL CONTROL

EMERGENCY PREPAREDNESS AND RESPONSE PLAN

HSE AUDITS & INSPECTION

- Daily Checks
- Inspection of PPEs
- Inspection of T& Ps
- Inspection of Cranes & Winches
- Inspection of Height work
- Inspection of Welding and Gas cutting
- Inspection of elevators etc.

HSE PERFORMANCE EVALUATION PARAMETERS

PENALTY for NON CONFORMANCE Refer Clause 16 Incremental penalty

For repeated violation by the same person, the penalty would be double of the previous penalty

For repeated fatal incident in the same Unit incremental penalty to be imposed. The subcontractor will pay 2 times the penalty compared to previously paid in case there are repeated cases of fatal incidents under the same subcontractor for the same package in the same unit.



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POWER SECTOR

REVISION HISTORY SHEET

Date	Revision No.	Details of Changes	Reason	Prepared	Reviewed	Approved
12.08.2014	00	First Issue	First Issue	S. B. Jayant, Dy Manager- FQA & Safety	A. K. Sinha, GM-FQA & Safety	Anuj Bhatnagar, ED-FQA & Safety
20.01.2020	01	Formats added: HSEP:14-F30 – Monthly HSE Planning & Review (Page 11, Clause 8.0 - updated) HSEP:14-F13E-Excavation Inspection Format (part of F30)) HSEP:14-F32B – Job Safety Analysis Format (part of F30) HSEP:14-F31A – Daily HSE Reporting (Page 18, Clause 10.3 – added) HSEP:14-F33 – HSE Performance Evaluation (Page 31, Clause 13 – revised)	PSHQHSE/M ONREP/02 Dated 08-Jan- 2020	Rohit Kumar		sh Nair, K & HSE)



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1.0 PURPOSE

- 1.1 The purpose of this HSE Plan is to provide for the systematic identification, evaluation, prevention and control of general workplace hazards, specific job hazards, potential hazards and environmental impacts that may arise from foreseeable conditions during installation and servicing of industrial projects and power plants.
- 1.2 This document shall be followed by BHEL's subcontractors at all installation and servicing sites. In case customer specific documents are to be implemented, this document will be followed in conjunction with customer specific documents.
- **1.3** Although every effort has been made to make the procedures and guidelines in line with statutory requirements, in case of any discrepancy relevant statutory guidelines must be followed.
- **1.4** In case the customer has any specific requirement, the same is to be fulfilled.

2.0 SCOPE

The document is applicable for BHEL's Subcontractors at all installation / servicing activities of BHEL Power Sector as per the relevant contractual obligations.

3.0 OBJECTIVES AND TARGETS

The HSE Plan reflects that BHEL places high priority upon the Occupational Health, Safety and Environment at workplaces.

- Ensure the Health and Safety of all persons at work site is not adversely affected by the work.
- Ensure protection of environment of the work site.
- Comply at all times with the relevant statutory and contractual HSE requirements.
- Provide trained, experienced and competent personnel. Ensure medically fit personnel only are engaged at work.
- Provide and maintain plant, places and systems of work that are safe and without risk to health and the
 environment.
- Provide all personnel with adequate information, instruction, training and supervision on the safety aspect of their work
- Effectively control, co-ordinate and monitor the activities of all personnel on the Project sites including subcontractors in respects of HSE.
- Establish effective communication on HSE matters with all relevant parties involved in the Project works.
- Ensure that all work planning takes into account all persons that may be affected by the work.
- Ensure fitness testing of all T&Ps/Lifting appliances like cranes, chain pulley blocks etc. are to be certified by competent person.
- Ensure timely provision of resources to facilitate effective implementation of HSE requirements.
- Ensure continual improvements in HSE performance
- Ensure conservation of resources and reduction of wastage.
- Capture the data of all incidents including near misses, process deviation etc. Investigate and analyze the same
 to find out the root cause.
- Ensure timely implementation of correction, corrective action and preventive action.



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HSE TARGETS

EXPLOSION ZERO
FATALITY ZERO
LOST TIME INJURY ZERO
FIRE ZERO
VEHICLE INCIDENTS ZERO
ENVIRONMENTAL INCIDENTS ZERO

4.0 BHEL POWER SECTOR HEALTH, SAFETY & ENVIRONMENT POLICY

Health, Safety & Environment Policy of BHEL

In BHEL, Health, Safety and Environment (HSE) responsibilities are driven by our commitment to protect our employees and people we work with, community and environment. BHEL believes in zero tolerance for unsafe work/non-conformance to safety and in minimizing environmental footprint associated with all its business activities. We commit to continually improve our HSE performance by:

- Developing safety and sustainability culture through active leadership and by ensuring availability of required resources.
- Ensuring compliance with applicable legislation, regulations and BHEL systems.
- Taking up activities for conservation of resources and adopting sound waste management by following Reduce/Recycle/Reuse approach.
- Continually identifying, assessing and managing environmental impacts and Occupational Health & Safety risks of all activities, products and services adopting approach based on elimination/substitution/reduction/control.
- Incorporating appropriate Occupational Health, Safety and Environment criteria into business decisions, design of products & systems and for selection of plants, technologies and services.
- Imparting appropriate structured training to all persons at workplace and promoting awareness amongst customers, contractors and suppliers on HSE issues.
- Reviewing periodically this policy and HSE Management Systems to ensure its relevance, appropriateness and effectiveness.
- Communicating this policy within BHEL and making it available to interested parties.

sd/-

CMD, BHEL



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5.0 MEMORANDUM OF UNDERSTANDING:

After award of work, subcontractors are required to enter into a memorandum of understanding as given below:

Titler award or work, babooritide	toro are required to officer into a memorahadin or anaerotarianing as given below.
	Memorandum of Understanding
	ctorRegion is committed to Health, Safety and Environment Policy (HSE Policy)do hereby also commit to comply with the same HSE Policy w hile
executing the Contract Numbe	
M/s	shall ensure that safe work practices as per the HSE plan. Spirit and
content therein shall be reach	ed to all workers and supervisors for compliance.
In addition to this, M/S	shall comply to all applicable statutory and regulatory requirements
which are in force in the place	ce of project and any special requirement specified in the contract document of the
principal customer.	
M/s	shall co-operate in HSE audits/inspections conducted by BHEL /customer/
third party and ensure to close	e any non-conformity observed/reported within prescribed time limit.
Signed by authorized represen	tative of M/s
Name :	

Place & Date:



SITE OPERATION by SUBCONTRACTORS REV:

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POWER SECTOR

TERMS AND DEFINITIONS 6.0

6.1 **DEFINITIONS**

6.1.1 **INCIDENT**

Work- related or natural event(s) in which an injury, or ill health (regardless of severity), damage to property or fatality occurred, or could have occurred.

6.1.2 **NEAR MISS**

An incident where no ill health, injury, damage or other loss occurs, but it had a potential to cause, is referred to as "Near-Miss".

MAN-HOURS WORKED 6.1.3

The total number of man hours worked by all employees including subcontractors working in the premises. It includes managerial, supervisory, professional, technical, clerical and other workers including contract labours. Man-hours worked shall be calculated from the payroll or time clock recorded including overtime. When this is not feasible, the same shall be estimated by multiplying the total man-days worked for the period covered by the number of hours worked per day. The total number of workdays for a period is the sum of the number of men at work on each day of period. If the daily hours vary from department to department separate estimate shall be made for each department and the result added together.

FIRST AID CASES 6.1.4

First aids are not essentially all reportable cases, where the injured person is given medical treatment and discharged immediately for reporting on duty, without counting any lost time.

6.1.5 **LOST TIME INJURY**

Any work injury which renders the injured person unable to perform his regular job or an alternative restricted work assignment on the next scheduled work day after the day on which the injury occurred.

6.1.6 **MEDICAL CASES**

Medical cases come under non-reportable cases, where owing to illness or other reason the employee was absent from work and seeks Medical treatment.

6.1.7 TYPE OF INCIDENTS & THEIR REPORTING:

The three categories of Incident are as follows:

Non-Reportable Cases:

An incident, where the injured person is given medical help and discharged for work without counting any lost time.



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Reportable Cases:

In this case the injured person is disable for 48 hours or more and is not able to perform his duty.

Injury Cases:

These are covered under the heading of non-reportable cases. In these cases the incident caused injury to the person, but he still continues his duty.

6.1.8 TOTAL REPORTABLE FREQUENCY RATE

Frequency rate is the number of Reportable Lost Time Injury (LTI) per one Million Man hours worked. Mathematically, the formula read as:

Number of Reportable LTI x 1,000,000

Total Man Hours Worked

6.1.9 **SEVERITY RATE**

Severity rate is the Number of days lost due to Lost Time Injury (LTI) per one Million Man hours worked. Mathematically, the formula reads as:

Days lost due to LTI __x 1,000,000

Total Man Hours Worked

6.1.10 INCIDENCE RATE

Incidence Rate is the Number of LTI per one thousand manpower deployed. Mathematically, the formula reads as:

Number of LTIx1000

Average number of manpower deployed

7.0 **HSE ORGANISATION**

Number of safety officers:

The subcontractor must deploy one safety officer for every 500 workers or part thereof in each package. In addition, there must be one safety-steward/safety-supervisor for every 100 workers.

Deployment: The subcontractor should deploy sufficient safety officers and safety-steward/Safety-supervisor, as per requirement given above, since initial stage and add more in proportion to the added strength in work force. Any delay in deployment will attract a penalty of Rs.30,000/- per man month for the delayed period.

7.1 **QUALIFICATION FOR HSE PERSONNEL**

Sl.no	Designation	Qualification	Experience
1	Safety officer	Degree or Diploma in Engineering with	Minimum two years for
	(Construction Agency)	full time diploma in Industrial Safety with construction safety as one of the subjects	degree holder and five years for diploma holder in the field of
		Subjects	Construction of power plant/ major industries



subjects

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2	Safety-Steward/ Safety-	Degree or diploma in any discipline with	Minimum two years
	Supervisor	full time diploma in Industrial Safety with	
		construction safety as one of the	

7.2 **RESPONSIBILITIES**

7.2.1 SITE IN -CHARGE OF SUBCONTRACTOR

- Shall sign Memorandum of Understanding (MoU) for compliance to BHEL's HSE Plan for Site Operations as per clause 5.0
- Shall engage qualified safety officer(s) and steward (s) as per clause 7.0
- Shall adhere to the rules and regulations mentioned in this code, practice very strictly in his area of work in consultation with his concerned engineer and the safety coordinator.
- Shall screen all workmen for health and competence requirement before engaging for the job and periodically thereafter as required.
- Shall not engage any employee below 18 years.
- Shall arrange for all necessary PPEs like safety helmets, belts, full body harness, shoes, face shield, hand gloves etc. before starting the job. Shall ensure that no working men/women carry excessive weight more than stipulated in Factory Rule Regulation R57.
- Shall ensure that all T&Ps engaged are tested for fitness and have valid certificates from competent person.
- Shall ensure that provisions stipulated in contract Labour Regulation Act 1970, Chapter V C.9, canteen, rest rooms/washing facilities to contracted employees at site.
- Shall adhere to the instructions laid down in Operation Control Procedures (OCPs) available with the site management.
- Shall ensure that person working above 2.0 meter should use Safety Harness tied to a life line/stable structure.
- Shall ensure that materials are not thrown from height. Cautions to be exercised to prevent fall of material from height.
- Shall report all incidents (Fatal/Major/Minor/Near Miss) to the Site engineer /HSE officer of BHEL.
- Shall ensure that Horseplay is strictly forbidden.
- Shall ensure that adequate illumination is arranged during night work.
- Shall ensure that all personnel working under subcontractor are working safely and do not create any Hazard to self and to others.
- Shall ensure display of adequate signage/posters on HSE.
- Shall ensure that mobile phone is not used by workers while working.
- Shall ensure conductance of HSE audit, mockdrill, medical camps, induction training and training on HSE at site.
- Shall ensure full co-operation during HQ/External /Customer HSE audits.



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Shall ensure submission of look-ahead plan for procurement of HSE equipment's and PPEs as per work schedule.

- Shall ensure good housekeeping.
- Shall ensure adequate valid fire extinguishers are provided at the worksite.
- Shall ensure availability of sufficient number of toilets /restrooms and adequate drinking water at work site and labour colony.
- Shall ensure adequate emergency preparedness.
- · Shall be member of site HSE committee and attend all meetings of the committee
- Power source for hand lamps shall be maximum of 24 v.
- ☐ Temporary fencing should be done for open edges if Hand railings and Toe-guards are not available.

7.2.2 HEALTH, SAFETY AND ENVIRONMENT OFFICER OF SUBCONTRACTOR

- Carry out safety inspection of Work Area, Work Method, Men, Machine & Material, P&M and other tools and tackles.
- Facilitate inclusion of safety elements into Work Method Statement.
- Highlight the requirements of safety through Tool-box / other meetings.
- Help concerned HOS to prepare Job Specific instructions for critical jobs.
- Conduct investigation of all incident/dangerous occurrences & recommend appropriate safety measures.
- Advice & co-ordinate for implementation of HSE permit systems, OCPs & MPs.
- Convene HSE meeting & minute the proceeding for circulation & follow-up action.
- Plan procurement of PPE & Safety devices and inspect their healthiness.
- Report to PS Region/HQ on all matters pertaining to status of safety and promotional program at site level.
- Facilitate administration of First Aid
- · Facilitate screening of workmen and safety induction.
- Conduct fire Drill and facilitate emergency preparedness
- · Design campaigns, competitions & other special emphasis programs to promote safety in the workplace.
- □ Apprise PS− Region on safety related problems.
- Notify site personnel non-conformance to safety norms observed during site visits / site inspections.
- Recommend to Site In charge, immediate discontinuance of work until rectification, of such situations warranting immediate action in view of imminent danger to life or property or environment.
- To decline acceptance of such PPE / safety equipment that do not conform to specified requirements.
- Encourage raising Near Miss Report on safety along with, improvement initiatives on safety.
- Shall work as interface between various agencies such customer, package-in-charges, subcontractors on HSE matters



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8.0 **PLANNING BY SUBCONTRACTOR**

Monthly planning and review of HSE activities shall be carried out by subcontractor as per format No. HSEP:14-F30 jointly along with BHEL.

MOBILISATION OF MACHINERY/EQUIPMENT/TOOLS BY SUBCONTRACTOR 8.1

- As a measure to ensure that machinery, equipment and tools being mobilized to the construction site are fit for purpose and are maintained in safe operating condition and complies with legislative and owner requirement, inspection shall be arranged by in-house competent authority for acceptance as applicable.
- The machinery and equipment to be embraced for this purpose shall include but not limited to the following:
 - Mobile cranes. 0
 - Side Booms.
 - Forklifts.
 - Grinding machine.
 - Drilling machine.
 - Air compressors.
 - 0 Welding machine.
 - 0 Generator sets.
 - Dump Trucks.
 - Excavators.
 - Dozers
 - Grit Blasting Equipment. 0
 - Hand tools.
- Subcontractor shall notify the engineer, of his intention to bring on to site any equipment or any container, with liquid or gaseous fuel or other substance which may create a hazard. The Engineer shall have the right to prescribe the condition under which such equipment or container may be handled and used during the performance of the works and the subcontractor shall strictly adhere to such instructions. The Engineer shall have the right to inspect any construction tool and to forbid its use, if in his opinion it is unsafe. No claim due to such prohibition will be entertained.

8.2 MOBILISATION OF MANPOWER BY SUBCONTRACTOR

- The subcontractor shall arrange induction and regular health check of their employees as per schedule VII of BOCW rules by a registered medical practitioner.
- The subcontractor shall take special care of the employees affected with occupational diseases under rule 230 and schedule II of BOCW Rules. The employees not meeting the fitness requirement should not be engaged for
- Ensure that the regulatory requirements of excessive weight limit (to carry/lift/ move weights beyond prescribed limits) for male and female workers are complied with.
- Appropriate accommodation to be arranged for all workmen in hygienic condition.



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8.3 **PROVISION OF PPEs**

Personnel Protective Equipment (PPEs), in adequate numbers, will be made available at site & their regular use by all concerned will be ensured

The following matrix recommends usage of minimum PPEs against the respective job.

SI.	Type of work	PPEs
No		
1	Concrete and asphalt mixing	Nose mask, hand glove, apron and gum boot
2	Welders/Grinders/ Gas cutters	Welding/face screen, apron, hand gloves, nose mask and ear
		muffs if noise level exceeds 90dB. Helmet fitted with welding shield
		is preferred for welders
3	Stone/ concrete breakers	Ear muffs, safety goggles, hand gloves
4	Electrical Work	Rubber hand glove, Electrical Resistance shoes
5	Insulation Work	Respiratory mask, Hand gloves, safety goggles
6	Work at height	Double lanyard full body harness, Fall arrestor (specific cases)
7	Grit/Sand blasting	Blast suit, blast helmet, respirator, leather gloves
8	Painting	Plastic gloves, Respirators (particularly for spray painting)
9	Radiography	As per BARC guidelines

The PPEs shall conform to the relevant standards as below and bear ISI mark.

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-II)	Leather safety boots and shoes.
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 molding sole.
IS: 5983 – 1978	Eye protectors.
IS: 9167 – 1979	Ear protectors.
IS: 1179-1967	Eye & Face protection during welding
IS: 3521 – 1983	Industrial Safety Belts and Harness
IS:8519 -1977	Guide for selection of industrial Safety equipment for body protection
IS:9473-2002,14166- 1994,14746-1999	Respiratory Protective Devices

The list is not exhaustive. The safety officer may demand additional PPEs based on specific requirement.



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Where workers are employed in sewers and manholes, which are in use, the subcontractor shall ensure that the
manhole covers are opened and ventilated at least for an hour before the workers are allowed to get into
manhole, and the manholes so opened shall be cordoned off with suitable railing and provided with warning
signals or boards to prevent incident to the public

• Besides the PPEs mentioned above, the persons shall use helmet and safety shoe. The visitors shall use Helmet and any other PPEs as deemed appropriate for the area of work.

Colour scheme for Helmets:

1. Workmen: Yellow

2. Safety staff: Green or white with green band

3. Electrician: Red

4. Others including visitors: White

- All the PPEs shall be checked for its quality before issue and the same shall be periodically checked. The users shall be advised to check the PPEs themselves for any defect before putting on. The defective ones shall be repaired/ replaced.
- The issuing agency shall maintain register for issue and receipt of PPEs.
- The Helmets shall have logo or name (abbreviation of agency name permitted) affixed or printed on the front.
- The body harnesses shall be serial numbered.

8.4 ARRANGEMENT OF INFRASTRUCTURE

8.4.1 DRINKING WATER

- Drinking water shall be provided and maintained at suitable places at different elevations.
- Container should be labeled as "Drinking Water"
- Cleaning of the storage tank shall be ensured atleast once in 3 months indicating date of cleaning and next due
 date.
- Potability of water should be tested as per IS10500 at least once in a year.

8.4.2 WASHING FACILITIES

- In every workplace, adequate and suitable facilities for washing shall be provided and maintained.
- Separate and adequate cleaning facilities shall be provided for the use of male and female workers. Such facilities shall be conveniently accessible and shall be kept in clean and hygienic condition and dully illuminated for night use.
- Overalls shall be supplied by the subcontractor to the workmen and adequate facilities shall be provided to enable the painters and other workers to wash during the cessation of work.

8.4.3 LATRINES AND URINALS

- Latrines and urinals shall be provided in every work place.
- Urinals shall also be provided at different elevations.
- They shall be adequately lighted and shall be maintained in a clean and sanitary condition at all times, by appointing designated person.
- Separate facilities shall be provided for the use of male and female worker if any.



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8.4.4 PROVISION OF SHELTER DURING REST

Proper Shed & Shelter shall be provided for rest during break

8.4.5 MEDICAL FACILITIES

8.4.5.1 MEDICAL CENTRE (As per Schedule V, X and XI of BOCW central Rules, 1998)

- A medical centre shall be ensured/identified at site with basic facilities for handling medical emergencies. The
 medical center can be jointly developed on proportionate sharing basis with permission from BHEL
- · A qualified medical professional, not less than MBBS, shall be deployed at the medical centre
- The medical centre shall be equipped with one ambulance, with trained driver and oxygen cylinder.
- Medical waste shall be disposed as per prevailing legislation (Bio-Medical Waste –Management and Handling Rules, 1998)

8.4.5.2 FIRST AIDER

- Ensure availability of Qualified First-aider throughout the working hours.
- Every injury shall be treated, recorded and reported.
- Refresher course on first aid shall be conducted as necessary.
- List of Qualified first aiders and their contact numbers should be displayed at conspicuous places.

8.4.5.3 FIRST AID BOX (as per schedule III of BOCW)

- The subcontractor shall provide necessary first aid facilities as per schedule III of BOCW. At every work place first aid facilities shall be provided and maintained.
- The first aid box shall be kept by first aider who shall always be readily available during the working hours of the work place. His name and contact no to be displayed on the box.
- The first aid boxes should be placed at various elevations so as to make them available within the reach and at the quickest possible time.
- The first aid box shall be distinctly marked with a Green Cross on white background.
- Details of contents of first aid box is given in Annexure No. 01
- Monthly inspection of First Aid Box shall be carried out by the owner as per format no. HSEP:14-F01
- The subcontractor should conduct periodical first –aid classes to keep his supervisor and Engineers properly trained for attending to any emergency.

8.4.5.4 HEALTH CHECK UP (As per schedule VII and Form XI)

The persons engaged at the site shall undergo health checkup as per the format no. HSEP:14-F02 before induction. The persons engaged in the following works shall undergo health checkup at least once in a year:

- a. Height workers
- b. Drivers/crane operators/riggers



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- c. Confined space workers
- d. Shot/sand blaster
- e. Welding and NDE personnel

8.4.6 PROVISION OF CANTEEN FACILITY

- Canteen facilities shall be provided for the workmen of the project inside the project site.
- Proper cleaning and hygienic condition shall be maintained.
- Proper care should be taken to prevent biological contamination.
- Adequate drinking water should be available at canteen.
- Fire extinguisher shall be provided inside canteen.
- Regular health check-up and medication to the canteen workers shall be ensured.

8.4.7 PROVISION OF ACCOMODATION/LABOUR COLONY

The subcontractor shall arrange for the accommodation of workmen at nearby localities or by making a labour
colony.
Regular housekeeping of the labour colony shall be ensured.
Proper sanitation and hygienic conditions to be maintained.
Drinking water and electricity to be provided at the labour colony.
Bathing/ washing bay
Room ventilation and electrification.

8.4.8 PROVISION OF EMERGENCY VEHICLE

 Dedicated emergency vehicle shall be made available at workplace by each subcontractor to handle any emergency

8.4.9 PEST CONTROL

Regular pest control should be carried out at all offices, mainly laboratories, canteen, labour colony and stores.

8.4.10 SCRAPYARD

- In consultation with customer, scrapyard shall be developed to store metal scrap, wooden scrap, waste, hazardous waste.
- Scrap/Waste shall be segregated as Bio-degradable and non-bio-degradable and stored separately.

8.4.11 ILLUMINATION

- The subcontractor shall arrange at his cost adequate lighting facilities e.g. flood lighting, hand lamps, area lighting etc. at various levels for safe and proper working operations at dark places and during night hours at the work spot as well as at the pre-assembly area.
- Adequate and suitable light shall be provided at all work places & their approaches including passage ways as per IS: 3646 (Part-II). Some recommended values are given below:



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	S. No.	Location	Illumination (Lux)
A.	Construction Are	ea	
1.		Outdoor areas like store yards, entrance and exit roads	20
2.		Platforms	50
3.		Entrances, corridors and stairs	100
4.		General illumination of work area	150
5.		Rough work like fabrication, assembly of major items	150
6.		Medium work like assembly of small machined parts rough measurements etc.	300
7.		Fine work like precision assembly, precision measurements etc.	700
8.		Sheet metal works	200
9.		Electrical and instrument labs	450
В.	Office		
1.		Outdoor area like entrance and exit roads	20
2.		Entrance halls	150
3.		Corridors and lift cars	70
4.		Lift landing	150
5.		Stairs	100
6.		Office rooms, conference rooms, library reading tables	300
7.		Drawing table	450
8.		Manual telephone exchange	200

- Lamp (hand held) shall not be powered by mains supply but either by 24V or dry cells.
- Lamps shall be protected by suitable guards where necessary to prevent danger, in case of breakage of lamp.
- Emergency lighting provision for night work shall be made to minimise danger in case of main supply failure.

If the subcontractor fails to take appropriate safety precautions or to provide necessary safety devices and equipment or to carry out instructions issued by the authorized BHEL official, BHEL shall have the right to take corrective steps at the risk and cost of the subcontractor

9.0 HSE TRAINING& AWARENESS

9.1 HSE INDUCTION TRAINING

All persons entering into project site shall be given HSE induction training by the HSE officer of BHEL /subcontractor before being assigned to work.

In-house induction training subjects shall include but not limited to:

- · Briefing of the Project details.
- Safety objectives and targets.
- Site HSE rules.
- Site HSE hazards and aspects.
- First aid facility.
- Emergency Contact No.
- Incident reporting.
- Fire prevention and emergency response.
- Rules to be followed in the labour colony (if applicable)



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- Proper safety wear & gear must be issued to all the workers being registered for the induction (i.e., Shoes/Helmets/Goggles/Leg guard/Apron etc.)
- They must arrive fully dressed in safety wear & gear to attend the induction.
- Any one failing to conform to this safety wear& gear requirement shall not qualify to attend.
- On completing attending subcontractor's in-house HSE induction, each employee shall sign an induction training form (format no. HSEP:14-F03) to declare that he had understood the content and shall abide to follow and comply with safe work practices. They may only then be qualified to be issued with a personal I.D. card, for access to the work site.

9.2 HSE TOOLBOX TALK

- HSE tool Box talk shall be conducted by frontline foreman/supervisor of subcontractor to specific work groups prior to the start of work. The agenda shall consist of the followings:
 - Details of the job being intended for immediate execution.
 - The relevant hazards and risks involved in executing the job and their control and mitigating measures.
 - Specific site condition to be considered while executing the job like high temperature, humidity, unfavorable weather etc.
 - Recent non-compliances observed.
 - Appreciation of good work done by any person.
 - Any doubt clearing session at the end.
- Record of Tool box talk shall be maintained as per format no. HSEP:14-F04
- Tool box talk to be conducted at least once a week for the specific work.

9.3 TRAINING ON HEIGHT WORK

Training on height work shall be imparted to all workers working at height by in-house/external faculty at least twice in a year. The training shall include following topics:

- Use of PPEs
- Use of fall arrester, retractable fall arrester, life line, safety nets etc.
- Safe climbing through monkey ladders.
- Inspection of PPEs.
- Medical fitness requirements.
- Mock drill on rescue at height.
- Dos & Don'ts during height work.

9.4 HSE TRAINING DURING PROJECT EXECUTION

- Other HSE training shall be arranged by BHEL/ subcontractor as per the need of the project execution and recommendation of HSE committee of site.
- The topics of the HSE training shall be as follows but not limited to:
 - Hazards identification and risk analysis (HIRA)
 - o Work Permit System
 - o Incident investigation and reporting
 - Fire fighting
 - o First aid
 - o Fire-warden training
 - o EMS and OHSMS
 - o T & Ps fitness and operation



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- Electrical safety
- Welding, NDE & Radiological safety
- Storage, preservation & material handling.
- A matrix shall be maintained to keep an up-to-date record of attendance of training sessions carried out.

9.5 HSE PROMOTION-SIGNAGE, POSTERS, COMPETITION, AWARDS ETC

9.5.1 Display of HSE posters and banners

Site shall arrange appropriate posters, banners, slogans in local/Hindi/English languages at work place

9.5.2 Display of HSE signage

Appropriate HSE signage shall be displayed at the work area to aware workmen and passersby about the work going on and do's and don'ts to be followed

9.5.3 Competition on HSE and award

Site will arrange different competition (slogan, poster, essay etc.) on HSE time to time (Safety day, BHEL day, World Environment Day etc.) and winners will be suitably awarded.

9.5.4 **HSE** awareness programme

Subcontractor shall arrange HSE awareness programme periodically on different topics including medical awareness for all personnel working at site

10.0 **HSE COMMUNICATION**

10.1 INCIDENT REPORTING

- The subcontractor shall submit report of all incidents, fires and property damage etc to the Engineer immediately after such occurrence, but in any case not later than 24 hours of the occurrence. Such reports shall be furnished in the manner prescribed by BHEL. (Refer HSE procedure for incident investigation, analysis and reporting for details)
- In addition, periodic reports on safety shall also be submitted by the subcontractor to BHEL from time to time as prescribed by the Engineer. Compiled monthly reports of all kinds of incidents, fire and property damage to be submitted to BHEL safety officer as per prescribed formats.
- HSE incidents of site shall be reported to BHEL site Management as per Procedure for Incident Investigation and Reporting in format no. HSEP:14-F15. Corrective action shall be immediately implemented at the work place and compliance shall be verified by BHEL HSE officer and until then, work shall be put on hold by Construction Manager.

HSE EVENT REPORTING 10.2

- Important HSE events like HSE training, Medical camp etc. organized at site shall be reported to BHEL site management in detail with photographs for publication in different in-house magazines
- Celebration of important days like National Safety Day, World Environment Day etc. shall also be reported as mentioned above.

10.3 **DAILY HSE ACTIVITY REPORTING**

Daily HSE activities shall be reported by subcontractor to BHEL as per Format No. HSEP:14-F31A



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11.0 **OPERATIONAL CONTROL**

All applicable OCPs (Operational control procedures) will be followed by subcontractor as per BHEL instructions. This will be done as part of normal scope of work. List of such OCPs is given below. In case any other OCP is found to be applicable during the execution of work at site, then subcontractor will follow this as well, within quoted rate. These OCPs (applicable ones) will be made available to subcontractor during work execution at site. However for reference purpose, these are kept with Safety Officer of BHEL at the Power Sector Regional HQ, or available in downloadable format in the website, which may be refereed by subcontractor, if they so desire.

LIST OF OCPs

Safe handling of chemicals	Safety in use of cranes	Hydraulic test
Electrical safety	Storage and handling of gas cylinders	Spray insulation
Energy conservation	Manual arc welding	Trial run of rotary equipment
Safe welding and gas cutting operation	Safe use of helmets	Stress relieving
Fire safety	Good house keeping	Material preservation
Safety in use of hand tools	Working at height	Cable laying/tray work
First aid	Safe excavation	Transformer charging
Food safety at canteen	Safe filling of hydrogen in cylinder	Electrical maintenance
Illumination	Vehicle maintenance	Safe handling of battery system
Handling and erection of heavy metals	Safe radiography	Computer operation
Safe acid cleaning	Waste disposal	Storage in open yard
Safe alkali boil out	Working at night	For sanitary maintenance
Safe oil flushing	Blasting	Batching
Steam blowing	DG set	Piling rig operation
Safe working in confined area	Handling & storage of mineral wool	Gas distribution test
Safe operation of passenger lift, material hoists & cages	Drilling, reaming and grinding(machining)	Cleaning of hotwell / deaerator
Electro-resistance heating	Compressor operation	O&M of control of AC plant & system
Air compressor	Passivation	Safe Loading of Unit
Safe EDTA Cleaning	Safe Chemical cleaning of Pre boiler system	Safe Boiler Light up
Safe Rolling and Synchronization		

HSE ACTIVITIES 11.1

HSE activities shall be conducted at site based on the HSEMSM developed by Power Sector and issued to site by

While planning for any activity the following documents shall be referred for infrastructural requirements to establish control measures:

- 1) HSE Procedure for Register of OHS Hazards and Risks
- 2) HSE Procedure for Register of Environmental Aspects and Impacts
- 3) HSE Procedure for Register of Regulations



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- **Operational Control Procedures**
- 5) HSE Procedure for Emergency Preparedness and Response Plan
- 6) Contract documents

11.2 **WORK PERMIT SYSTEM**

- The following activities shall come under Work Permit System
 - a. Height working above 2 metres
 - b. Hot working at height
 - c. Confined space
 - d. Radiography
 - e. Excavation more than 4 meter depth
 - f. Heavy lifting above 50 ton

Refer Annexure 05 for Work permit formats.

- "HSE Procedure for Work Permit System" shall be followed while implementing permit system. Where customer is having separate Work Permit System the same shall be followed.
- □ Permit applicant shall apply for work permit of particular work activity at particular location before starting of the work with Job Hazard Analysis.
- □ Permit signatory shall check that all the control measures necessary for the activity are in place and issue the permit to the permit holder.
- □ Permit holder shall implement and maintain all control measures during the period of permit .He will close the permit after completion of the work. The closed permit shall be archived in HSE Department of site.

SAFETY DURING WORK EXECUTION 11.3

Respective OCPS are to be followed and adherence to the same would be contractually binding

11.3.1 WELDING SAFETY

All safety precautions shall be taken for welding and cutting operations as per IS-818. All safety precautions shall be taken for foundation and other excavation marks as per IS-3764.

RIGGING 11.3.2

Rigging equipment shall not be loaded in excess of its recommended safe working load. Rigging equipment, when not in use, shall be removed from the original work area so as not to present a hazard to employees.

CYLINDERS STORAGE AND MOVEMENT 11.3.3

All gas cylinders shall be stored in upright position. Suitable trolley shall be used. There shall be flash-back arrestors conforming to IS-11006 at both cylinder and burner ends. Damaged tube and regulators must be immediately replaced. No of cylinders shall not exceed the specified quantity as per OCP

Cylinders shall be moved by tilting and rolling them on their bottom edges. They shall not be intentionally dragged, struck or permitted to strike each other violently.



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When cylinders are transported by powered vehicle they shall be secured in a vertical position.

11.3.4 DEMOLITION WORK

Before any demolition work is commenced and also during the process of the work the following shall be ensured:

- All roads and open areas adjacent to the work site shall either be closed or suitably protected.
- No electric cable or apparatus which is liable to be a source of danger nor a cable or an apparatus used by the operator shall remain electrically charged.
- All practical steps shall be taken to prevent danger to persons employed from the risks of fire or explosion or flooding. No floor, roof or other part of the building shall be so overloaded with debris or materials as to render them unsafe.

11.3.5 T&Ps

All T&Ps/ MMEs should be of reputed brand/appropriate quality & must have valid test/calibration certificates bearing endorsement from competent authority of BHEL..Subcontractor to also submit monthly reports of T&Ps deployed and validity test certificates to BHEL safety Officer as per the format/procedure of BHEL.

11.3.6 CHEMICAL HANDLING

Displaying safe handling procedures for all chemicals such as lube oil, acid, alkali, sealing compounds etc, at work place. Where it is necessary to provide and/or store petroleum products or petroleum mixture & explosives, the subcontractor shall be responsible for carrying out such provision / storage in accordance with the rules & regulations laid down in the relevant petroleum act, explosive act and petroleum and carbide of calcium manual, published by the chief inspector of explosives of India. All such storage shall have prior approval if necessary from the chief inspector of explosives or any other statutory authority. The subcontractor shall be responsible for obtaining the same.

11.3.7 ELECTRICAL SAFETY

- Providing adequate no. of 24 V sources and ensure that no hand lamps are operating at voltage level above 24 Volts.
- Fulfilling safety requirements at all power tapping points.
- High/ Low pressure welders to be identified with separate colour clothings. No welders will be deployed without
 passing appropriate tests and holding valid welding certificates. Approved welding procedure should be displayed at
 work place.
- The subcontractor shall not use any hand lamp energized by Electric power with supply voltage of more than 24 volts in confined spaces like inside water boxes, turbine casings, condensers etc.
- All portable electric tools used by the subcontractor shall have safe plugging system to source of power and be
 appropriately earthed. Only electricians licensed by appropriate statutory authority shall be employed by the
 subcontractor to carry out all types of electrical works. Details of earth resource ad their test date to be given to BHEL
 safety officer as per the prescribed formats of BHEL
- The subcontractor shall use only properly insulated and armored cables which conform to the requirement of Indian Electricity Act and Rules for all wiring, electrical applications at site.



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- BHEL reserves the right to replace any unsafe electrical installations, wiring, cabling etc. at the cost of the subcontractor.
- All electrical appliances used in the work shall be in good working condition and shall be properly earthed.
- No maintenance work shall be carried out on live equipment.
- The subcontractor shall maintain adequate number of qualified electricians to maintain his temporary electrical installations.
- Area wise Electrical safety inspection is to be carried out on monthly basis as per "Electrical Safety Inspection checklist" and the report is to be submitted to BHEL safety officer
- Adequate precautions shall be taken to prevent danger for electrical equipment. No materials on any of the sites of work shall be so stacked or placed as to cause danger or inconvenience to any person or the public
- The subcontractor shall carefully follow the safety requirement of BHEL/ the purchaser with the regard to voltages used in critical areas.

11.3.8 FIRE SAFETY

- Providing appropriate fire fighting equipment at designated work place and nominate a fire officer/warden adequately trained for his job.
- Subcontractor shall provide enough fire protecting equipment of the types and numbers at his office, stores, temporary structure in labor colony etc. Such fire protection equipment shall be easy and kept open at all times.
- The fire extinguishers shall be properly refilled and kept ready which should be certified at periodic intervals. The date of changing should be marked on the Cylinders.
- All other fire safety measures as laid down in the "codes for fire safety at construction site" issued by safety coordinator of BHEL shall be followed.
- Non-compliance of the above requirement under fire protection shall in no way relieve the subcontractor of any of his
 responsibility and liabilities to fire incident occurring either to his materials or equipment or those of others.
- Emergency contacts nos must be displayed at prominent locations
- Tarpaulin being inflammable should not be used (instead, only non-infusible covering materials shall be used) as protective cover while preheating, welding, stress relieving etc. at site.

11.3.9 SCAFFOLDING

- Suitable scaffolds shall be provided for workman for all works that cannot safely be done from the ground, or from solid construction except in the case of short duration of work which can be done safely from ladders.
- When a ladder is used, it shall be of rigid construction made of steel. The steps shall have a minimum width of 45 cm and a maximum rise of 30 cm. Suitable handholds of good quality wood or steel shall be provided and the ladder shall be given an inclination not steeper then ¼ horizontal and 1 vertical.
- Scaffolding or staging more than 3.6 m above the ground floor, swung or suspended from an overhead support or
 erected with stationery support shall have a guard rail properly bolted, braced or otherwise secured, at least 90 cm above
 the floor or platform of such scaffolding or staging and extending along the entire length of the outside and ends thereof
 with only such openings as may be necessary for the delivery of materials. Such scaffolding or staging shall be so
 fastened as to prevent it from saver, from swaying, from the building or structure.

11.3.10 **WORK AT HEIGHT**:

• Guardrails and toe-board/barricades and sound platform conforming to IS:4912-1978 should be provided.



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- Wherever necessary, life-line (pp or metallic) and fall arrestor along with Polyamide rope or Retractable lifeline should be provided.
- Safety Net as per IS:11057:1984 should be used extensively for prevention/ arrest of men and materials falling from height. The safety nets shall be fire resistant, duly tested and shall be of ISI marked and the nets shall be located as per site requirements to arrest or to reduce the consequences of a possible fall of persons working at different heights.
- Reaching beyond barricaded area without lifeline support, moving with support of bracings, walking on beams without support, jumping from one level to another, throwing objects and taking shortcut must be discouraged.
- Use of Rebar steel for making Jhoola and monkey-ladder (Rods welded to vertical or inclined structural members), temporary platform etc. must be avoided.
- Monkey Ladder should be properly made and fitted with cages.
- Jhoola should be made with angles and flats and tested like any lifting tools before use.
- Lanyard must be anchored always and in case of double lanyard, each should be anchored separately.
- In case of pipe-rack, persons should not walk on pipes and walk on platforms only.
- In case of roof work, walking ladder/ platform should be provided along with lifeline and/ or fall arrestor.
- Empty drums must not be used.
- For chimney or structure painting, both hanging platform and men should be anchored separately to a firm structure along with separate fall arrestor. Rope ladder should be discouraged.

11.3.11 WORKING PLATFORM

Working platforms, gangways and stairways shall be so constructed that they do not sag unduly or unequally and if the height of the platform gangways provided is more than 3.6 m above ground level or floor level, they shall be closely boarded and shall have adequate width which shall not be less than 750 mm and be suitably fenced as described above. Every opening in the floor or a building or in a working platform shall be provided with suitable means to prevent the fall of persons or materials by providing suitable fencing or railing whose minimum height shall be 90 cm.

11.3.12 EXCAVATION

Wherever there are open excavation in ground, they shall be fenced off by suitable railing and danger signals installed at night so as to prevent persons slipping into the excavations.

11.3.13 LADDER SAFETY

Safe means of access shall be provided to all working places. Every ladder shall be securely fixed. No portable single ladder shall be over 9 m in the length while the width between side rails in rung ladder shall in no case be less than app. 29.2 cm for ladder upto and including 3 m in length. For longer ladders this width shall be increased at least ¼" for each additional foot of length.

A sketch of the ladders and scaffolds proposed to be used shall be prepared and approval of the Engineer obtained prior to Construction.

11.3.14 LIFTING SAFETY

• It will be the responsibility of the subcontractor to ensure safe lifting of the equipment, taking due precaution to avoid any incident and damage to other equipment and personnel.



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 All requisite tests and inspection of handling equipment, tools & tackle shall be periodically done by the subcontractor by engaging only the Competent Persons as per law.

- Defective equipment or uncertified shall be removed from service.
- Any equipment shall not be loaded in excess of its recommended safe working load.

11.3.15 HOISTING APPLIANCE

- Motors, gearing, transmission, electric wiring and other dangerous parts of hoisting appliances should be provided with efficient safe guards.
- Hoisting appliance should be provided with such means as will reduce to the minimum the risk of any part of a suspended load becoming incidentally displaced.
- When workers employed on electrical installations which are already energized, insulating mats, wearing apparel, such as gloves, sleeves and boots as may be necessary should be provided.
- The worker should not wear any rings, watches and carry keys or other materials which are good conductor of electricity.

11.4 ENVIRONMENTAL CONTROL

Environment protection has always been given prime importance by BHEL. Environmental damage is a major concern of the principal subcontractor and every effort shall be made, to have effective control measures in place to avoid pollution of Air, Water and Land and associated life. Chlorofluorocarbons such as carbon tetrachloride and trichloroethylene shall not be used. Waste disposal shall be done in accordance with the guidelines laid down in the project specification.

Any chemical including solvents and paints, required for construction shall be stored in designated bonded areas around the site as per Material Safety Data Sheet (MSDS).

In the event of any spillage, the principle is to recover as much material as possible before it enters drainage system and to take all possible action to prevent spilled materials from running off the site. The subcontractor shall use appropriate MSDS for clean-up technique

All subcontractors shall be responsible for the cleanliness of their own areas.

The subcontractors shall ensure that noise levels generated by plant or machinery are as low as reasonably practicable. Where the subcontractor anticipates the generation of excessive noise levels from his operations the subcontractor shall inform to Construction Manager of BHEL accordingly so that reasonable &practicable precautions can be taken to protect other persons who may be affected.

It is imperative on the part of the subcontractor to join and effectively contribute in joint measures such as tree plantation, environment protection, contributing towards social upliftment, conversion of packing woods to school furniture, keeping good relation with local populace etc.

The subcontractor shall carry out periodic air and water quality check and illumination level checking in his area of work place and take suitable control measure.

11.5 HOUSEKEEPING

 Keeping the work area clean/ free from debris, removed scaffoldings, scraps, insulation/sheeting wastage /cut pieces, temporary structures, packing woods etc. will be in the scope of the subcontractor. Such cleanings has to be done by



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subcontractor within quoted rate, on daily basis by an identified group. If such activity is not carried out by subcontractor / BHEL is not satisfied, then BHEL may get it done by other agency and actual cost along with BHEL overheads will be deducted from contractor's bill. Such decisions of BHEL shall be binding on the subcontractor

- Proper housekeeping to be maintained at work place and the following are to be taken care of on daily basis.
- All surplus earth and debris are removed/disposed off from the working areas to identified locations.
- Unused/Surplus cables, steel items and steel scrap lying scattered at different places/elevation within the working
 areas are removed to identified locations.
- All wooden scrap, empty wooden cable drums and other combustible packing materials, shall be removed from workplace to identified locations. Sufficient waste bins shall be provided at
- Different work places for easy collection of scrap/waste. Scrap chute shall be installed to remove scrap from high location.
- Access and egress (stair case, gangways, ladders etc.) path should be free from all scrap and other hindrances.
- Workmen shall be educated through tool box talk about the importance of housekeeping and encourage not to litter.
- Labour camp area shall be kept clear and materials like pipes, steel, sand, concrete, chips and bricks, etc. shall not be allowed in the camp to obstruct free movement of men and machineries.
- Fabricated steel structures, pipes & piping materials shall be stacked properly.
- No parking of trucks/trolleys, cranes and trailers etc. shall be allowed in the camp, which may obstruct the traffic movement as well as below LT/HT power line.
- Utmost care shall be taken to ensure over all cleanliness and proper upkeep of the working areas

11.6 WASTE MANAGEMENT

Take suitable measures for waste management and environment related laws/legislation as a part of normal construction activities. Compliance with the legal requirements on storage/ disposal of paint drums (including the empty ones), Lubricant containers, Chemical Containers, and transportation and storage of hazardous chemicals will be strictly maintained.

11.6.1 BINS AT WORK PLACE

- Sufficient rubbish bins shall be provided close to workplaces.
- Bins should be painted yellow and numbered.
- Sufficient nos. of drip trays shall be provided to collect oil and grease.
- Sufficient qty. of broomsticks with handle shall be provided.
- Adequate strength of employees should be deployed to ensure daily monitoring and service for waste management.

11.6.2 STORAGE AND COLLECTION

- Different types of rubbish/waste should be collected and stored separately.
- Paper, oily rags, smoking material, flammable, metal pieces should be collected in separate bins with close fitting
 lide.
- Rubbish should not be left or allowed to accumulate on construction and other work places.
- Do not burn construction rubbish near working site.



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11.6.3 SEGREGATION

- Earmark the scrap area for different types of waste.
- Store wastes away from building.
- Oil spill absorbed by non-combustible absorbent should be kept in separate bin.
- Clinical and first aid waste stored and incinerated separately.

11.6.4 DISPOSAL

- Sufficient containers and scrap disposal area should be allocated.
- All scrap bin and containers should be conveniently located.
- Provide self-closing containers for flammable/spontaneously combustible material.
- · Keep drainage channels free from choking.
- Make schedule for collection and disposal of waste.

11.6.5 WARNING AND SIGNS

- Appropriate sign to be displayed at scrap storage area
- No toxic, corrosive or flammable substance to be discarded into public sewage system.
- Waste disposal shall be in accordance with best practice.
- Comply with all the requirements of Pollution Control Board (PCB) for storage and disposal of hazardous waste.

11.7 TRAFFIC MANAGEMENT SYSTEM

11.7.1 SAFE WORKPLACE TRANSPORT SYSTEM

- Traffic routes in a work place shall be suitable for the persons or vehicles using them. This shall be sufficient in number and of sufficient size. This shall reflect the suitability of traffic routes for vehicles and pedestrians.
- Where vehicles and pedestrians use the same traffic routes there shall be sufficient space between them. Where
 necessary all traffic routes must be suitably indicated. Pedestrians or vehicles must be able to use traffic routes
 without endangering those at work. There must be sufficient separation of traffic routes from doors, gates and
 pedestrian traffic routes.
- For internal traffic, lines marked on roads / access routes and between buildings shall clearly indicate where vehicles are to pass.
- Temporary obstacles shall be brought to the attention of drivers by warning signs or hazard cones.
- Speed limits shall be clearly displayed. Speed ramps preceded by a warning signs or marker are necessary.
- The traffic route should be wide enough to allow vehicles to pass and re-pass oncoming or parked traffic and it may be advisable to introduce on-way system or parking restrictions.
- Safest route shall be provided between places where vehicles have to call or deliver.
- Avoid vulnerable areas/items such as fuel or chemicals tanks or pipes, open or unprotected edges and structures likely to collapse



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Safe areas shall be provided for loading and unloading.

- Avoid sharp or blind bends. If this is not possible hazards should be indicated e.g. blind corner.
- Ensure road crossings are minimum and clearly signed.
- Entrance and gateways shall be wide enough to accommodate a second vehicle without causing obstruction.
- Set sensible speed limits which are clearly sign posted.
- Where necessary ramps should be used to retard speed. This shall be preceded by a warning sign or mark on the road.
- Forklift trucks shall not pass over road hump unless of a type capable of doing so.
- Overhead electric cable, pipes containing flammable hazardous chemical shall be shielded by using goal posts height gauge posts or barriers.
- Road traffic signs shall be provided on prominent locations for prevention of incidents and hazards and for quick guidance and warning to employees and public. Safety signs shall be displayed as per the project working requirement and guideline of the state in which project is done. Vehicles hired or used shall not be parked within the 15m radius of any working area. Any vehicle, that is required to be at the immediate/near the vicinity, shall be approved by the person in-charge of the site.

11.7.2 TRAFFIC ROUTE FOR PEDESTRIANS

- Where traffic routes are used by both pedestrians and vehicles road shall be wide enough to allow vehicles and pedestrians safely.
- Separate routes shall be provided for pedestrians to keep them away from vehicles. Provide suitable barriers/guard at entrances/exit and the corners or buildings.
- Where pedestrian and vehicle routes cross, appropriate crossing shall be provided.
- Where crowd is likely to use roadway e.g. at the end of shift, stop vehicles from using them at such times.
- Provide high visibility clothing for people permitted in delivery area.

11.7.3 WORK VEHICLE

Work vehicle shall be as safe stable efficient and roadworthy as private vehicles on public roads. Site management shall ensure that drivers are suitably trained. All vehicle e.g. heavy motor vehicle forklift trucks dump trucks mobile cranes shall ensure that the work equipment conforms to the following:

- A high level of stability.
- o A safe means of access/egress.
- o Suitable and effective service and parking brakes.
- Windscreens with wipers and external mirrors giving optimum all round visibility.
- o Provision of horn, vehicle lights, reflectors, reversing lights, reversing alarms.
- Provision of seat belts.
- Guards on dangerous parts.
- Driver protection to prevent injury from overturning and from falling objects/materials.
- Driver protection from adverse weather.
- No vehicle shall be parked below HT/LT power lines.
- Valid Pollution Under Control certification for all vehicles



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11.7.4 **DAILY CHECK BY DRIVER**

- There should also be daily safety checks containing below mentioned points by the driver before the vehicle is
 - Brakes. 0
 - Tires. 0
 - Steering. 0
 - Mirrors.
 - Windscreen waters.
 - 0 Wipers.
 - Warning signals.
 - Specific safety system i.e. control interlocks
- Management should ensure that drivers carry out these checks.

11.7.5 TRANSPORTATION OF PERSONNEL AND MATERIALS BY VEHICLES

- All drivers shall hold a valid driving License for the class of vehicle to be driven and be registered as an authorized BHEL driver with the Administration Department.
- Securing of the load shall be by established and approved methods, i.e. chains with patented tightening equipment for steel/heavy loads. Sharp corners on loads shall be avoided when employing ropes for securing.
- All overhangs shall be made clearly visible and restricted to acceptable limits
- Load shall be checked before moving off and after traveling a suitable distance.
- On no account is construction site to be blocked by parked vehicles Drivers of vehicles shall only stop or park in the areas designate by the stringing foreman.
- Warning signs shall be displayed during transportation of material. All vehicles used by BHEL shall be in worthy condition and in conformance to the Land Transport requirement.

11.7.6 MAINTENANCE

All Vehicles used for transportation of man and material shall undergo scheduled inspections on frequent intervals to secure safe operation. Such inspections shall be conducted in particular for steering, brakes, lights, horn, doors etc. Site management shall ensure that work equipment is maintained in an efficient, working order and in good repair. Inspections and services carried out at regular intervals of time and or mileage. No maintenance shall be carried below HT/LT power lines.

EMERGENCY PREPAREDNESS AND RESPONSE 11.8

- Emergency preparedness and response capability of site shall be developed as per Emergency Preparedness and Response plan issued by Regional HQ
- Availability of adequate number of first aiders and fire warden shall be ensured with BHEL and its subcontractors
- All the subcontractor's supervisory personnel and sufficient number of workers shall be trained for fire protection systems. Enough number of such trained personnel must be available during the tenure of contract. Subcontractor should nominate his supervisor to coordinate and implement the safety measures.
- Assembly point shall be earmarked and access to the same from different location shall be shown
- Fire exit shall be identified and pathway shall be clear for emergency escape.



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- Appropriate type and number of fire extinguisher shall be deployed as per Fire extinguisher deployment plan and validity shall be ensured periodically through inspection
- Adequate number of first aid boxes shall be strategically placed at different work places to cater emergency
 need. Holder of the first aid box shall be identified on the box itself who will have the responsibility to maintain the
 same.
- First aid center shall be developed at site with trained medical personnel and ambulance
- Emergency contact numbers (format given in EPRP) of the site shall be displayed at prominent locations.
- Tie up with fire brigade shall be done in case customer is not having fire station.
- Tie up with hospital shall be done in case customer is not having hospital.
- Disaster Management group shall be formed at site
- Mock drill shall be arranged at regular intervals. Monthly report of the above to be given to BHEL safety Officer as per prescribed BHEL formats
- Mock drill shall be conducted on different emergencies periodically to find out gaps in emergency preparedness and taking necessary corrective action

12.0 HSE INSPECTION

Inspection on HSE for different activities being carried out at site shall be done to ensure compliance to HSEMS requirements. The subcontractor shall maintain and ensure necessary safety measures as required for inspection and tests HV test, Pneumatic test, Hydraulic test, Spring test, Bend test etc. as applicable, to enable inspection agency for performing Inspection. If any test equipment is found not complying with proper safety requirements then the Inspection Agency may withhold inspection, till such time the desired safety requirements are met.

12.1 DAILY HSE CHECKS

Both the Site Supervisors and safety officer of Subcontractor are to conduct daily site Safety inspection around work activities and premises to ensure that work methods and the sites are maintained to an acceptable standard. The following are to form the common subjects of a daily safety inspection:

- Personal Safety wears & gear compliance.
- Complying with site safety rules and permit-to-work (PTW).
- Positions and postures of workers.
- Use of tools and equipment etc. by the workers.

The inspection should be carried out just when work starts in beginning of the day, during peak activities period of the day and just before the day's work ends.

12.2 INSPECTION OF PPE

- PPEs shall be inspected by HSE officer at random once in a week as per format no. HSEP:14-F06 for its compliance to standard and compliance to use and any adverse observation shall be recorded in the PPE register.
- The applicable PPEs for carrying out particular activities are listed below.



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12.3 **INSPECTION OF T&Ps**

- A master list of T&Ps shall be maintained by each subcontractor.
- All T&Ps being used at site shall be inspected by HSE officer once in a month as per format no. HSEP:14-F07 for its healthiness and maintenance.
- The T&Ps which require third party inspection shall be checked for its validity during inspection. The third party test certificate should be accompanied with a copy of the concerned competent person's valid qualification record.
- The validity of T&P shall be monitored as per "Status of T&Ps" format no. HSEP:14-F08

12.4 **INSPECTION OF CRANES AND WINCHES**

- Cranes and winches shall be inspected by the operator through a daily checklist for its safe condition (as provided by the equipment manufacturer) before first use of the day.
- Cranes and Winches shall be inspected by HSE officer once in a month as per format no. HSEP:14-F09 for healthiness, maintenance and validity of third party inspection.
- The date of third party inspection and next due date shall be painted on cranes and winches.
- The operators/drivers shall be authorized by sub-contractor based on their competency and experience and shall carry the I-card.
- The operator should be above 18 years of age and should be in possession of driving license of HMV man & goods), vision test certificate and should have minimum qualification so that he can read the instructions and check list.

12.5 **INSPECTION ON HEIGHT WORKING**

- Inspection on height working shall be conducted daily by supervisors before start of work to ensure safe working condition including provision of
 - Fall arrestor
 - Lifelines
 - Safety nets
 - Fencing and barricading
 - Warning signage
 - Covering of opening
 - Proper scaffolding with access and egress.
 - Illumination
- Inspection on height working shall be conducted once in a week by HSE officer as per format no. HSEP:14-F10.
- Medical fitness of height worker shall be ensured.
- Height working shall not be allowed during adverse weather.

INSPECTION ON WELDING AND GAS CUTTING OPERATION 12.6

- Supervisor shall ensure that no flammable items are available in near vicinity during welding and gas cutting activity.
- Gas cylinders shall be kept upright.
- Use of Flash back arrestor shall be ensured at both ends.



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- Inspection during welding and gas cutting operations shall be carried out by HSE officer once a month as per format no. HSEP:14-F11.
- Use of fire blanket to be ensured to avoid falling of splatters during welding or gas cutting operation at height.
- Availability of fire extinguisher at vicinity shall be ensured.

12.7 INSPECTION ON ELECTRICAL INSTALLATION/APPLIANCES

- Ensure proper earthing in electrical installation
- Use ELCB at electrical booth
- Electrical installation shall be properly covered at top where required
- Use appropriate PPEs while working
- Use portable electrical light < 24 V in confined space and potentially wet area.
- Monthly inspection shall be carried out as per format no. HSEP:14-F12.

12.8 **INSPECTION OF ELEVATOR**

- Elevators shall be inspected by concerned supervisors once in a week as per format no. HSEP:14-F13.
- All elevators shall be inspected by competent person and validity shall be ensured.
- The date of third party inspection and next due date shall be painted on elevator.

12.9 **INSPECTION OF EXCAVATION**

Excavation activities shall be inspected as per Format HSEP:14-F13A

13.0 **HSE PERFORMANCE**

- Contractor shall be assessed on monthly basis for HSE Compliance by BHEL Safety In-charge at site. The HSE compliance shall be based on Online HSE Evaluation System of BHEL as per Format No. HSEP:14-
- BHEL shall reserve the right to use this assessment for evaluating bidder's capacity for future tenders
- Suitable HSE reward system shall be developed at site level to promote HSE compliance amongst workmen by the subcontractor.
 - To decide HSE reward, performance towards HSE shall be evaluated for workmen and it shall be awarded regularly in public gathering.
- If safety record of the subcontractor in execution of the awarded job is to the satisfaction of safety department of BHEL, issue of an appropriate certificate to recognize the safety performance of the subcontractor may be considered by BHEL after completion of the job.



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14.0 **HSE PENALTIES**

- As per contractual provision HSE penalties shall be imposed on subcontractors for non- compliance on HSE requirement as per format no. HSEP:14-F14. The list in the format is only indicative. For any other violation, not listed in the format, the minimum penalty amount is to be decided as per BOCW act.
- If principal customer/statutory and regulatory bodies impose some penalty on HSE due to the non-compliance of the subcontractor the same shall be passed on to them.
- The penalty amount shall be recovered by Site Finance department from subcontractors from the RA/Final bill.

OTHER REQUIREMENTS 15.0

- In case of any delay in completion of a job due to mishaps attributable to lapses by the subcontractor, BHEL shall have the right to recover cost of such delay from the payments due to the subcontractor, after notifying the subcontractor suitably.
- If the subcontractor fails to improve the standards of safety in its operation to the satisfaction of BHEL after being given reasonable opportunity to do so and/or if the subcontractor fails to take appropriate safety precautions or to provide necessary safety devices and equipment or to carry out instruction regarding safety issued by BHEL, BHEL shall have the right to take corrective steps at the risk and cost of the subcontractor after giving a notice of not less than 7 days indicating the steps that would be taken by BHEL.
- If the subcontractor succeeds in carrying out its job in time without any fatal or disabling injury incident and without any damage to property BHEL may, at its sole discretion, favorably consider to reward the subcontractor suitably for the performance.
- In case of any damage to property due to lapses by the subcontractor, BHEL shall have the right to recover the cost of such damages from the subcontractor after holding an appropriate enquiry.
- The subcontractor shall take all measures at the sites of the work to protect all persons from incidents and shall be bound to bear the expenses of defense of every suit, action or other proceeding of law that may be brought by any persons for injury sustained or death owing to neglect of the above precautions and to pay any such persons such compensation or which may with the consent of the subcontractor be paid to compromise any claim by any such person, should such claim proceeding be filed against BHEL, the subcontractor hereby agrees to indemnify BHEL against the same.
- The subcontractor shall not employ men below the age of 18 years and women on the work of painting with products containing lead in any form. Wherever men above the age of 18 are employed on the work of lead painting, overalls shall be supplied by the subcontractor to the workmen and adequate facilities shall be provided to enable the working painters to wash during the cessation of work.
- The subcontractor shall notify BHEL of his intention to bring to site any equipment or material which may create hazard.
- BHEL shall have the right to prescribe the conditions under which such equipment or materials may be handled and the subcontractor shall adhere to such instructions.



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BHEL may prohibit the use of any construction machinery, which according to the organization is unsafe. No claim for compensation due to such prohibition will be entertained by BHEL.

16. NON COMPLIANCE

NONCONFORMITY OF SAFETY RULES AND SAFETY APPLIANCES WILL BE VIEWED SERIOUSLY AND BHEL HAS RIGHT TO IMPOSE FINES ON THE SUBCONTRACTOR AS UNDER FOR EVERY INSTANCE OF VIOLATION NOTICED:

SN	Violation of Safety Norms	Fine (in Rs)
01	Not Wearing Safety Helmet	200/- *
02.	Not wearing Safety Belt or not anchoring life line	500/-*
03	Not wearing safety shoe	200/-*
04	Not keeping gas cylinders vertically	200/-
05	Not using flash back arrestors	100/-
06	Not wearing gloves	50/- *
07.	Grinding Without Goggles	50/- *
08.	Not using 24 V Supply For Internal Work	500/-
09.	Electrical Plugs Not used for hand Machine	100/-
10.	Not Slinging properly	200/-
11.	Using Damaged Sling	200/-
12.	Lifting Cylinders Without Cage	500/-
13.	Not Using Proper Welding Cable With Lot of Joints And Not Insulated Property.	200/-
14.	Not Removing Small Scrap From Platforms	500/-
15.	Gas Cutting Without Taking Proper Precaution or Not Using Sheet Below Gas Cutting	500/-
16.	Not Maintaining Electric Winches Which are Operated Dangerously	500/-
17.	Improper Earthing Of Electrical T&P	500/-
18	No or improper barricading	500/-
19.	Activity carried out without Safety work permit (Height work, Lifting activity, Hot work-each person/case)	1000/-
20.	Incident Resulting in Partial Loss in Earning Capacity	25,000/- per victim
21.	Fatal Incident Resulting in total loss in Earning Capacity	1,00,000/- per victim for first instance #

Legend:-

#: or as deducted by customer, whichever is higher. For repeated fatal incident in the same Unit incremental penalty to be imposed. The subcontractor will pay 2 times the penalty compared to previously paid in case there are repeated cases of fatal incidents under the same subcontractor for the same package in the same unit.

Any other non-conformity noticed not listed above will also be fined as deemed fit by BHEL. The decision of BHEL engineer is final on the above. The amount will be deducted from running bills of the subcontractor. The amount collected above will be utilized for giving award to the employees who could avoid incident by following safety rules. Also the amount will be spent for purchasing the safety appliances and supporting the safety activity at site.

^{*:} per head. For repeated violation by the same person, the penalty would be double of the previous penalty. Date of "Repeated violation" will be counted from subsequent days.



SITE OPERATION by SUBCONTRACTORS REV:

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17.0 **HSE AUDIT/INSPECTION**

- Regular HSE Audit/inspection shall be carried out by Subcontractor as per Site HSE audit calendar.
- HSE checklist (Annexure 02) shall be used for carrying out audit/inspection and report shall be submitted to BHEL site management
- All non-conformities and observations on HSE identified during internal or external HSE audit shall be disposed off by site in a time bound manner and reported back the implementation status
- Corrective action and Preventive action on HSE issues raised by certification body issued by Regional HQs shall be implemented by site and reported to Site management.

18.0 MONTHLY HSE REVIEW MEETING

- Site shall hold HSE review meeting every month to discuss and resolve HSE issues of site and improve HSE performance. It will also discuss the incidents occurred since previous meeting, its root cause and Corrective action and Preventive action. The agenda is given below:
 - Implementation of earlier MOM
 - **HSE** performance
 - **HSE** inspection Ω
 - HSE audit and CAPA
 - **HSE** training
 - Health check-up camp
 - HSE planning for the erection and commissioning and installation activities in the coming month
 - HSE reward and promotional activities
- The meeting shall be chaired by Construction Manager, convened by HSE coordinator and attended by all HOS, Site Incharge of Subcontractors and HSE officer of Subcontractors.
- MOM on the discussion will be circulated to the concerned for implementation.

FORMATS USED (Details available in Annexure-04)

SL. No.	Format Name	Format No.	Rev No.
01	Inspection of First Aid Box	HSEP:14-F01	00
02	Health Check Up	HSEP:14-F02	00
03	HSE Induction Training	HSEP:14-F03	00
04	Tool Box Talk	HSEP:14-F04	00
05	Monthly Site HSE Report	As specified by BHEL	00
06	Inspection of PPE	HSEP:14-F06	00



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07	Inspection of T&Ps	HSEP:14-F07	00
08	Status of T&Ps	HSEP:14-F08	00
09	Inspection of Cranes and Winches	HSEP:14-F09	00
10	Inspection on Height Working	HSEP:14-F10	00
11	Inspection on Welding & Gas Cutting	HSEP:14-F11	00
12	Inspection on Electrical Installation	HSEP:14-F12	00
13	Inspection on Elevator	HSEP:14-F13	00
14	HSE Penalty	HSEP:14-F14	00
15	Accident /incident / property damage /fire incident report	HSEP:14-F15	00



SITE OPERATION by SUBCONTRACTORS

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20.0 **ANNEXURES**

ANNEXURE 01

As per Contract Labour (Regulation & Abolition Act), Central Rules, 1971,

(1) The first-aid box shall be distinctively marked with a Red Cross on a white background and shall contain the following items, namely:

(a) For establishments in which the number of contract labour employed does not exceed fifty, each first aid box shall contain the following equipment:

(i)	6 small sterilized dressings
(ii)	3 medium size sterilized dressings
(iii)	3 large size sterilized dressings
(iv)	6 pieces of sterilized eye pads in separate sealed packets.
(v)	6 roller bandages 10 cm wide.
(vi)	6 roller bandages 5 cm wide.
(vii)	One tourniquet
(viii)	A supply of suitable splints
(ix)	Three packets of safety pins.
(x)	Kidney tray.
(xi)	3 large sterilized burn dressings.
(xii)	1 (30ml) bottle containing a two percent alcoholic solution of iodine
(xiii)	1 (30 ml) bottle containing Sal volatile having the dose and mode of administration
	indicated on the label
(xiv)	1 snake bite lancet
(xv)	1 (30gms) bottle of potassium permanganate crystals.
(xvi)	1 pair scissors
(xvii)	1 copy of the First-Aid leaflet issued by the Director General, Factory Advice Service and
	Labour Institutes, Government of India.
(xviii)	A bottle containing 100 tablets (each of 5 grains) of aspirin
(xix)	Ointment for burns
(xx)	A bottle of suitable surgical anti-septic solution

(b) For establishment in which the number of contract labour exceeds fifty each first-aid box shall contain the following equipment:

(i)	12 small sterilized dressings
(ii)	6 medium size sterilized dressings
(iii)	6 large size sterilized dressings.
(iv)	6 large size sterilized burn dressings
(v)	6 (15 grams) packets sterilized cotton wool
(vi)	12 pieces of sterilized eye pads in separate sealed packets.



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(vii)	12 roller bandages 10 cm wide.	
(viii)	12 roller bandages 5 cm wide.	
(ix)	One tourniquet.	
(x)	A supply of suitable splints.	
(xi)	Three packets of safety pins.	
(xii)	Kidney tray.	
(xiii)	Sufficient number of eye washes bottles filled with distilled water or suitable liquid clearly indicated by a distinctive sign which shall be visible at all times.	
(xiv)	4 per cent Xylocaine eye drops, and boric acid eye drops and soda by carbonate eye drops.	
(xv)	1 (60ml) bottle containing a two percent alcoholic solution of iodine	
(xvi)	One (two hundred ml) bottle of mercurochrome (2 per cent) solution in water.	
(xvii)	1 (120ml) bottle containing Sal volatile having the dose and mode of administration indicated on the label.	
(xviii)	1 roll of adhesive plaster (6 cmX1 meter)	
(xix)	2 rolls of adhesive plaster (2 cmX1 meter)	
(xx)	A snake bite lancet.	
(xxi)	1 (30 grams) bottle of potassium permanganate crystals.	
(xxii)	1 pair scissors	
(xxiii)	1 copy of the First-Aid leaflet issued by the Director-General, Factory Advice service and labour Institutes, Government of India.	
(xxiv)	a bottle containing 100 tablets (each of 5 grains) of aspirin	
(xxv)	Ointment for burns	
(xxvi)	A bottle of a suitable surgical anti septic solution.	

(2) Adequate arrangement shall be made for immediate recoupment of the equipment when necessary.



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ANNEXURE 02

HSE AUDIT/INSPECTION CHECKLIST CUM COMPLIANCE REPORT				
OJECT:SUBCONTRACTOR:				
DATE :	OW	NER	:	
INSPECTION BY:				
Note: write 'NA' wherever the items is not applicable				
Item	Υ	N	Remarks	Action
	е	0		
HOUSEKEEPING	S			
Waste containers provided and used				
Passageways and walkways clear				
General neatness of working area				
Other				
PERSONNELPROTECTIVEEQUIPTMENTS				
Goggles; shields				
Face protection				
Hearing protection				
Respiratory masks etc.				
Safety belts				
Other				
EXCAVATIONS / OPENINGS				
Openings properly covered or barricaded				
Excavations shored				
Excavations barricaded				
Overnight lighting provided				
Other				
WELDING, CUTTING				
Gas cylinders chained upright				
Cable and hoses not obstructing				
Fire extinguisher (s) accessible				
Others				
SCAFFOLDING				
Fully decked platforms				
Guard and intermediate rails in place		ļ		
Toe boards in place		ļ		
Adequate shoring				
Adequate access				
Others				
LADDER		1		
Extension side rails 1 m above				
Top of landing				
Properly secured				



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POW	/FR	SEC	TOR
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			T
Angle + 70° from horizontal			
Other			
HOISTS, CRANES AND DERRICKS			
Condition of cables and sheaf OK			
Condition of slings, chains, hooks OK			
Inspection & maintenance log maintained			
Outriggers used			
Signals observed and understood			
Qualified operators			
Others			
MACHINERY, TOOLS & EQUIPMENT			
Proper instruction			
Safety devices			
Proper cords			
Inspection and maintenance			
Other			
VEHICLE AND TRAFFIC			
Rules and regulations observed			
Inspection and maintenance			
Licensed drivers			
Other			
TEMPORARY FACILITIES			
Emergency instructions posted			
Fire extinguishers provided			
Fire-aid equipment available			
General neatness			
Others			
FIRE PREVENTION			
Personnel instructed			
Fire extinguishers checked			
No smoking in prohibited areas.			
Hydrants			
Clearance			
Others			
ELECTRICAL			
Proper wiring			
ELCB's provided			
Ground fault circuit interrupters			
Protection against damage			
Prevention of tripping hazards			
Other			
HANDLING & STORAGE OF MATERIALS			
HANDLING & STORAGE OF MATERIALS			
Properly stored or stacked			
Passageways clear			
Other			
FLAMMABLE GASES AND LIQUIDS			
Containers clearly identified			
Proper storage	 		
Fire extinguisher nearby	+ +		
I I IIO CAUTUUISHEI HEALDY	1	1	1



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-	$^{\prime\prime}$	SEC	-
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Other		
WORKING AT HEIGHT		
Safety nets		
Safety belts		
Safety helmets		
Anchoring of safety belt to the life line rope		
ENVIRONMENT		
Lubricant waste/engine oils properly dispose.		
Waste from Canteen, offices, sanitation etc. disposed properly.		
Disposal of surplus earth, stripping materials, expired batteries, oily rags and combustible materials done properly.		
HEALTH CHECKS		
Hygienic conditions at labor camps O.K.		
Availability of first-aid facilities		
Proper sanitation at site, office & labor camps.		
Arrangement of medical facilities.		
Measures for dealing with illness.		
Availability of potable drinking water for workmen & staff.		
Provision of crèches for children.		



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ANNEXURE 03

REFERENCES

- Contract documents
- Relevant legislations
- **HSEMSM**
- Relevant Indian standards as listed below (illustrative only):

SL	CODE NAME	TITLE
NO		
(1)	IS : 818-1888	Code of Practice for safety and health requirements in
	(Reaffirmed 2003)	Electric and Gas Welding and Cutting operations.
(2)	IS: 1179-1967	Specification for Equipment for Eye & Face protection during
	(Reaffirmed 2003)	welding.
(3)	IS: 1989 (Part 2):1986	Specification for Leather Safety Boots & Shoes
	(Reaffirmed 1997)	
(4)	IS:2925 – 1984	Specification for Industrial Safety Helmets
	(Reaffirmed 2010)	
(5)	IS:3521 : 1999	Industrial Safety Belts & Harnesses-Specification
	(Reaffirmed 2002)	
(6)	IS:3646(Part II) - 1966	Code of Practice for Interior Illumination
	(Reaffirmed 2003)	
(7)	IS:3696 (Part I) - 1987	Safety Code for Scaffolds and Ladders
	(Reaffirmed 2002)	
(8)	IS: 3696(Part 2) : 1991	Scaffolds and Ladders-Code of Safety
	(Reaffirmed 2002)	
(9)	IS:3786 – 1983	Method for Computation of Frequency and Severity Rates for
	(Reaffirmed 2002)	Industrial Injuries and Classification of Industrial Incidents
(10)	IS:4770 : 1991	Rubber Gloves – Electricals purposes-Specification
	(Reaffirmed 2006)	
(11)	IS:4912 : 1978	Safety Requirements for Floor and Wall Openings, Railings
	(Reaffirmed 2002)	and Toe Boards
(12)	IS: 5983 – 1980	Specification for Eye-Protectors
	(Reaffirmed 2002)	
(13)	IS:6519 – 1971	Code of Practice for Selection, Care and Repair of Safety
	(Reaffirmed 1997)	Footwear
(14)	IS:9167:1979	Specification for Ear-Protectors
(15)	IS:6994(Part I)-1973	Specification for Industrial Safety Gloves
	(Re affirmed 1996)	Leather and Cotton Gloves
(16)	IS:8519 – 1977	Guide for Selection of Industrial Safety Equipment for Body
	(Reaffirmed 1983)	Protection.
(17)	IS 11006 : 2011	Flash Back(Flame Arrestor) Specification



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(18)	IS:8520 – 1977	Guide for Selection of Industrial Safety Equipment for Eye,
	(Reaffirmed 2002)	Face and Ear Protection.
(19)	IS:9473:2002	Respiratory Protective Devices-Filtering Half Masks to protect
		against Particles-Specification.
(20)	IS:9944:1992	Natural and Man-made Fiber Rope Slings-Recommendations
	(Reaffirmed 2003)	on Safe working loads.
(21)	IS:11057 – 1884	Specification for Industrial Safety Nets
	(Reaffirmed 2001)	
(22)	IS:12254:1993	Polyvinyl Chloride (PVC) Industrial Boots-Specification
	(Reaffirmed 2002)	
(23)	IS:13367(Part 1):1992	Safe Use of Cranes-Code of Practice
	(Reaffirmed 20030	
(24)	IS:14166:1994	Respiratory Protective Devices-Full Face Masks Specification
	(Reaffirmed 2002)	
(25)	IS:14746 : 1999	Respiratory Protective Devices-Half Masks and Quarter
	(Reaffirmed 2003)	Masks - Specification
(26)	IS: 15397:2003	Portable Extinguisher Mechanical Foam Type(Stored
	(Reaffirmed 2008)	Pressure)-Specification
(27)	IS: 19011:2002	Guidelines for Quality and/or Environmental Management
		Systems Auditing



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ANNEXURE 04 : SAFETY FORMATS

& ANNEXURE 05 : WORK PERMIT FORMATS



INSPECTION OF FIRST AID BOX

FORMAT NO: HSEP:14-F01

REV NO.: 00 PAGE NO. 01 OF 02

Name of Site :	
Name of Sub-Contractor :	
Name of Sub-Contractor:	
Inspected by :	
Date of Inspection :	
Date of Inspection :	

Number of employees on the site: -_____

Sl.No.	Item	No. Available	Remarks
1	No. of small sterilized dressings		
2	No of medium sized sterilized dressings		
3	No of large sized sterilized dressings.		
4	No of large sized sterilized burn dressings		
5	No of (15 grams) packets sterilized cotton wool		
6	No of pieces of sterilized eye pads in separate sealed packets.		
7	No of roller bandages 10 cm wide.		
8	No of roller bandages 5 cm wide.		
9	Whether tourniquet available		
10	Whether supply of Suitable splints available.		
11	No of packets of safety pins.		
12	Whether kidney tray available		
13	Whether sufficient number of eye wash bottles, filled with distilled water or suitable liquid, clearly indicated by a distinctive sign which shall be visible at all times, available.		
14	Whether 4%-xylocaine eye drops, and boric acid eye drops and soda by carbonate eye drops available.		
15	Whether (60ml) bottle containing a two percent alcoholic solution of iodine available		
16	Whether (two hundred ml) bottle of mercurochrome (2 per cent) solution in water available.		



INSPECTION OF FIRST AID BOX

FORMAT NO: HSEP:14-F01

REV NO.: 00 PAGE NO. 02 OF 02

Sl.No.	Item	No. Available	Remarks
17	Whether 120ml bottle containing Sal volatile having the dose and mode of administration indicated on the label, available.		
18	Whether roll of adhesive plaster (6 cmX1 meter) available		
19	No of rolls of adhesive plaster (2 cmX1 meter)		
20	Whether snake bite lancet available.		
21	Whether (30 grams) bottle of potassium permanganate crystals available.		
22	Whether a pair scissors available		
23	Whether copy of the First-Aid leaflet issued by the Director-General, Factory Advice service and labour Institutes, Government of India available.		
24	Whether bottle containing 100 tablets (each of 5 grains) of aspirin available		
25	Whether Ointment for burns available		
26	Whether bottle of a suitable surgical anti-septic solution available		

Signature of Subcontractor's Site I/C:



HEALTH CHECK UP

FORMAT NO: HSEP:14-F02

REV NO.: 00 PAGE NO. 1 OF 02

Name of Site :				
Name of Sub-Contractor :				
Name of Employee :				
NAME:				
History Of Past Illness	H/O Epilep	osy		
	H/O Drug			
		tics/ Hypertension		
	H/O Uncor	nsciousness		
Personal History				
EXAMINATI			OBSERVATION	
General Physical Examination	<u>on</u>			
Height	:			
Weight	:			
ВМІ	:			
Built And nourishment	:			
Pallor	:			
Temperature	:			
Chest Expansion	:	Inspiration	Expansion	
Lymph Node Enlargement	:			
Ear, Nose, Throat	:			
Ear	:			
Nose	:			
Throat	:			



HEALTH CHECK UP

FORMAT NO: HSEP:14-F02

REV NO.: 00 PAGE NO. 2 OF 02

EXAMINATION			OBSERVATION	
Cardiovascular System Examination	on :			
Inspection	:			
Palpation	:	Pulse	ВР	
Auscultation (Heart Sounds)	:			
Respiratory System	<u>:</u>			
Inspection	:	Respiratory Rate		
Palpation:	:			
Percussion	:			
Auscultation (Breath Sounds)	:			
Examination of Abdomen	:			
Inspection	:			
Palpation	:			
Auscultation (Bowel Sounds)	:			
Any Other	:			
Clinical Impression				

Signature of the examining doctor



HSE INDUCTION TRAINING

FORMAT NO: HSEP:14-F03

REV NO.: 00 PAGE NO. 01 OF 01

Name of Site :	
Name of Sub-Contractor	
:	
Date :	
Name of Training	
Co-ordinator	

SI	Name	Designation	Organisation	Signature
No.				

Signature of Training co-ordinator :



Name of Site:

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TOOL-BOX TALK

FORMAT NO: HSEP:14-F04

REV NO.: 00

PAGE	NO.	01	OF	01
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_			
ate :			
Горіс	Name of person delivered Tool Box Talk	No. of Participants attended	Remarks

Signature of Site I/C of Subcontractor:



PERSONAL PROTECTIVE EQUIPMENTS

FORMAT NO: HSEP:14-F06

REV NO.: 00

PAGE NO. 01 OF 01

Name of Site:			
Name of Sub-Contract:	or		
Inspected by :			
Date of Inspection :			
Item	Issued this Month	Nos. Issued up to the Month	Percentage of usage at site
Safety Helmet		the Month	ut site
Safety Shoes			
Full Body Harness			
Fall Arrestor			
Safety Nets			
Other PPEs.			

Signature of Site I/C of Subcontractor:



INSPECTION OF T&Ps

FORMAT NO: HSEP:14-F07

REV NO.: 00 PAGE NO. 01 OF 01

Signature-Subcontractor/ Subcontractor's

Safety Officer

Name of S	ite:		
Name of Sub-Contractor :			
Date of Ins	spection :		
		1	
Sl.No.	Description	Remarks	
1.0	Name of equipment		
2.0	Basic Information of equipment		
2.1	Specification		
2.2	Sr. No. of equipment		
2.3	Make		
2.4	Year of manufacture		
3.0	Major repairs / overhauls(Furnish details of work carried or		Date(s) of major
			repair/overhaul
3.1			
3.2			
3.3	Repairs carried out at site		
4.0	Any performance test conducted	Yes/No	1
5.0	Document Submitted	Yes/No	
6.0	Manufacturer's test / guarantee certificate	Available/ Not available	
7.0	Performance test	Done/ Not Done	
8.0	Acceptance Norms		
9.0	Committee Observations		
10.0	Date of next review (if accepted)		
		Ш	

Signature-Site Safety Officer (BHEL)



STATUS OF T&Ps

FORMAT NO: HSEP:14-F08

REV NO.: 00 PAGE NO. 01 OF 01

Name of Site	
Name of Sub-Contractor	
Date of Inspection	

Item	Nos. Deployed	Identification	Nos. Tested by	Validity of Test
		No.	competent	Certificate
			person	
Winches				
Chain Blocks				
Wire Rope				
Slings				
Man Cages				
D-Shackles				
Air				
Compressors				
Crawler				
Cranes				
Mobile Cranes				
Hydra Cranes				
Others				

Signature of Site I/C of subcontractor:

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<i>-77</i>

INSPECTION OF CRANES AND WINCHES

FORMAT NO: HSEP:14-F09

REV NO.: 00 PAGE NO. 01 OF 03

	PAGE NO. 01 OF 03
Name of Site :	
Name of Sub-Contractor :	
Inspected by :	
Date of Inspection:	
Crane Reg. No (Make/Model) Name of Driver/Operator	

Sl.no.	Description	Observation	Measures
1	Valid Driving license		
2	Hook & Hook Latch		
3	Over Hoist limit switch		
4	Boom limit switch		
5	Boom Angle Indicator		
6	Boom limit cutoff switch		
7	Condition of Boom		
8	Condition of ropes		
9	Number of load lines		
10	Size and condition of the slings		
11	Stability of the cranes		
12	Soil Condition		
13	Swing Break And Lock		
14	Proper Break And Lock		
15	Hoist Break And Lock		
16	Boom Break And Lock		
17	Main Clutch		
18	Leakage in Hydraulic Cylinders		
19	Out riggers filly extendable		
20	Tyre pressure		
21	Condition of Battery And Lamps		



INSPECTION OF CRANES AND WINCHES

FORMAT NO: HSEP:14-F09

REV NO.: 00 PAGE NO. 2 OF 03

Sl.no.	Description	Observation	Measures
22	Guards of moving and rotating parts		
23	Load chart provided		
24	Number and position of pedant ropes		
25	Reverse Horn		
26	Load Test Details		
27	Operator's fitness		
28	Pollution under control certificate		
29	Fire extinguisher of appropriate type.		
30	Training of the operator		

WINCH

SI.	Description	YES	NO	NA	Remarks
No.	Description				
1	Has the copy of Third Party Inspection				
	certificate been provided in winch machine shed?				
2	Is winch machine operator experienced				
	enough to operate the winch machine?				
3	Is the winch machine operated by				
	someone other than the winch machine				
	operator?				
4	Is there guard provided in all moving parts				
	like wheel and motor's shaft?				
5	Will it protect against unforeseen				
	operational contingencies?				
6	Are brakes, clutch and locking				
	arrangement working properly?				
7	Has it been ensured that the guard does				
	not constitute a hazard by itself?				
8	Are the cranks and the connecting rods				
	protected by guardrails?				
9	Is there provision for fully covered shed				
	with wooden plank roof?				



INSPECTION OF CRANES AND WINCHES

FORMAT NO: HSEP:14-F09

REV NO.: 00 PAGE NO. 3 OF 03

SI.	Description	YES	NO	NA	Remarks
No.					
10	Is wire rope free from any kind of damage				
	or wear and tear?				
11	Is split pin provided for the protection of				
	clutch and brake locking arrangement?				
12	Is pulley inspected by competent person				
	and certified before use?				
13	Is pulley free from any wear and tear				
	visually?				
14	Is winch rope barricaded with clipsheet for				
	the protection of rope and person?				
15	Is the wire rope lubricated by cardium oil?				
16	Is there any friction in wire rope which				
	may damage the wire rope rather than the				
	rolling parts?				
17	Is there any oil leakage in the hydraulic				
	system of the winch machine?				
18	Has it been ensured that the guard will not				
	cause discomfort or inconvenience to				
	operator?				
	Total Number of NO:				
	Total Number of NA:				
	% Compliance :				
	1	1	1	1	1

Signature of Site I/C of subcontractor:



INSPECTION OF HEIGHT WORKING

FORMAT NO: HSEP:14-F10

REV NO.: 00 PAGE NO. 01 OF 02

Name of Site :	
Name of Sub-Contractor :	
Inspected by :	
Date of Inspection:	

Sl. No.	Descriptions	Observation	Remarks
		(Yes/No)	
1	All the workers have been explained safe work method?		
2	An established communication system has been		
	established and explained to the workers.		
3	Adequate illumination has been ensured.		
4	Work area inspected prior to the start of the work.		
5	Area below the work place barricaded, particularly below		
	hot work.		
6	Workers provided with bags /box to carry bolts, nuts and		
	hand tools		
7	Arrangement for fastening hand tools made.		
8	All work platforms ensured to be of adequate strength		
	and ergonomically suitable.		
9	Fabricated makeshift arrangements are checked for		
	quality and type of material welding, anchoring etc.		
10.	Work at more than one elevation at the same segment is		
	restricted.		
	ACCESS/EGRESS		
1	Walkways provided with handrail, mid-rail and toe		
	guard?		
2	All checkered plates, gratings properly welded/ bolted?		
3	Are ladders inspected and they are in good condition?		
4	Are ladders spliced?		
5	Are ladders properly secured to prevent slipping, sliding		
	or falling?		
6	Do side rails extend 36" above top landing?		
7	Are built up ladders constructed of sound materials?		



INSPECTION OF HEIGHT WORKING

FORMAT NO: HSEP:14-F10

REV NO.: 00

PAGE NO. 02 OF 02

SI. No.	Descriptions	Observation (Yes/No)	Remarks
8	Are rugs and cleats not over 12" on center?		
9	Metal ladders not used around electrical hazards.		
10	Proper maintenance and storage.		
11	Ladders placed at right slope.		
12	Ladders / staircases welded/ bolted properly.		
13	Any obstruction in the stairs.		
14	Are landing provided with handrails, knee rails, toe boards etc.?		
15	Whether ramp is provided with proper slope.		
16	Proper hand rails / guards provided in ramps.		
	Housekeeping		
1	Walkways, aisles & all overhead workplaces cleared of		
	loose material.		
2	Flammable materials, if any, are cleared.		
3	All the de shuttering materials are removed after de		
	shuttering is done.		
4	Platforms and walkways free from oil/grease or other		
	slippery material.		
5	Collected scrap are brought down or lowered down and not dropped from height.		
	PPE And Safety Devices		
1	Use of safety helmet, safety belts ensured for all workers		
2	Anchoring points provided at all places of work.		
3	Common lifeline provided wherever linear movement at		
	height is required.		
4	Safety nets are use wherever required.		
5	Proper fall arrest system is deployed at critical		
	workplaces.		
6	Crawler boards/Safety system or works on fragile roof		
	are used.		

Signature of Site I/C of subcontractor :



INSPECTION OF WELDING AND GAS CUTTING

FORMAT NO: HSEP:14-F11 REV NO.: 00 PAGE NO. 1 OF 02

Name of Site	
Name of Sub-Contractor	
Inspected by	
Date of Inspection	

Weldin	ng			
Sl.no.	Description	Υ	N	Remarks
		е	О	
		S		
1	Is electric connection given through			
	30 mA ELCB/RCCB to welding m/c?			
2	Is electric cable fitted properly in			
	junction box on m/c?			
3	Is electrical cable free from joints?			
4	Are the joints attached firmly &			
	insulated with tape?			
5	Is double earthing given to body of			
	m/c?			
6	Is the physical condition of the m/c			
	good?			
7	Is ON/OFF switch connected to the			
	m/c is working and in good			
	condition?			
8	Are indication lamps on m/c			
	working?			
9	Is the electrode holder in good			
	condition?			
10	Are the cables of the welding m/c			
	lugged & tight properly?			
11	Are return lead connected properly			
	(Rod, Angle, Channels shall not be			
	used)			
	Total No of NO			
	Total No of YES			



INSPECTION OF WELDING AND GAS CUTTING

FORMAT NO: HSEP:14-F11

REV NO.: 00 PAGE NO. 2 OF 02

Gas Cutt	ting			
SI. no	Description	Yes	No	Remarks
1	Are Cylinders kept on trolleys?			
2	Physical condition of Gas cylinders Good?			
3	Is there Oil/Grease on valve of the cylinder?			
4	Are pressure regulators in good condition?			
5	Condition of hose pipe OK?			
6	Are hose pipe clamped with hose clip?			
7	Is flash back arrestor & NRV fitted on torch both for O2 and LPG cylinder?			
8	Is nozzle of the torch cleaned?			
	Total Number of NO			
	Total No of YES			
	% Compliance			

Signature of Site I/C of subcontractor :



INSPECTION OF ELECTRICAL INSTALLATION

FORMAT NO: HSEP:14-F12

REV NO.: 00

PAGE NO. 01 OF 02

Name of Site	
Name of Sub-Contractor	
Inspected by	
Date of Inspection:	

Sr.	Contents	Yes/No	Remarks
No.			
Α	Cable		
1.	Whether the condition of cable is checked?		
2.	Are cables received from other sites checked for		
	insulation resistance before putting them into use?		
3.	Are all main cables taken either underground /		
	overhead?		
4.	Are welding cables routed properly above the ground?		
5.	Are welding and electrical cables overlapping?		
6.	Is any improper joining of cables/wires prevailing at site?		
В	DBs/SDBs		
1.	Is earth conductor continued up to DB / SDB?		
2.	Whether DBs and extension boards are protected from		
	rain / water?		
3.	Is there any overloading of DBs / SDBs?		
4.	Are correct / proper fuses & CBs provided at main		
	boards and sub-boards?		
5.	Is energized wiring in junction boxes, CB panels &		
	similar places covered all times?		
С	ELCB		
1.	Whether the connections are routed through ELCB?		
2.	Is ELCB sensitivity maintained at 30 mA?		



INSPECTION OF ELECTRICAL INSTALLATION

FORMAT NO: HSEP:14-F12

REV NO.: 00 PAGE NO. 02 OF 02

Sr.	Contents	Yes/No	Remarks
No.			
3.	Are the ELCB numbered and tested periodically & test		
	results recorded in a logbook countersigned by a		
	competent person?		
D	Grounding		
1.	Is natural earthing ensured at the source of power		
	(main DB at Generator or Transformer)?		
2.	Whether the continuity and tightness of the earth		
	conductor are checked?		
3.	Mention the gauge of the earth conductor used at the		
	site.		
4.	Mention the value of Earth Resistance.		
E	Electrically operated Machines or Accessories.		
1.	Whether the plug top is provided everywhere.		
2.	Are all metal parts of electrical equipment and light		
	fittings / accessories grounded?		
3.	Is there any shed or cover for welding machines?		
4.	Are halogen lamps fixed at proper places?		
5.	Are portable power tools maintained as per norms?		
6.	Any other information:		

Signature of Site I/C of subcontractor :



INSPECTION OF ELEVATOR

FORMAT NO: HSEP:14-F13

REV NO.: 00

PAGE NO. 01 OF 01

Name of Site	
Name of Sub-Contractor	
Inspected by	
Date of Inspection	

Sr. No.	Description		Remarks	
1.0	Name of equipment			
2.0	Basic Information of equipment			
2.1	Specification			
2.2	Sr. No. of equipment			
2.3	Make			
2.4	Year of manufacture			
3.0	Major repairs/overhauls(Furnish details of	work carried o	out)	Date(s) of major repair/overhaul
3.1				
3.2				
3.3	Repairs carried out at site			
4.0	Any performance test conducted		Yes/No	
5.0	Document Submitted		Yes/No	
6.0	Manufacturer's test / guarantee certificate	!		Not available
7.0	Performance test		Done/ Not	Done
8.0	Acceptance Norms			
9.0	Committee Observations			
10.0	Date of next review (if accepted)			
10.0	Date of flext review (if accepted)		l	
Signa	ture-Subcontractor/ Subcontractor's Safety Officer	Signatu	re-Site Safe	ty Officer (BHEL)

	3	7
/-	4	4
		F

Inspection of Excavation

FORMAT NO: HSEP:14-F13E REV NO.: 00 PAGE NO. 01 OF 01

Name of Site :	
Name of Sub-Contractor :	
Inspected by :	
Date of Inspection :	

Sl.no.	Description	Yes	No	Remarks
1	Precautions taken for Underground Electrical Cable			
2	Precautions taken for Under / Above ground sewer/ Drinking Water Line			
3	Precautions taken for Underground Telecommunication Line			
4	Precautions taken for Underground Product/Utility Line			
5	Precautions taken for Underground Fire Water Line			
6	Shoring / Shuttering / Sheet piling done to prevent collapse of excavation walls. Strength of Excavation wall ensured at all times			
7	Slope Cutting / Angle Maintained			
8	Hard Barricading & Edge Protection provided			
9	Separate Safe Access for Man and Vehicle			
10	Lighting arrangement			
11	Banksman Provided			
12	Required basic PPEs provided			
13	Excavated soil / Construction Material / equipment kept away from the edge.			
14	First aid in attendance.			
15	Other:			
	Total No of YES			



HSE PENALTY

FORMAT NO: HSEP:14-F14

REV NO.: 00 PAGE NO. 1 OF 02

Sub: MEMO for Penalty for non-compliances in Safety

Following lapse (tick marked) was observed and penalty is imposed as stated at the bottom of this memo. It is requested that such occurrences be please avoided in future.

Safety Area

SN	Violation of Safety Norms	Fine (in Rs)
01	Not Wearing Safety Helmet	200/- *
02.	Not wearing Safety Belt or not anchoring life line	500/-*
03	Not wearing safety shoe	200/-*
04	Not keeping gas cylinders vertically	200/-
05	Not using flash back arrestors	100/-
06	Not wearing gloves	50/- *
07.	Grinding Without Goggles	50/- *
08.	Not using 24 V Supply For Internal Work	500/-
09.	Electrical Plugs Not used for hand Machine	100/-
10.	Not Slinging properly	200/-
11.	Using Damaged Sling	200/-
12.	Lifting Cylinders Without Cage	500/-
13.	Not Using Proper Welding Cable With Lot of Joints And Not Insulated Property.	200/-
14.	Not Removing Small Scrap From Platforms	500/-
15.	Gas Cutting Without Taking Proper Precaution or Not Using Sheet Below Gas Cutting	500/-
16.	Not Maintaining Electric Winches Which are Operated Dangerously	500/-
17.	Improper Earthing Of Electrical T&P	500/-
18	No or improper barricading	500/-
19.	Activity carried out without Safety work permit (Height work, Lifting activity, Hot work-each person/case)	1000/-
20.	Incident Resulting in Partial Loss in Earning Capacity	25,000/- per victim
21.	Fatal Incident Resulting in total loss in Earning Capacity	1,00,000/- per victim for first instance #

Legend: -

#: or as deducted by customer, whichever is higher. For repeated fatal incident in the same Unit incremental penalty to be imposed. The subcontractor will pay 2 times the penalty compared to previously paid in case there are repeated cases of fatal incidents under the same subcontractor for the same package in the same unit.

^{*:} per head. For repeated violation by the same person, the penalty would be double of the previous penalty. Date of "Repeated violation" will be counted from subsequent days.



HSE PENALTY

FORMAT NO: HSEP:14-F14

REV NO.: 00 PAGE NO. 2 OF 02

Details (if any) related to non-compliance (Name of persons, Nature of deficiency, etc.)

Penalty imposed:
1, Rate as per above chart
2. No. of Persons/ machine/ event/ labour
3. Total Penalty= 1. X 2. =
Signature:
Witnessed by: (Sub- Contractor representative) (BHEL Personnel)
Name Name
Distribution: 1 Copy: to Sub- contractor, 1 Copy to Site Construction Manager (BHEL)



Incident Report

FORMAT NO: HSEP:14-F15 REV NO.: 00

(To be submitted within 24 hours of time of incident)

PAGE NO. 01 OF 01

Type of incident: Fatal/Major/ Minor/Fire/Property Damage/Near-miss

1	NAME OF SITE		3	ACTIVITY AREA					
2	SCOPE OF WORK		4	4 NAME OF CONTRACTOR					
				5	NAME & DESIGNATION OF BHEL ACTIVITY I/C				
6	DATE & TIME OF ACCIDENT			7	7 DATE RESUMED				
8	NO. OF WORK-DAYS								
9	NO. OF MANHOURS	LOST BY O	THERS						
10	PERSONAL DETAILS	OF INJURE	D AND / OR DETAILS O	F M	ATERIALS / EQUIPMENT / PROP	ERTY DAMAGED			
NAME				N/	AME OF MATERIAL / EQUIPMEN	T / PROPERTY			
PERIO	OD OF EMPLOYMENT								
AGE	YRS	SEX	MALE/ FEMALE		ESTIMATED COST	ACTUAL COST			
MARI	TAL STATUS	SIN	GLE / MARRIED						
occi	JPATION				NATURE OF DAI	MAGE			
PART	OF BODY INJURED								
NATU	IRE OF INJURY								
	ICY (OBJECT / EQUIF ONSIBLE FOR CAUSI		STANCE) MOST NT/INJURY/DAMAGE						
PERSON (NAME & DESIGNATION) WITH MOST CONTROL OVER AGENCY (OBJECT / EQUIPMENT / SUBSTANCE) CAUSING ACCIDENT INJURY / DAMAGE									
13	DESCRIBE CLEARLY	Y HOW THE	ACCIDENT OCCURRED	(US	E ADDITIONAL SHEET, IF REQU	IRED			
ANAL	.YSIS								
14	WHAT ACTS AND / C								
15	WHAT ARE THE BAS OF THESE ACTS AN		I FOR THE EXISTENCE DITION ?						
WHAT CORRECTIVE ACTIONS HAVE BEEN TAKEN TO PREVENT ACCIDENT RECURRENCE ?									
DATE :					SIGNATURE OF SI	TE HSE COORDINATOR			
17 COMMENTS OF HEAD / SOX									
	DATE:				s	GIGNATURE OF HEAD/SOX			



Format for Monthly HSE Planning & Review

FORMAT NO: HSEP:14-F30

REV NO.: 00 PAGE NO. 01 OF 3

Name of the Site			Name of the Subcontractor	
Scope of Work		Date		
PART	- A: PLAN OF HSE ACTIVITIES FOR	THE MONTH OF		PART-B: REVIEW ON
SN.	Description of HSE Activity & Forn	nats	Plan & Targets for the month	Review
1	Availability of First Aid Box at Requi per Format: Fo1		Areas 1	
2	Health check-up as per Format: Fo2		Health check-up for Nos 1. New inductees 2. Drivers & Operators 3. Workers in following high risk areas: a	
3	Induction training of newly joined w	orkers as per Format: Fo3	Minimum No. of workers:	
4 Toolbox talks (TBT) conducted before start of work as per Format: Fo4		Locations of TBTs & No. of workers 1		
5	PPE usage and issue as per Format:	Fo6		
5	Inspection of T&Ps as per Format: F	07	List of T&Ps to be inspected 1.	
•	Identification & Inspection Status of	T&Ps as per Format: Fo8		
}	Inspection of Cranes & Winches as p	er Format: Fo9	List of Cranes & Winches & Nos. 1	
)	Inspection of Height Working as per	Format: F10	Areas: 1	
0	Inspection of Welding & Gas Cutting	operations as per Format: F11	Areas: 1	
1	Inspection of Electrical Installations	as per Format: F12	Locations: 1	
.2	Inspection of Elevators (as applicabl	e) as per Format: F13	Locations: 1	
<u>1</u> 3	Inspection of Excavation as per Forn	nat: F13E	Locations: 1	



Format for Monthly HSE Planning & Review

FORMAT NO: HSEP:14-F30

REV NO.: 00 PAGE NO. 02 OF 3

SN.	Description of HSE Activity & Formats	Plan & Targets for the month	Review
14	Job Safety Analysis as per Format F ₃ 2B	Activities:	
15	Regular Job Specific Training (Re-training) for workers involved in hazardous activities	Topics/ Hazards & No. of workers 1	
16	Mass housekeeping (HK) drive in work areas	Areas 1.	
17	Vertigo Test of Height workers	Minimum No. of workers:	
18	Deployment of qualified HSE Officers as per contract	Location(s) & Nos. 1	
19	Deployment of qualified HSE Stewards as per contract	Location(s) & Nos.	
20	Deployment of Safety tools & Equipment (Safety Nets, Lifelines, Fall arrestors, Man-cages, flashback arrestors, scaffolding etc.)	Tool/ Equipment & Location 1	
21	Safety Walks by site in charge of agency (4 -Weekly once)	Dates:	
22	Safety walks by departmental head (8-Weekly twice)	Dates:	
23	Availability/ deployment of Safety posters/ placards/ signage at strategic locations	Locations: Nos.	
24	Provision of clean drinking water sources for workers	Locations: Nos.	
25	Provision of toilets for workers (separate for male & female workers)	Locations: Nos.	
26	Rest sheds for workers during lunchtime, rain, dust storm etc.	Locations: Nos.	
27	Availability of following in Labor colony	 Clean drinking water Toilets Cleanliness & Hygiene Grass cutting, Fogging Electrical Inspection 	



Format for Monthly HSE Planning & Review

FORMAT NO: HSEP:14-F30

REV NO.: 00 PAGE NO. 03 OF 3

SN.	Description of HSE Activity & Formats	Plan & Targets for the month	Review
28	Availability of dust/ waste bins at various locations	Locations:	
29	Availability of Ambulance (individual/joint) in each shift	Ambulance No.	
30	Availability of emergency vehicle in each shift	Emergency vehicle	
31	Deployment/ Availability of tested Fire Extinguishers	Locations & Nos. 1	
32	Tree plantation	Locations & Nos. 1	
33	Waste disposal & Scrap Bins	Locations 1	
34	Illumination checks	Locations 1	
35	Safety award function: 1. Display of good practices Award presentation	Minimum 1 per month	
36	Submission of Daily Reports as per Format No.F31A	Daily Reports (Night & Day Shifts)	

PLAN			<u>REVIEW</u>
Agency	BHEL	Agency	BHEL
Name:	Name:	Name:	Name:
Sign:	Sign:	Sign:	Sign:
Date:	Date:	Date:	Date:



Format for Daily HSE Reporting

FORMAT NO: **HSEP:14-F31** A REV NO.: oo

REV NO.: 00 PAGE NO. 01 OF 1

Note: Following format to be submitted (preferably) in excel/ soft copy by subcontractor daily at the end of each shift. Any photographs/ records to be attached

Site														Subo	ontra	ctor												
Year	1			1	1			I	Mon	th	1							ı	1	Day						1		
SHIFT	Submitted By	Work Area(s)	Staff	Man-Power	Safety Officers	Safety Stewards	Tool Box (Topics and No. of Participants)	Induction Training (No. of Participants)	Vertigo Test (Numbers Tested)	On-the-Job Training (Topic & participants)	Work Permits	Job Safety Analyses conducted	Height Work Inspection	Other Hazardous Activities Inspection	T&P Inspection (Names & Nos. Inspected)	Safety Walk (Designation, Areas)	HSE Meeting	Safety Reward (Details)	Housekeeping/ Dust Suppression/ Tree Plantation Activities (Locations/ Details)	Lost time Accident	Restricted Work Case	Medical Treatment Case	First Aid Case	Near miss	Property Damage/ Fire	Non-Compliances Submitted by BHEL	Complied by Agency	Any other Remarks/Inputs
Day																												
Night															NA		NA	NA	NA									



Job Safety Analysis Format

FORMAT NO	O: HSEP	:14-F32B
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REV NO.: 00 PAGE NO. 01 OF 1

Name of the Site		
Name of the Subcontractor		
Activity, Area		
	HAZARDS	PRECAUTION
(1)		
(Name) Submitted By	Reviewed By	Approved By
(Agency HSE)	(BHEL Execution)	(BHEL HSE)
(Date)	Execution	



FORMAT NO: HSEP:14-F33

REV NO.: 00 PAGE NO. 01 OF 3

Checklist for Evaluation of HSE Performance

SL	Parameter for Measurement	M/ O	Wt	Supporting Documents
1a	Induction training for new workers conducted through audio-visual medium & documented ?	М	1	Induction Training Records
1b	Tool box talk conducted regularly as per plan, and documented?	М	1	Toolbox Talk Records
10	Contractor in charge and safety in charge attended safety meetings?	М	2	Minutes of Meeting
1d	Whether observations in safety meetings are complied before next meeting?	М	2	-do-
1e	Preparation and submission of Monthly HSE report within stipulated time	М	1	Report submission date
1 f	Preparation and submission of Incident/near-miss report and RCA Report (as applicable) within stipulated time	М	1	Incident/ Near Miss Records
1 g	Carrying out Inspections and submission of Inspection reports within stipulated time	М	1	Inspection Records
1h	Regular Job Specific Training ensured for High Risk Workers (through audio-visual medium) as per plan	М	1	Training & Attendance Records
2a	Whether the contractor is registered under BOCW	М	2	BOCW Registration Certificate
2b	Availability of Qualified safety officer (1 for every 500 labour)	М	2	Safety Officer qualification & experience records
20	Availability of Qualified safety supervisor (1 for every 100 labour)	М	2	Safety Officer qualification & experience records
2d	All the workers are provided and using safety helmets and safety shoes/gum boots	М	2	PPE Issue Records, Inspection/ non-conformity records
2e	Housekeeping done on regular basis and scrap removal at site	М	1	Housekeeping records, Inspection/ non-conformity records
2f	Usage of Goggles/Face shields and Hand gloves for gas cutter and grinders		1	PPE Issue Records, Inspection/ non-conformity records
2g	Wall openings & floor openings are guarded?		1	Inspection/ non-conformity records
2h	Adequate illumination provided in all working area?		1	Inspection/ non-conformity records
2i	Safety posters, sign boards and emergency contact numbers in all prominent location are displayed?		1	Inspection/ non-conformity records
2j	Availability of automatic reverse horns, Main horn, hook latches for Vehicles, mobile cranes, Hydras		1	Inspection/ non-conformity records
2k	Ban of carrying mobile phones to work place is implemented for workers		1	Inspection/ non-conformity records
2	Availability of Tags & Inspection Certificates for Cranes of all capacities		1	Master T&P List with internal & external test details
21.2	Availability of Tags & Inspection Certificates for Winches of all capacities		1	Master T&P List with internal & external test details
21.3	Availability of Tags & Inspection Certificates, color coding for Chain pulley blocks		1	Master T&P List with internal & external test details
21.4	Availability of Tags & Inspection Certificates for Vehicles - Trailers, Dozers, Dumpers, Excavators. Mixers etc.		1	Master T&P List with internal & external test details
21.5	Availability of Tags & Inspection Certificates for Welding machines, grinders, Drilling machines, etc.		1	Master T&P List with internal & external test details
21.6	Availability of Tags & Inspection Certificates, colour coding for Wire rope slings etc.		1	Master T&P List with internal & external test details
21.7	Availability of Tags & Inspection Certificates for Batching plants		1	Master T&P List with internal & external test details



FORMAT NO: HSEP:14-F33

REV NO.: 00 PAGE NO. 02 OF 3

Checklist for Evaluation of HSE Performance

SL	Parameter for Measurement	M/ O	Wt	Supporting Documents
2m.1	Use of Lifting Permit as per requirement		1	Permit Records
2m.2	Use of Height Permit as per requirement		1	Permit Records
2m.3	Use of Hot Work Permit as per requirement		1	Permit Records
2m.4	Use of Excavation permit as per requirement		1	Permit Records
2m.5	Use of Confined space work permit as per requirement		1	Permit Records
2m.6	Use of Grating removal and safety net removal permit as per requirement		1	Permit Records
2m.7	Use of Lockout-Tag out permit as per requirement		1	Permit Records
2m.8	Use of Radiography permit as per requirement		1	Permit Records
2m.9	Use of Night/ Holiday Work Permit as per requirement		1	Permit Records
2m.10	Use of Any other Applicable Permit as per requirement		1	Permit Records
3a	Material safety data sheet(MSDS) available for all chemicals and displayed in usage and storage area?		1	Inspection/ non-conformity records
3p	Spillages of oil/concrete and other chemical is controlled and cleaned by proper method in case of spill?		1	Inspection/ non-conformity records
3c	Availability of adequate number of urinals in workplace and in elevations and maintained	М	1	
3d	Availability of rest rooms for workers at site	М	1	
3е	Availability of Drinking water facility at work spot		1	
3f	Hygienic Labour colony is provided for workers.		1	
4a	Is heavy/complex critical lifting permit obtained for heavy, complex materials before handling/erection activity?		1	Work Permit records
4b	Whether area below lifting activities barricaded		1	Inspection/ non-conformity records
4C	Availability of experienced rigging foreman		1	Experience details of rigging foreman
4d	Is agency is following proper storage and handling procedure as per manufacturer standard for all hazardous material?		1	Procedure for storage & handling
4e	Are oxygen and acetylene cylinders are transported to work place from storage area in trolleys		1	
5a	Whether all deep excavation has been protected by barrier		1	Inspection/ non-conformity records
5b	Sloping/benching & shoring provided for excavation as per requirement?		1	-do-
5C	Proper access and egress provided for excavations?		1	-do-
5d	Blasting is done in controlled manner?		2	-do-
6a	Whether Electrical booth is equipped with Co ₂ fire extinguishers and fire buckets filled with sand?		2	Inspection/ non-conformity records
6b	Availability of Illumination lamp in electric booth?		1	-do-
6c	whether Caution Boards have been displayed?		1	-do-
6d	Usage of Metal Plug top for all hand power tools?		1	-do-
6e	Usage of Insulated welding cables.		1	-do-
6f	Electrical Booth/Distribution Board to be covered by proper Canopy.		1	-do-
6g	Availability of functional & individual 30ma ELCB / RCCB and MCB for protection and conducting periodical check-up?		1	-do-
6h	Double earthing for panel boards and all machinery & proper earth pit with regular inspection available?		1	-do-
6i	Whether Electrician is qualified and experienced		1	Qualification & Experience records of electrician
6 <u>j</u>	Availability and usage of Rubber hand gloves by electrician?		1	Inspection/ non-conformity records



FORMAT NO: HSEP:14-F33

REV NO.: 00 PAGE NO. 03 OF 3

Checklist for Evaluation of HSE Performance

SL	Parameter for Measurement	M/ O	Wt	Supporting Documents
7a	Whether Scaffolding pipes made with steel or aluminum, are being used and checked periodically by experienced/ certified scaffolder?		2	Inspection/ non-conformity records
7b	8mm Stainless Steel wire rope with plastic cladding is provided for life line (Vertical / Horizontal) during height work?		2	-do-
7C	Availability of emergency lighting in case of power failure		1	-do-
7d	Whether all the openings are covered with Safety Nets made of fire proof Nylon?		1	-do-
7e	Whether MS pipe rails around staircases & platforms in usage are provided with top, middle rails and toe guard?		1	-do-
7f	Whether Ladder with vertical life line /Fall arrestor is available to climb?		1	-do-
79	Whether all workers deployed for working at height have been issued height pass after undergoing vertigo test?		1	Height Pass records
7h	Whether all workers deployed for height work / climbing ladder are provided and using Double lanyard safety belt?		1	PPE Issue records, inspection/ non- conformity reports
7 i	Is all hand tools/Small material used by height workers is tied firmly to prevent fall?		1	-do-
8a	Flash back arrestors for all gas cutting sets is available on Torch side and cylinder side		1	Inspection/ non-conformity records
8b	Oxygen/Acetylene/LPG cylinders not in use have caps in place and stored separately?		1	-do-
8c	Availability of Face screen, Hand gloves, and Apron, for welders		1	-do-
8d	Protection from falling hot molten metal during metal cutting / welding at height by providing GI sheet below the cutting area especially in fire prone areas		1	-do-
9a	Pre-employment medical check-up done for all workers and submitted?		1	Medical check records
9b	Availability of first aid center, with MBBS doctor(Own or Sharing basis)	М	2	Attendance records
9с	Availability of Ambulance facility 24 hours (Own or sharing basis)	М	2	-do-
9d	Is First aid trained personnel's are available and their names are displayed at site?	М	1	-do-
9e	Availability of Emergency vehicle at site		1	
9f	Periodical medical check-up is conducted for all the workers and submitted?		1	Medical check records
99	Availability of sufficient number of first aid box as per standard list and maintaining record		1	Inspection records
10a	Availability of Fire extinguishers, buckets at all vulnerable points		2	Fire extinguisher records
10b	Periodic fire mock drill conducted?		1	Fire, Mock drill records
100	Are all flammable materials are stored separately?		1	
10d	Periodic grass cutting is done in material storage area?		1	
10e	Availability of 24V DC lighting in confined space work area		1	
10f	Availability of exhaust fan in confined space work area		1	

Note:

- M: Mandatory; O: Optional. Points other than mandatory can be excluded with appropriate justification (scope etc.) by BHEL
- Additionally: 30 Marks for each Fatal Accident and 10 mark for each major accident shall be deducted.



SAFETY WORK CLEARANCE	Permit no.		
Project:	Emergency Contact Nos:		
Subcontractor:			

BURNING/WELDING /HOT WORK PERMIT

Area	:	Date:		Time:	
	e of Site Engineer (Permit Requesting Authority):				
	e of Work Performing Contractor:		_		
	e of Package In charge:				
Desc	ription of Work:				
	Execution Date:				
The a	above signing person(s) will be responsible to ensure a e permit to work.	that the above described work will be o	done under all the	safety precauti	ons mentioned
	ollowing precautions are to be taken:				
No.	Item			Yes	Not required
1.	Proper Access/Exit available				
2.	Proper ventilation and /or lighting provided.				
3.	Proper and safe scaffolding, platform, ladder provid	led.			
4.	Welding machine located in a clean and dry area.				
5.	Welding machine grounded at the equipment and p provided for welding machine.	proper leakage current protection devic	e (ELCB)		
6.	Emergency STOP buttons are in working condition.	. Welder /Helper knows how to operate	e it.		
7.	Welding machine input/output cables, welding holds good condition.	er and weld return clamp (Holder) are	insulated and in		
8.	Welder & Fitter trained to connect ground/work retu welding machine.	ırn clamps (Holder) to work place prior	to energization of		
9.	Gas cylinders are stacked vertically and not below twith cylinder.	the welding / cutting area. Regulator ke	ey is available		
10.	Pressure gauges/Flash back arrestor provided and	in working condition.			
11.	Personal Protective equipment Minimum applicable shoes, leather gloves, long sleeve and nose mask -		ng helmet, safety		
12.	In case of pits, water removed from the pit and woo	od/rubber insulation provided.			
13.	Safety signboards are in place.				
14.	Adequate and Suitable nos. of fire fighting extinguis	sher provided.			
15.	Nearby combustible material removed. Housekeepi	ing done.			
16.	Other				
			_	_	
	e of Contractor Safety Officer:ewed and approved by BHEL Site Engineer (Permi		Da	ate:	1 ime:
	ewed and approved by BNEL Site Engineer (Fermi e:	• • • • • • • • • • • • • • • • • • • •	Date:	Ti	me:
	e of BHEL Safety Representative:				
I und	erstand the precaution to be taken as described above upervision by following all precaution and Safety Rules	e and as per project requirement and I			
-	e of Work Performing Authority:		Date:	Time):
Perm	it Cancellation:				
I here	eby declare that the work is complete, all workers und	er my control have been withdrawn an	d the site restored	to safe tidy cor	ndition.
Name	e of Work performing Authority:	Sign:	Date:	Time:_	
Name	e of Site Engr. (Permit Requesting Authority):	Sign:	Date:	Time:	
Name	e of BHEL Site Engr. (Permit Issuing Authority):	Sign:	Date:	Time:	
	(This perr	mit is valid only for the date it is issued)		
Origi	nal at BHEL site Second	Copy - BHEL SAFETY	Third Copy : C	ontractor	



SAFETY WORK CLEARANCE	Permit no.		
Project:	Emergency Contact Nos:		
Subcontractor:			

LIFTING ACTIVITY PERMIT

Area	·	Date:	Time:	
Name	e of Site Engineer (Permit Requesting Authority):		Sign: Nar	ne of Work
Perfo	orming Contractor:			
Name	e of Package In charge:	Sign:	Date):
Desc	ription of Work:			
	Execution Date:			
	above signing person(s) will be responsible to ensu autions mentioned on the permit to work.	re that the above described work w	vill be done under all	the safety
The f	ollowing precautions are to be taken:			
No.	Item		Yes	Not required
1.	Crane used for lifting activity tested, certified and appro-	ved for rated lifting		
2.	All lifting tackles, gears/appliances are tested and certifi	ed for lifting works.		
3.	Crane operator is trained and competent for lifting opera	ation.		
4.	Lifting sling/ belt is protected against sharp edge of the	jobs to be lifted.		
5.	Access and exit marked and without obstruction.			
6.	Lifting arrangement adequate.			
7.	Unwanted rubbish material removed from work platform	l.		
8.	Minimum 2 guidelines have been provided for balancing	g and guiding jobs to be lifted.		
9.	Periphery area of crane booms as well as lifting job is be posted.	arricaded and unauthorized/no-entry si	gn board	
10.	Rigger and signal man is trained and competent for lifting	ng work.		
11.	No lifting activity to be carried out during lightening, hea	vy wind/rain.		
12.	If scaffolding to be used during lift, scaffolding with valid	I tag available for use.		
13.	Double lanyards safety harness/belt checked an in work	king condition.		
14.	Safety shoes (non-slip), helmet with chin strap available	e with employees.		
15.	Others.			
Name	e of Contractor Safety Officer:	Sign:	Date:	Time:
	ewed and approved by BHEL Site Engineer (Per		Batc	111110.
	e:		Date:	Time:
	e of BHEL Safety Representative:			
	lerstand the precaution to be taken as described ab uted under my supervision by following all precautio		t and hereby confirm	that work will be
	e of Work Performing Authority:		Date:	Time:
Perm	nit Cancellation:			
I here	eby declare that the work is complete, all workers unition.	nder my control have been withdra	wn and the site resto	ored to safe tidy
Name	e of Work performing Authority:	Sign:	Date:	Time:
	e of Site Engr. (Permit Requesting Authority):			
Name	e of BHEL Site Engr. (Permit Issuing Authority):	Sign:	Date:	Time:

(This permit is valid only for the date it is issued)



SAFETY WORK CLEARANCE	Permit no.		
Project:	Emergency Contact Nos:		
Subcontractor:			

WORKING AT HEIGHT PERMIT

moa.		Date:	Tir	me:
Name	of Site Engineer (Permit Requesting Authority):		Sign: N	Name of Work
Perfor	rming Contractor:			
Name	of Package In charge:	Sign:	D	ate:
Descr	iption of Work:			
	Execution Date:Ti			
	bove signing person(s) will be responsible to ensure to utions mentioned on the permit to work.	tnat the above described work	wiii be aone unaer	all the safety
The fo	ollowing precautions are to be taken:			
No.	Item		Yes	Not required
1.	All workers on job are medically fit for working at height (Pe	erson should not have vertigo)		
2.	Scaffolding with valid tag available for use			
3.	Safety harness with life line support/ fall arrester are check	ed and in working condition		
4.	Safety shoes (non-slip), Helmet with chin strip available wi	th employees		
5.	Safety nets are provided as per design and provided 25 ft.	below working area & extending 8	3 ft beyond.	
6.	Horizontal life lines are provided to cater to design specifical	ation of 2300kg per person.		
7.	Ladders have been inspected and provided as per BHEL s	tandard/contract.		
8.	All lifting / tightening tools, hand tools/equipment checked a	and in good condition		
9.	Access and exit marked and without obstruction.			
10.	Lighting arrangement adequate.			
11.	Unwanted and rubbish material removed from working plat	form.		
12.	Electrical cable, welding Hose/Compressed air hose prope	rly secured and lay down without	obstruction.	
13.	Signboards provided on working platforms			
14.	Hazards in the vicinity are identified and communicated to	the worker.		
15.	Other			
Nome	of Contractor Safaty Officer	Sign	Data	Time:
	e of Contractor Safety Officer:ewed and approved by BHEL Site Engineer (Permi		Date	riine
	:::		Date:	Time:
	e of BHEL Safety Representative:			
I unde	erstand the precaution to be taken as described above tted under my supervision by following all precaution a	e and as per project requireme		
Name	of Work Performing Authority:	Sign:	Date:	Time:
Perm	it Cancellation:			
I here condit	by declare that the work is complete, all workers under tion.	er my control have been withd	rawn and the site re	stored to safe tidy
	of Work performing Authority:			
	e of Site Engr. (Permit Requesting Authority):			
	of BHEL Site Engr. (Permit Issuing Authority):	•		

(This permit is valid only for the date it is issued)



Regd Office: BHEL House, Siri Fort, New Delhi-110049



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Name of Project	Contract No.	
Name of Work	Name of Contractor	

PART- A: PLAN/ REVIEW OF WORK FOR THE MONTH OF

Data	of Dlass	D	
Date	or Plan/	Keview	

Form No: F-14 (Rev 01)

SN.	Description of work	Unit of Measur ement	Unit Rate	(QTY Pla	nned for the per Part –C of month)	attril contrac	tive Shortfall butable to ctor upto last month er Note 1)	Ac	hieved	to BHE	attributable L w.r.t Plan ol. 3 of Part- D)	attril Contra	tive Shortfall butable to actor upto & ng this month	REMARKS (Reasons for Shortfall attributable to Contractor.
(a)	(b)	(c)	(d)		A		В		C		D	E=A	A+B-C-D	Supporting documents to be kept as record.)
				Phy.	Financial	Phy.	Financial	Phy.	Financial	Phy.	Financial	Phy.	Financial	kept us record.)
	Value of Other Items not mentioned above but planned to be executed in this month													
	Total			<u> </u>	ΣΑ		ΣΒ		ΣC		ΣD		ΣΕ	

Note 1: In addition to the work planned as per Col. 'A', Contractor shall also make full efforts to minimize the 'Cumulative shortfall attributable to contractor upto the month' as mentioned in Col. 'B' by enhancing its resources, so as to achieve the completion of activities as per agreed schedule. In case contractor is not able to execute the entire shortfall, then BHEL 'Engineer in-charge', shall decide the priority of work to be executed and it shall be binding on the contractor.

Note 2: Percentage Shortfall attributable to contractor w.r.t. "Plan - Shortfall attributable to BHEL" for the month = $[(\Sigma E - \Sigma B)/(\Sigma A - \Sigma D)]x100$ In case, $(\Sigma E - \Sigma B)$ is negative, then it shall be treated as zero percent."

Note 3: Form 14 should include all items being planned in the current month, and all items against which shortfall was attributable to contractor till previous month. However, for practical reason, if it is not possible to mention some of the items in Form-14 being planned to be executed in this month, then also value of such items shall necessarily be included in calculation of Total Value.

Note 4: In case reason for shortfall attributable to contractor is w.r.t. T&P and Manpower, it should be in conformity with Part B1 and B2.





Name of Project	Contract No.	
Name of Work	Name of Contractor	

CONTRACTOR'S SCOPE:-

PLAN					DEPLOYMENT STATUS			
Major T&P to be deployed as per work planned for the month	QTY.	Deployment Period (in days)	Weightage assigned to planned T&P (in fraction such that ΣC =1)	Actual Deployed Quantity	Actual Deployment Period (in days)	Weighted T&P Deployed	REMARKS (Works affected due to non-deployment of T&Ps)	
	A	В	С	D	Е	$F=(C \times D \times E) / (A \times B)$		

Note: In case, E>B, it shall be considered as E=B. Similarly, in case D>A, it shall be considered as D=A. Percentage of T&P Deployed = $\Sigma F \times 100$

BHEL SCOPE:-

	PLAN			DEPLOYMENT STATUS			
SN.	Major T&P to be deployed as per work planned for the month	QTY.	Deployment Period (in days)	Actual Deployed Quantity	Actual Deployment Period (in days)	REMARKS (Works affected due to non-deployment of T&Ps)	

Form No: F-14 (Rev 01)

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Form No: F-14 (Rev 01)

Name of Project Contract No. Name of Work Name of Contractor

PART – B-2: PLAN/ REVIEW OF DEPLOYMENT OF MANPOWER FOR THE MONTH OF	Date of Plan/ Review

CONTRACTOR'S SCOPE:-

SN.	Area of Work	Category of Labour	No. of Labour required as per category	Deployment Period (in days)	No. of Labour actually deployed	Actual Deployment Period (in days)	REMARKS (Works affected due to non-availability of labour)
			A	В	С	D	

Percentage of Manpower Deployed= $100 \times \Sigma(CxD)/\Sigma(AxB)$

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Name of Project	Contract No.	
Name of Work	Name of Contractor	

PART – C: PLAN(PHYSICAL) FOR THE NEXT MONTH i.e. Date of Plan

		Planned			T&Ps Re	equired		Manpower Required		REMARKS	
		Original	Quantity (excluding	Unit of	Contractor Sc	ope	BHEL Sco	cope			(Reasons for
SN.	Description of work	_	shortfalls attributable to contractor till date)	Measu- rement	Major T&P to be deployed as per work planned for the month	Quantity	Major T&P to be deployed as per work planned for the month	Quantity	Category of Labour	No. of Labour required as per Category	difference in Original Planned Quantity w.r.t. Planned quantity to be given)

Note 1: Planned quantity should be based on available/ expected fronts/ inputs in the next month

Form No: F-14 (Rev 01)

Note 2: "Original Planned Quantity" shall be as per latest jointly agreed programme between BHEL and Contractor before commencement of work or at the time of latest Time Extension, as the case may be.





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Name of Project	Contract No.	
Name of Work	Name of Contractor	

PART - D: REASONS FOR SHORTFALL ATTRIBUTABLE TO BHEL IN RESPECT OF PLAN FOR THE MONTH

	Description of Work	Quantities Affected		Reasons for Shortfall	Agency responsible for	Remarks
SN.	(from Part-A)	Physical	Unit of Measu-		reasons for shortfall	(Supporting Documents in respect of agency responsible)
	, , , ,	Quantity	rement			
1	2	3		4	5	6

Note1: Reasons for shortfall shall include non-availability of fronts/ drawings/ materials/ T&P (BHEL Scope)/ clearances etc. and other hindrances for which contractor is not responsible.

Note2: Agency responsible may be BHEL Site/ MUs/ Design Centre/ BHEL Customer etc.

Form No: F-14 (Rev 01)

Form No.: F-15 (Rev 03)

Project		Vendor			Package/Unit	
SI. No.	Parameter for Measurement	Classification	Max Score	Score Obtained	Measurement Key/Scheduled date	Supporting Documents
#1.01	Cumulative number of days in the month, the nominated Quality Officer or his authorised nominee was not available	QUALITY	1.5		Quality Officer or his authorised nominee should be available for all the days of working at site	Daily Log Book entry/Incident Registers/letter references
#1.02	Number of instances of non- compliance wrt FQP, Standard Drawings, Specifications, E&C Manuals etc.	QUALITY	1.5		No deviation from FQP, Standard Drawings, Specifications, E&C Manuals etc. is allowed without BHEL Engineer's approval.	Daily Log Book entry/Incident Registers/letter references
#1.03	Percentage submission of test certificates for batches of welding electrodes, cement, sand, aggregate, consumable, Paints etc. as applicable for this month OR In case of MM & MH package, monthly checks for Storage/Preservation of material.	QUALITY	1		Submission of 100% Test certificates for materials as per FQP is mandatory. MM & MH package: Storage/Preservation as per manual/procedure.	Daily Log Book entry/Incident Registers/letter references
#1.04	Number of incidences of improper storage & preservation (not in accordance to the guidelines of BHEL MUs or approved FQP) of materials, consumables (viz. gases, welding electrodes & fluxes, fuel etc.) & bought-out items (paints, fasteners etc.) under the custody of the contractor	QUALITY	1		Total number of non-compliances	Daily Log Book entry/Incident Registers/letter references
#1.05	Rework/ Rejection instances in a month necessitated due to deviation from Standard Drawings /Specifications /Manuals /E&C procedures /FQPs or due to Poor Workmanship by contractor	QUALITY	2		Reworks/ Rejection should be as minimum as possible. Total number of reworks/ rejections due to reasons attributable to contractor.	Daily Log Book entry/Incident Registers/letter references
#1.06	Delay in preparation & submission of signed protocols / log sheets / site register / NDT test reports as per approved FQP/ Qualified Welder List along with photocopies of Welder ID cards / Welder Performance Evaluation records etc. in the month OR in case of MM / MH package reconciliation statement / verification report.	QUALITY	1		Within 2 days of measurements taken or within first 3 working days of next month, as advised by BHEL Engineer	Daily Log Book entry/Incident Registers/letter references
#1.07	Number of instances for Major equipment/product failure due to negligence/improper work/poor workmanship by contractor	QUALITY	1		No such event should happen	Daily Log Book entry/Incident Registers/letter references
#1.08	Total number of complaints received in the month on the quality of finish / aesthetics	QUALITY	1		Total number of non-compliances	Daily Log Book entry/Incident Registers/letter references

Form No.: F-15 (Rev 03)

Project		Vendor			Package/Unit	
SI. No.	Parameter for Measurement	Classification	Max Score	Score Obtained	Measurement Key/Scheduled date	Supporting Documents
#2.01	Cumulative number of days of delay in submission of Plan FOR THE MONTH supported by deployment plan of Major T&Ps and Manpower (as per Form F-14) and relevant construction/layout drawings - like A4 plan / elevation views of plan status for structures / pressure parts/Civil Works, Piping isometrics for piping, Layout / PID / System reference sketch, Unloading / storage plans etc.as applicable.	PERFORMANCE	5		Number of days delayed from second working day of the month	Daily Log Book entry/Incident Registers/letter references
#2.02	Percentage of timely submission of Daily Reports for Progress of work, Resources, Consumables etc.	PERFORMANCE	1.5		Percentage of timely submission of daily reports/ Scheduled date is successive next day for each day	Daily Log Book entry/Incident Registers/letter references
#2.03	Number of days delayed for submission of FQP log sheets / protocols / Monthly Progress Reports for the work executed during the month under measurement	PERFORMANCE	1.5		Number of days delayed/Scheduled date is first 2 working days of next month	Daily Log Book entry/Incident Registers/letter references
#2.04	Percentage Shortfall attributable to contractor w.r.t. "Plan - Shortfall attributable to BHEL" for the month as per Form-14	PERFORMANCE	35		As per Part-A of Form-14	Progress review formats
#2.05	Number of days delayed in submission of Running bills with complete supporting documents (including updated reconciliation statement of BHEL issued material) for the month	PERFORMANCE	2		Number of days delayed / Scheduled date is 7th day of next month	Daily Log Book entry/Incident Registers/letter references
#2.06	Number of times the Top Management of contractor did not respond to critical issues of site, for the month	PERFORMANCE	1		Total number of instances	Daily Log Book entry/Incident Registers/letter references
#2.07	Cumulative number of days in the month the works were stopped / refused on interpretation of contract clauses/scope due to tendency of taking undue advantage by interpreting contract clauses in their favour	PERFORMANCE	2		Cumulative number of days lost	Daily Log Book entry/Incident Registers/letter references
#2.08	Number of times rework was refused by contractor	PERFORMANCE	1		Total number of non-compliances	Daily Log Book entry/Incident Registers/letter references

Project		Vendor			Package/Unit	
SI. No.	Parameter for Measurement	Classification	Max Score	Score Obtained	Measurement Key/Scheduled date	Supporting Documents
#2.09	Cumulative number of days in the month recording / logging was not done in daily log / history register / hindrance register / soft form in a PC maintained at BHEL Site Office	PERFORMANCE	1		Cumulative number of days recording or logging was not done / all days of the month	Daily Log Book entry/Incident Registers/letter references
#3.01	Percentage of Manpower Deployed w.r.t. Plan for the month as per Form-14.	RESOURCES	7		As per Part-B2 of Form-14	Daily Log Book entry/Incident Registers/letter references
#3.02	Percentage of T&P Deployed w.r.t. Plan for the month as per Form-14.	RESOURCES	7		As per Part-B1 of Form-14	Daily Log Book entry/Incident Registers/letter references
#3.03	Cumulative number of major instances in the month hampering / affecting progress of work due to breakdown or non-availability of major T&P and MME for the work, under the scope of Contractor	RESOURCES	3		Cumulative number of instances	Daily Log Book entry/Incident Registers/letter references
#3.04	Cumulative number of major instances in the month hampering / affecting progress of work due to non-availability of Consumables/ use of improper consumables under the scope of contractor	RESOURCES	3		Cumulative number of instances	Daily Log Book entry/Incident Registers/letter references
#4.01	Number of non-compliances during the month for Statutory requirements like validity of Labour Licence, Insurance Policy, Labour Insurance, PF, BOCW Compliance etc. and any other applicable laws/ Regulation, Electrical Licence, T&P fitness certificate, Contractors' All Risk Policy etc. as applicable	SITE INFRASTRUCTURE & SERVICE	1		Total number of non-compliances	Daily Log Book entry/Incident Registers/letter references
#4.02	Cumulative number of days in a month poor illumination is reported at storage area, erection area, pre-assembly area and other designated areas by BHEL site.	SITE INFRASTRUCTURE & SERVICE	0.5		Total number of non-compliances/random checks	Daily Log Book entry/Incident Registers/letter references
#4.03	Cumulative number of days of non-availability of well-maintained toilets facilities for workers (separate for men and women) and non-availability of potable drinking water stations for workers in specified areas.	SITE INFRASTRUCTURE & SERVICE	1		Total number of non-compliances/random checks	Daily Log Book entry/Incident Registers/letter references

Project		Vendor			Package/Unit	
SI. No.	Parameter for Measurement	Classification	Max Score	Score Obtained	Measurement Key/Scheduled date	Supporting Documents
#4.04	Total number of instances in the month, Housekeeping NOT attended to in spite of instructions by BHEL -i.e. removal / disposal of surplus earth / debris / scrap / unused / surplus cable drums / other electrical items / surplus steel items / packing materials, thrown out scrap like weld butts, cotton waste etc. from the working area to identified locations	SITE INFRASTRUCTURE & SERVICE	2		Total number of non-compliances/random checks	Daily Log Book entry/Incident Registers/letter references
#4.05	Total number of instances in a month, Site Office with reasonably good facilities including enough nos. of computers and printers etc. for use by office and supporting staff was not made available/maintained.	SITE INFRASTRUCTURE & SERVICE	0.5		No discrepancy during regular or surprise visits	Photograph and report of the Engineer
#5.01	Number of days delayed in making labour payments for the last month	SITE FINANCE	2		Number of days delayed / Scheduled date is 7th day of next month	Daily Log Book entry/Incident Registers/letter references
#5.02	Number of complaints from labour/ sub supplier/ sub-contractor for non-receipt of payments from contractor	SITE FINANCE	1.5		Total number of complaints or reporting	Daily Log Book entry/Incident Registers/letter references
#5.03	Number of times the site operations were hampered for want of funds at the disposal of site-in-charge.	SITE FINANCE	1.5		Total number of non-compliances	Daily Log Book entry/Incident Registers/letter references
#6.0	Performance against HSE Parameters (as per Annexure-AA)	HSE	10		Score as per Safety Performance Evaluation System, scaled down to 10	Safety Performance Evaluation System
		Total	100			

Less Deduction in Score Due to Fatal Accidents attributable to the Contractor @ 20 points/ accident	
Less Deduction in Score Due to Major Accidents (Permanent Disability or bodily injury by which person injured is prevented to resume to work within 48 hours or more after accident,, Major Damage to Equipment etc.) attributable to the contractor @ 15 points/ accident	
Less Deduction in Score Due to Minor Accidents attributable to the contractor @ 2 points/ accident	
Less Deduction in Score Due to not Maintaining of Labour Colony (if applicable) as per BHEL HSE policy @3 points in a month on verification any day	
Final Score	

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Project		Vendor			Package/Unit	
SI. No.	Parameter for Measurement	Classification	Max Score	Score Obtained	Measurement Key/Scheduled date	Supporting Documents
	Performance Score Summary for the Month	Total Score	Score Obtained			
	QUALITY	10				
	PERFORMANCE	50				
	RESOURCES	20				
	SITE INFRASTRUCTURE & SERVICE	5				
	SITE FINANCE	5				
	HSE	10				
	OTHERS (deductions if any)	0	-			
	TOTAL	100				

Note:

- It is only indicative and shall be as per the online format issued by BHEL time to time.
- 2) No request will be entertained after specified date of current month w.r.t. changes requested in the scores of immediate previous month.

Monthly Safety Performance Evaluation of Contractor

SL	Parameter for Measurement	M/O	Wt	Supporting Documents
1 a	Induction training for new workers conducted through audiovisual medium & documented ?	М	1	Induction Training Records
1b	Tool box talk conducted regularly as per plan, and documented?	M	1	Toolbox Talk Records
1 C	Contractor in charge and safety in charge attended safety meetings?	М	2	Minutes of Meeting
1d	Whether observations in safety meetings are complied before next meeting?	М	2	-do-
1e	Preparation and submission of Monthly HSE report within stipulated time	М	1	Report submission date
1 f	Preparation and submission of Incident/near-miss report and RCA Report (as applicable) within stipulated time	М	1	Incident/ Near Miss Records
1 g	Carrying out Inspections and submission of Inspection reports within stipulated time	М	1	Inspection Records
1h	Regular Job Specific Training ensured for High Risk Workers (through audio-visual medium) as per plan	М	1	Training & Attendance Records
2a	Whether the contractor is registered under BOCW	M	2	BOCW Registration Certificate
2b	Availability of Qualified safety officer (1 for every 500 labour)	М	2	Safety Officer qualification & experience records
20	Availability of Qualified safety supervisor (1 for every 100 labour)	М	2	Safety Officer qualification & experience records
2d	All the workers are provided and using safety helmets and safety shoes/gum boots	М	2	PPE Issue Records, Inspection/ non-conformity records
2 e	Housekeeping done on regular basis and scrap removal at site	М	1	Housekeeping records, Inspection/ non-conformity records
2f	Usage of Goggles/Face shields and Hand gloves for gas cutter and grinders		1	PPE Issue Records, Inspection/ non-conformity records
2 g	Wall openings & floor openings are guarded?		1	Inspection/ non-conformity records
2h	Adequate illumination provided in all working area?		1	Inspection/ non-conformity records
2i	Safety posters, sign boards and emergency contact numbers in all prominent location are displayed?		1	Inspection/ non-conformity records
2 j	Availability of automatic reverse horns, Main horn, hook latches for Vehicles, mobile cranes, Hydras		1	Inspection/ non-conformity records
2k	Ban of carrying mobile phones to work place is implemented for workers		1	Inspection/ non-conformity records
2	Availability of Tags & Inspection Certificates for Cranes of all capacities		1	Master T&P List with internal & external test details
21.2	Availability of Tags & Inspection Certificates for Winches of all capacities		1	Master T&P List with internal & external test details
21.3	Availability of Tags & Inspection Certificates, colour coding for Chain pulley blocks		1	Master T&P List with internal & external test details
21.4	Availability of Tags & Inspection Certificates for Vehicles - Trailers, Dozers, Dumpers, Excavators, Mixers etc.		1	Master T&P List with internal & external test details
2l.5	Availability of Tags & Inspection Certificates for Welding machines, grinders, Drilling machines, etc.		1	Master T&P List with internal & external test details

2m.1 Use of Uffing Permit as per requirement 1 Permit Records	21.6	Availability of Tags & Inspection Certificates, colour coding for Wire rope slings etc.		1	Master T&P List with internal & external test details
Jampa Jese of Height Permit as per requirement Jermit Records Jermit Records Jermit Records Jermit Records Jese of Excavation permit as per requirement Jese of Excavation permit as per requirement Jese of Grating removal and safety net removal permit as per requirement Jermit Records Jermi	21.7	Availability of Tags & Inspection Certificates for Batching plants		1	Master T&P List with internal & external test details
2m_4 Use of Excavation permit as per requirement 1 Permit Records	2m.1	Use of Lifting Permit as per requirement		1	Permit Records
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6j Availability and usage of Rubber hand gloves by electrician? 1 Inspection/ non-conformity records	6j	Availability and usage of Rubber hand gloves by electrician?		1	

7a	Whether Scaffolding pipes made with steel or aluminium, are being used and checked periodically by experienced/ certified scaffolder?		2	Inspection/ non-conformity records
7b	8mm Stainless Steel wire rope with plastic cladding is provided for life line (Vertical / Horizontal) during height work?		2	-do-
7C	Availability of emergency lighting in case of power failure		1	-do-
7d	Whether all the openings are covered with Safety Nets made of fire proof Nylon?		1	-do-
7e	Whether MS pipe rails around staircases & platforms in usage are provided with top, middle rails and toe guard?		1	-do-
7f	Whether Ladder with vertical life line /Fall arrestor is available to climb?		1	-do-
79	Whether all workers deployed for working at height have been issued height pass after undergoing vertigo test?		1	Height Pass records
7h	Whether all workers deployed for height work / climbing ladder are provided and using Double lanyard safety belt?		1	PPE Issue records, inspection/ non-conformity reports
7i	Is all hand tools/Small material used by height workers is tied firmly to prevent fall?		1	-do-
8a	Flash back arrestors for all gas cutting sets is available on Torch side and cylinder side		1	Inspection/ non-conformity records
8b	Oxygen/Acetylene/LPG cylinders not in use have caps in place and stored separately?		1	-do-
8c	Availability of Face screen, Hand gloves, and Apron, for welders		1	-do-
8d	Protection from falling hot molten metal during metal cutting / welding at height by providing GI sheet below the cutting area especially in fire prone areas		1	-do-
9a	Pre-employment medical check-up done for all workers and submitted?		1	Medical check records
9b	Availability of first aid centre, with MBBS doctor(Own or Sharing basis)	М	2	Attendance records
9c	Availability of Ambulance facility 24 hours (Own or sharing basis)	М	2	-do-
9d	Is First aid trained personnel's are available and their names are displayed at site?	М	1	-do-
9e	Availability of Emergency vehicle at site		1	
9f	Periodical medical check-up is conducted for all the workers and submitted?		1	Medical check records
99	Availability of sufficient number of first aid box as per standard list and maintaining record		1	Inspection records
10a	Availability of Fire extinguishers, buckets at all vulnerable points		2	Fire extinguisher records
10b	Periodic fire mock drill conducted?		1	Fire, Mock drill records
100	Are all flammable materials are stored separately?		1	
10d	Periodic grass cutting is done in material storage area?		1	
100	Availability of 24V DC lighting in confined space work area		1	
10e	Availability of 24v DC lighting in confined space work area			

Note:

- M: Mandatory; O: Optional. Points other than mandatory can be excluded with appropriate justification (scope etc.) by BHEL. Score obtained in selected parameters divided by maximum possible score of selected parameters shall be multiplied by 10 for use in as per point SI. no. # 6.0 as detailed at page 4 of Form F-15.
- > There shall be deduction of marks from overall score for Fatal/ Major/ Minor Accidents and for not maintaining labour colony, as detailed at page 4 of Form F-15.

PROFORMA OF BANK GUARANTEE (in lieu of SECURITY DEPOSIT)

(On non-Judicial paper of appropriate value) (Para 4.7.6 of Works Accounts Manual)

	Bank Guarantee No
	Date
To (Employer's Name and Address)	
In consideration of Bharat Heavy Electricals Limited (hereinafter reference expression shall unless repugnant to the context or meaning there permitted assigns) incorporated under the Companies Act, 1956 an BHEL House, Siri Fort, Asiad, New Delhi – 110049 through its unit at Enewer Sector Southern Region, Tek Towers, No.11, Old Mahabalipurar Chennai - 600097 having agreed to exempt	eof, include its successors and d having its registered office at Bharat Heavy Electricals Limited, m Road, Okkiyam Thoraipakkam,
Contractor / Supplier) with its registered office at² (hereina	
which term includes supplier), from demand under the terms and co	onditions of the Contract arising
vide Letter of Intent (LOI) reference No	dated ³ valued
at Rs 4 (Rupees	only) ⁴ (hereinafter called the
said Contract), of Security Deposit for the due fulfilment by the sa	id Contractor of the terms and
conditions contained in the said Contract, on production of a Bank G	juarantee for Rs5
(Rupees only),	
We, the	ng our Head Office at Bank), at the request of antor under this Guarantee, do
an amount not exceeding Rs without any demur, in Employer and without any reservation, protest, and recourse and w prove or demonstrate reasons for its such demand	mmediately on demand from the
Any such demand made on the bank, shall be conclusive as regards the Bank under this guarantee. However, our liability under this guarantee amount not exceeding Rs5.	
We undertake to pay to the Employer any money so demanded r disputes raised by the Contractor(s) in any suit or proceeding pending Arbitrator or any other authority, our liability under this present b	g before any Court or Tribunal or
The payment so made by us under this guarantee shall be a valid dischereunder and the Contractor(s) shall have no claim against us for materials.	
We, further agree that the guarantee herein contained shall remain in period that would be taken for the performance of the said Contract enforceable till all the dues of the Employer under or by virtue of the paid and its claims satisfied & the Employer certifies that the terms an have been fully and properly carried out by the said contractor(s) of discharge of this guarantee by the Employer, whichever is earlier. This in force upto and including6 and shall be extended from time	t and that it shall continue to be ne said Contract have been fully d conditions of the said Contract or acceptance of the final bill or s guarantee shall initially remain

on or before the
We,(indicate the name of the Bank) further agree with the Employer that the Employer shall have the fullest liberty without our consent and without affecting in any manner our obligations hereunder to vary any of the terms and conditions of the said Contract or to extend time of performance by the said contractor(s) from time to time or to postpone for any time or from time to time any of the powers exercisable by the Employer against the said contractor(s) and to forbear or enforce any of the terms and conditions relating to the said Contract and we shall not be relieved from our liability by any reason of any such variation or extension being granted to the said contractor(s) or for any forbearance, act or omission on the part of the Employer or any indulgence by the Employer to the said contractor(s) or by any such matter or thing whatsoever which under the law relating to sureties would but for this provision have effect of so relieving us.
The Bank also agrees that the Employer at its option shall be entitled to enforce this Guarantee against the Bank as a principal debtor, in the first instance without proceeding against the Contractor and notwithstanding any security or other guarantee that the Employer may have in relation to the Contractor's liabilities.
This Guarantee shall not be determined or affected by liquidation or winding up, dissolution or change of constitution or insolvency of the Contractor but shall in all respects and for all purposes be binding and operative until payment of all money payable to the Employer in terms thereof. This guarantee will not be discharged due to the change in the constitution of the Bank or the Contractor(s).
We, BANK lastly undertake not to revoke this guarantee during its currency except with the previous consent of the Employer in writing. Notwithstanding anything to the contrary contained hereinabove:
a) The liability of the Bank under this Guarantee shall not exceed
b) This Guarantee shall be valid up to
We, Bank, have power to issue this Guarantee under law and the undersigned as a duly authorized person has full powers to sign this Guarantee on behalf of the Bank.
Date Day of for (indicate the name of the Bank)
(Signature of Authorised signatory)
 NAME OF VENDOR /CONTRACTOR / SUPPLIER REGISTERED OFFICE ADDRESS OF THE VENDOR /CONTRACTOR / SUPPLIER. LETTER OF INTENT(LOI) REFERENCE NO. WITH DATE CONTRACT VALUE (AS MENTIONED IN LOI) BG AMOUNT IN FIGURES AND WORDS VALIDITY DATE DATE OF EXPIRY OF CLAIM PERIOD (CLAIM PERIOD SHALL BE MINIMUM OF 3 MONTHS AFTER VALIDITY DATE)

Note:

- 1. The BG should be on Non-Judicial Stamp paper/e-stamp paper of appropriate value as per Stamp Act prevailing in the State(s) where the BG is submitted or is to be acted upon or the rate prevailing in the State where the BG was executed, whichever is higher. The Stamp Paper/e-stamp paper shall be purchased in the name of Vendor/Contractor/Supplier /Bank issuing the guarantee.
- 2. In Case of Bank Guarantees submitted by Foreign Vendors
 - a. From Nationalized/Public Sector / Private Sector/ Foreign Banks (BG issued by Branches in India) can be accepted subject to the condition that the Bank Guarantee should be enforceable in the town/city or at nearest branch where the Unit is located i.e. Demand can be presented at the Branch located in the town/city or at nearest branch where the Unit is located.
 - b. From Foreign Banks (wherein Foreign Vendors intend to provide BG from local branch of the Vendor Country's Bank)
 - b.1 In such cases, in the Tender Enquiry/ Contract itself, it may be clearly specified that Bank Guarantee issued by any of the Consortium Banks only will be accepted by BHEL. As such, Foreign Vendor needs to make necessary arrangements for issuance of Counter- Guarantee by Foreign Bank in favour of the Indian Bank's (BHEL's Consortium Bank) branch in India. It is advisable that all charges for issuance of Bank Guarantee/ counter- Guarantee should be borne by the Foreign Vendor. The tender stipulation should clearly specify these requirements.
 - b.2 In case, Foreign Vendors intend to provide BG from Overseas Branch of our Consortium Bank (e.g. if a BG is to be issued by SBI Frankfurt), the same is acceptable. However, the procedure at sl.no. b.1 will required to be followed.
 - b.3 The BG issued may preferably be subject to Uniform Rules for Demand Guarantees (URDG) 758 (as amended from time to time).

PROCEDURE FOR CONDUCT OF CONCILIATION PROCEEDINGS

- 1. The proceedings of Conciliation shall broadly be governed by Part-III of the Arbitration and Conciliation Act 1996 or any statutory modification thereof and as provided herein:
- 2. The party desirous of resorting to Conciliation shall send an invitation/notice in writing to the other party to conciliate specifying all points of Disputes with details of the amount claimed. The party concerned shall not raise any new issue thereafter. Parties shall also not claim any interest on claims/counterclaims from the date of notice invoking Conciliation till the conclusion of the Conciliation proceedings. If BHEL is to initiate Conciliation, then, the invitation to Conciliate shall be extended to the concerned Stakeholder in Format 7 hereto. Where the stakeholder is to initiate the Conciliation, the notice for initiation of Conciliation shall be sent in Format-8 hereto.
- **3.** The party receiving the invitation/notice for Conciliation shall within 30 days of receipt of the notice of Conciliation intimate its consent for Conciliation along with its counter-claims, if any.
- 4. The Conciliation in a matter involving claim or counter-claim (whichever is higher) up to Rs 5 crores shall be carried out by sole Conciliator nominated by BHEL while in a matter involving claim or counter-claim (whichever is higher) of more than Rs 5 crores Conciliation shall be carried out by 3 Conciliators nominated by BHEL. The appointment of Conciliator(s) shall be completed and communicated by the concerned Department/Group of BHEL Unit/Division/Region/Business Group to the other party and the Conciliator(s) within 30 days from the date of acceptance of the invitation to conciliate by the concerned party in the **Format-9**. The details of the Claim, and counter-claim, if any, shall be intimated to the Conciliator(s) simultaneously in **Format-5**.
- **5.** The Parties shall be represented by only their duly authorized in-house executives/officers and neither Party shall be represented by a Lawyer.
- **6.** The first meeting of the IEC shall be convened by the IEC by sending appropriate communication/notice to both the parties as soon as possible but not later than 30 days from the date of his/their appointment. The hearings in the Conciliation proceeding shall ordinarily be concluded within two (2) months and, in exceptional cases where parties have expressed willingness to settle the matter or there exists possibility of settlement in the matter, the proceedings may be extended by the IEC by a maximum of further 2 months with the consent of the Parties subject to cogent reasons being recorded in writing.

- 7. The IEC shall thereafter formulate recommendations for settlement of the Disputes supported by reasons at the earliest but in any case within 15 days from the date of conclusion of the last hearing. The recommendations so formulated along with the reasons shall be furnished by the IEC to both the Parties at the earliest but in any case within 1 month from the date of conclusion of the last hearing.
- **8.** Response/modifications/suggestions of the Parties on the recommendations of the IEC are to be submitted to the IEC within time limit stipulated by the IEC but not more than 15 days from the date of receipt of the recommendations from the IEC.
- **9.** In the event, upon consideration, further review of the recommendations is considered necessary, whether by BHEL or by the other Party, then, the matter can be remitted back to the IEC with request to reconsider the same in light of the issues projected by either/both the Parties and to submit its recommendations thereon within the following 15 days from the date of remitting of the case by either of the Parties.
- **10.** Upon the recommendations by the Parties, with or without modifications, as considered necessary, the IEC shall be called upon to draw up the Draft Settlement Agreement in terms of the recommendations.
- 11. When a consensus can be arrived at between the parties only in regard to any one or some of the issues referred for Conciliation the draft Settlement Agreement shall be accordingly formulated in regard to the said Issue(s), and the said Settlement Agreement, if signed, by the parties, shall be valid only for the said issues. As regards the balance issues not settled, the parties may seek to resolve them further as per terms and conditions provided in the contract.
- **12.** In case no settlement can be reached between the parties, the IEC shall by a written declaration, pronounce that the Conciliation between the parties has failed and is accordingly terminated.
- **13.** Unless the Conciliation proceedings are terminated in terms of para 22 (b), (c) & (d) herein below, the IEC shall forward his/its recommendations as to possible terms of settlement within one (1) month from the date of last hearing. The date of first hearing of Conciliation shall be the starting date for calculating the period of 2 months.
- **14.** In case of 3 members IEC, 2 members of IEC present will constitute a valid quorum for IEC and meeting can take place to proceed in the matter after

seeking consent from the member who is not available. If necessary, videoconferencing may be arranged for facilitating participation of the members. However, the IEC recommendations will be signed by all members. Where there is more than one (1) Conciliator, as a general rule they shall act jointly. In the event of differences between the Members of IEC, the decision/recommendations of the majority of the Members of IEC shall prevail and be construed as the recommendation of the IEC.

- **15.** The Draft Settlement Agreement prepared by the IEC in terms of the consensus arrived at during the Conciliation proceedings between the Parties shall be given by the IEC to both the parties for putting up for approval of their respective Competent Authority.
- **16.** Before submitting the draft settlement agreement to BHEL's Competent Authority viz. the Board Level Committee on Alternative Dispute Resolution (BLCADR) for approval, concurrence of the other party's Competent Authority to the draft settlement agreement shall be obtained by the other party and informed to BHEL within 15 days of receipt of the final draft settlement agreement by it. Upon approval by the Competent Authority, the Settlement Agreement would thereafter be signed by the authorized representatives of both the Parties and authenticated by the members of the IEC.
- **17.** In case the Draft Settlement Agreement is rejected by the Competent Authority of BHEL or the other Party, the Conciliation proceedings would stand terminated.
- **18.** A Settlement Agreement shall contain a statement to the effect that each of the person(s) signing thereto (i) is fully authorized by the respective Party(ies) he/she represents, (ii) has fully understood the contents of the same and (iii) is signing on the same out of complete freewill and consent, without any pressure, undue influence.
- **19.** The Settlement Agreement shall thereafter have the same legal status and effect as an arbitration award on agreed terms on the substance of the dispute rendered by an arbitral tribunal passed under section 30 of the Arbitration and Conciliation Act, 1996.
- **20.** Acceptance of the Draft Settlement Agreement/recommendations of the Conciliator and/or signing of the Settlement Agreement by BHEL shall however, be subject to withdrawal/closure of any arbitral and/or judicial proceedings initiated by the concerned Party in regard to such settled issues.
- **21.** Unless otherwise provided for in the agreement, contract or the Memorandum of Understanding, as the case may be, in the event of likelihood of prolonged

absence of the Conciliator or any member of IEC, for any reason/incapacity, the Competent Authority/Head of Unit/Division/Region/Business Group of BHEL may substitute the Conciliator or such member at any stage of the proceedings. Upon appointment of the substitute Conciliator(s), such reconstituted IEC may, with the consent of the Parties, proceed with further Conciliation into the matter either de-novo or from the stage already reached by the previous IEC before the substitution.

- **22.** The proceedings of Conciliation under this Scheme may be terminated as follows:
 - **a.** On the date of signing of the Settlement agreement by the Parties; or,
 - **b.** By a written declaration of the IEC, after consultation with the parties, to the effect that further efforts at conciliation are no longer justified, on the date of the declaration; or,
 - **c.** By a written declaration of the Parties addressed to the IEC to the effect that the Conciliation proceedings are terminated, on the date of the declaration; or,
 - **d.** By a written declaration of a Party to the other Party and the IEC, if appointed, to the effect that the Conciliation proceedings are terminated, on the date of the declaration; or,
 - **e.** On rejection of the Draft Settlement Agreement by the Competent Authority of BHEL or the other Party.
- **23.** The Conciliator(s) shall be entitled to following fees and facilities:

S1 No	Particulars	Amount			
1	Sitting fees	Each Member shall be paid a Lump			
		Sum fee of Rs 75,000/- for the whole			
		case payable in terms of paragraph No.			
		27 herein below.			
2	Towards drafting of	In cases involving claim and/or			
	settlement	counter-claim of up to Rs 5crores.			
	agreement	Rs 50,000/- (Sole Conciliator)			
		In cases involving claim and/or			
		counter-claim of exceeding Rs 5 crores			
		but less than Rs 10 crores.			
		Rs 75,000 (per Conciliator)			

S1 No	Particulars	Amount
		In cases involving claim and/or counter-claim of more than Rs 10 crores. Rs 1,00,000/- (per Conciliator) Note: The aforesaid fees for the drafting of the Settlement Agreement shall be paid on the, Signing of the Settlement Agreement after approval of the Competent Authority or Rejection of the proposed Settlement Agreement by the Competent Authority of BHEL.
3	Secretarial expenses	Rs 10,000/- (one time) for the whole case for Conciliation by a Sole Member IEC. Where Conciliation is by multi member Conciliators –Rs 30,000/- (one time)- to
		be paid to the IEC
4	Travel and transportation and stay at outstation Retired Senior Officials of other Public Sector Undertakings (pay scale wise equivalent to or more than E-8 level of BHEL)	As per entitlement of the equivalent officer (pay scale wise) in BHEL.
	Others	As per the extant entitlement of whole time Functional Directors in BHEL. Ordinarily, the IEC Member(s) would be entitled to travel by air Economy Class.
5	Venue for meeting	Unless otherwise agreed in the agreement, contract or the Memorandum of Understanding, as the case may be, the venue/seat of proceedings shall be the location of the concerned Unit / Division / Region /

S1 No	Particulars	Amount		
		Business Group of BHEL. Without		
		prejudice to the seat/venue of the		
		Conciliation being at the location of		
		concerned BHEL Unit / Division /		
		Region / Business Group, the IEC after		
		consulting the Parties may decide to		
		hold the proceedings at any other		
		place/venue to facilitate the		
		proceedings. Unless, Parties agree to		
		conduct Conciliation at BHEL premises,		
		the venue is to be arranged by either		
		Party alternately.		

- **24.** The parties will bear their own costs including cost of presenting their cases/evidence/witness(es)/expert(s) on their behalf. The parties agree to rely upon documentary evidence in support of their claims and not to bring any oral evidence in IEC proceedings.
- 25. If any witness(es) or expert(s) is/are, with the consent of the parties, called upon to appear at the instance of the IEC in connection with the matter, then, the costs towards such witness(es)/expert(s) shall be determined by the IEC with the consent of the Parties and the cost so determined shall be borne equally by the Parties.
- **26.** The other expenditures/costs in connection with the Conciliation proceedings as well as the IEC's fees and expenses shall be shared by the Parties equally.
- **27.** Out of the lump sum fees of Rs 75,000/- for Sitting Fees, 50% shall be payable after the first meeting of the IEC and the remaining 50% of the Sitting Fees shall be payable only after termination of the conciliation proceedings in terms of para 22 hereinabove.
- 28. The travelling, transportation and stay at outstation shall be arranged by concerned Unit as per entitlements as per Serial No. 4 of the Table at para 23 above, and in case such arrangements are not made by the BHEL Unit, the same shall be reimbursed to the IEC on actuals limited to their entitlement as per Serial No. 4 of the Table at Para 23 above against supporting documents. The IEC Member(s) shall submit necessary invoice for claiming the fees/reimbursements.
- **29.** The Parties shall keep confidential all matters relating to the conciliation proceedings. Confidentiality shall extend also to the settlement agreement,

- except where its disclosure is necessary for purposes of its implementation and enforcement or as required by or under a law or as per directions of a Court/Governmental authority/ regulatory body, as the case may be.
- **30.** The Parties shall not rely upon or introduce as evidence in any further arbitral or judicial proceedings, whether or not such proceedings relate to the Disputes that is the subject of the Conciliation proceedings:
 - **a.** Views expressed or suggestions made by the other party in respect of a possible settlement of the Disputes;
 - **b.** admissions made by the other party in the course of the Conciliator proceedings;
 - **c.** proposals made by the Conciliator;
 - **d.** The fact that the other Party had indicated his willingness to accept a proposal for settlement made by the Conciliator.
- **31.** The Parties shall not present the Conciliator(s) as witness in any Alternative Dispute Resolution or Judicial proceedings in respect of a Disputes that is/was the subject of that particular Conciliation proceeding.
- **32.** None of the Conciliators shall act as an arbitrator or as a representative or counsel of a Party in any arbitral or judicial proceeding in respect of a Disputes that is/was the subject of that particular Conciliation proceeding.
- or judicial proceedings in respect of a Disputes that is the subject matter of the Conciliation proceedings except that a Party may initiate arbitral or judicial proceedings where, in his opinion, such proceedings are necessary for preserving his rights including for preventing expiry of period of limitation. Unless terminated as per the provisions of this Scheme, the Conciliation proceedings shall continue notwithstanding the commencement of the arbitral or judicial proceedings and the arbitral or judicial proceedings shall be primarily for the purpose of preserving rights including preventing expiry of period of limitation.
- **34.** The official language of Conciliation proceedings under this Scheme shall be English unless the Parties agree to some other language.

STATEMENT OF CLAIMS/COUNTER CLAIMS TO BE SUBMITTED TO THE IEC BY BOTH THE PARTIES

1.	Chrono	logy	of	the	Disputes	
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- 2. Brief of the Contract/MoU/Agreement/LOI/LOA
- 3. Brief history of the Disputes:
- 4. Issues:
- 5. Details of Clam(s)/Counter Claim(s):

SI. No.	Description of claim(s)/Counter Claim	Amount (in INR)Or currency applicable in the contract	Relevant contract clause

6. Basis/Ground of claim(s)/counter claim(s) (along with relevant clause of contract)

Note– The Statement of Claims/Counter Claims may ideally be restricted to maximum limit of 20 pages. Relevant documents may be compiled and submitted along with the statement of Claims/Counter Claims. The statement of Claims/Counter Claims is to be submitted to all IEC members and to the other party by post as well as by email.

FORMAT FOR NOTICE INVOKING CONCILIATION CLAUSE BY BHEL FOR REFERRING THE DISPUTES TO CONCILIATION THROUGH IEC

M/s. (Stakeholder's name)

Subject: NOTICE FOR INVOCATION OF THE CONCILIATION CLAUSE OF THE CONTRACT BY BHEL

Def. Contract No / Mali / Agreement / I Ol / I OA % date

Rei. Com	ract No/	MOU/A	greement/	LOI/LOF	106 date		•	
Dear Sir	/Madam	1,						
As	you	are	aware,	with	reference	to	above	referred
Contract	/MoU/A	greeme	ent/LOI/LO	OA, certa	in disputes h	ave ari	sen, whic	h, in-spite
of several	l rounds	of muti	ıal discuss	ions and	various corres	sponde	ences have	remained
unresolve	ed. The 1	orief par	rticulars of	our clain	ns which arise	out o	f the above	e- referred
Contract	/MoU/A	greeme	ent/LOI/LO	OA are re	produced her	eunde	r:	

Sl.	Claim description	Amount involved
No.		

As you are aware, there is a provision in the captioned Contract/MoU/Agreement/LOI/ LOA for referring disputes to conciliation.

Please note that upon receipt of your consent in writing within 30 days of the date of receipt of this letter by you, BHEL shall appoint suitable person(s) from the BHEL Panel of Conciliators.

This letter is being issued without prejudice to our rights and contentions available under the contract and law.

Thanking you Yours faithfully

Representative of BHEL

Note: The Format may be suitably modified, as required, based on facts and circumstances of the case.

FORMAT FOR NOTICE INVOKING CONCILIATION CLAUSE BY A STAKEHOLDER FOR REFERRING THE DISPUTES TO CONCILIATION THROUGH IEC

To,

BHEL (Head of the Unit/Division/Region/Business Group)

Subject: NOTICE FOR INVOCATION OF THE CONCILIATION CLAUSE OF THE CONTRACT BY A STAKEHOLDER

Ref: Contract No/MoU/Agreement/LOI/LOA& date
Dear Sir/Madam,

As you are aware, with reference to above referred Contract/MoU/Agreement/LOI/LOA, certain disputes have arisen, which, in-spite of several rounds of mutual discussions and various correspondences have remained unresolved. The brief particulars of our claims which have arisen out of the above-referred Contract/MoU/Agreement/LOI/LOA are enumerated hereunder:

S1. No.	Claim description	Amount involved

As you are aware, there is a provision in the captioned Contract/MoU/Agreement/LOI/ LOA for referring inter-se disputes of the Parties to conciliation.

We wish to refer the above-said disputes to Conciliation as per the said Clause of the captioned Contract/MoU/Agreement/LOI/ LOA. In terms of Clause --------of Procedure i.e., Annexure ------ to the Contract/MoU /Agreement / LOI / LOA, we hereby invite BHEL to provide its consent in writing to proceed with conciliation into the above mentioned disputes within a period of 30 days from the date of this letter along with details of counter-claims, if any, which it might have with regard to the subject Contract/ MoU/ Agreement/ LOI/ LOA and to appoint suitable person(s) as Conciliator(s) from the BHEL Panel of Conciliators.

This letter is being issued without prejudice to our rights and contentions available under the contract and law.

Thanking you Yours faithfully

Representative of the Stakeholder

Note: The Format may be suitably modified, as required, based on facts and circumstances of the case.

FORMAT FOR INTIMATION TO THE STAKEHOLDER ABOUT APPOINTMENT OF CONCILIATOR/IEC

10,		
	M/s. (Stakeholder's name	<u>;</u>)

Subject: INTIMATION BY BHEL TO THE STAKEHOLDER AND CONCILIATOR(S) ABOUT APPOINTMENT OF CONCILIATOR/IEC

Ref: Contract No/MoU/Agreement/LOI/LOA& date
Sir,
This is with reference to letter dated regarding reference of the disputes arising in connection with the subject Contract No /MoU/Agreement/LOI/LOA to conciliation and appointment of Conciliator(s).
In pursuance of the said letter, the said disputes are assigned to conciliation and the following persons are nominated as Conciliator(s) for conciliating and assisting the Parties to amicably resolve the disputes in terms of the Arbitration & Conciliation Act, 1996 and the Procedure to the subject Contract/MoU/Agreement/LOI/LOA, if possible.
Name and contact details of Conciliator(s)
a)
b)
c)
You are requested to submit the Statement of Claims or Counter-Claims (strike off

You are requested to submit the Statement of Claims or Counter-Claims (strike off whichever is inapplicable) before the Conciliator(s) in Format 5 (enclosed herewith) as per the time limit as prescribed by the Conciliator(s).

Yours faithfully,

Representative of BHEL

CC: To Conciliator(s)... for Kind Information please.

Encl: As above

Note: The Format may be suitably modified, as required, based on facts and circumstances of the case.