

# Contractor Safety Management System at BPCL

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# Why Discuss Contractor Safety ?

- Between **2017 and 2020**, **three** people **died** and **eleven** were **injured each day**, on average, due to accidents in India's registered factories.
- As many as **3,331 deaths** were recorded between 2018 and 2020, but **only 14 people were imprisoned** for offences under the Factories Act 1948.
- **Each year**, over **350,000 deaths** worldwide are due to occupational accidents, and these accidents also cause over **313 million serious injuries and absences from work**, according to International Labour Organization.



(Data from Directorate General Factory Advice Service & Labour Institutes (DGFASLI), Ministry of Labour & Employment)



# Purpose



- **Systematic approach** to the **Management of Contractors** so that the risks to health and safety of contractors, employees, the community and the environment are minimized.
- **Providing** these service providers with a **healthy and safe work environment** that does not adversely impact safety of themselves, other personnel and plant.
- **Define** the broad minimum requirements / guidelines for managing safety aspects of contractors



# Applicability



- **To manage the health and safety risks** arising from deploying Contractors, and to **integrate safety aspects** in overall **contractor hiring process**.
- **Applies** to all those who use Contractor services for **work activities** including, **operation, maintenance , construction** and other similar services **regardless** the size and value.
- **Applies to long-term, short-term or one-time** contractor usage.



# 5 Tier Contractor Safety Management

1. Pre-qualification /selection
2. Contract preparation and award
3. Pre job meeting and training
4. Execution of work and performance monitoring
5. Post contract evaluation of contractors



# 5 Tier Contractor Safety Management



- For small contracts, and those where the extent of planning work is much less, the need for such a comprehensive coverage may be correspondingly reduced by management. However, even for small or short duration contracts, safety management must not be ignored or treated superficially.
- Industry may take a decision to apply the full approach based on the results of **risk assessment**.



**Major  
Risk  
Potential**

❖ Contractors performing maintenance or repair, turnaround, major renovation, of process equipment or specialty work on or adjacent to a process unit and whose work can impact process safety / fire more than 15 minutes, property loss more than Rs 10 Lacs.

❖ Contractors whose work could result in fatality, as:

- Electrical work
- Hot work
- Work at height
- High pressure water blasting
- Elevated work
- Demolition
- Scaffold erection/dismantling
- Excavation
- Cranes near power lines
- Construction
- Confined space entry including entries into inert atmospheres
- Abrasive blasting
- Pressure Testing



## Serious Risk Potential



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Contractors providing general services and support general maintenance. They have:

**low potential of impacting process safety,**

**potential for exposure to significant health risks and**

**high potential for exposure to significant personnel safety risks, e.g.:**

- Building and grounds (lawn care, painting, janitorial, paving, pest control, canteen, plumbing, etc.)
- Inspection
- Laborers (stores, reproduction)
- Vehicle mechanics

**Contractors whose work could result in Reportable Lost Time Injuries.**

## Minor Risk Potential



Contractors providing clerical or technical expertise and knowledge in support of plant and business operations (Technical & Administrative Contractors) generally have **minimal**

**exposure** to significant safety and health risks. Technical and administrative contractors

generally perform their work in an **office environment** or are escorted by Location

representatives while in the operating units.



# 5 Tier Contractor Safety Management



TIER	Step	Key Elements
TIER 1	<b>Contractor's Prequalification and Selection from Safety Aspects</b>	A procedure for the selection of contractors that includes scrutiny of their past safety performance and safety capabilities sufficient to meet HSSE policy & propped scope of work.
TIER 2	<b>Communicating Contract Specific Safety Requirements in Contract Documents (Tendering/ Agreements)</b>	Develop contract bid documents with clear safety expectations /requirements to be met by contractors.
TIER 3	<b>Pre-Job Meeting &amp; Contractor's Training</b>	Conduct pre job meetings and provide training (induction and SOP specific) to contractor's staff, prior to start of the work.
TIER 4	<b>Execution of the Work &amp; Performance Monitoring</b>	Clear arrangements for monitoring the work performance against contract requirements.
TIER 5	<b>Post Contract Evaluation</b>	Establish process & procedure for performance evaluation during and post contract.

# TIER -1: Pre-qualification & Selection of Contractors

**While selecting / pre-qualifying the contractors, consideration shall at least be given to:**

## Contractor's Past Safety Performance

- Worker's Compensation Payout (last 3 yeas)
- Number of Fatal Incidents (last 3 yeas)
- Reportable Lost Time Injury Frequency Rates (last 3 years)
- Pending court cases, if any

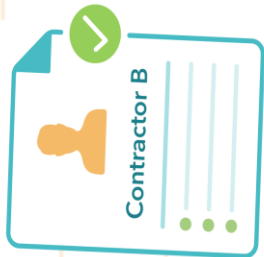
## Safety Capabilities Assessment

- Contractor's Company Safety Policy
- Contractor's Company Safety Organization
- Safety Management System Manual of the contractor
- Hazard Identification & Risk Management Program
- Accreditation ( ISO 9001/ ISO 14001/ OHSAS 18001)/ Performance Awards
- 3rd Party / Client Audits Report of similar previous jobs undertaken by them



# Pre-qualification & Selection of Contractors

- BU/ Locations may finalize the relevant pre-qualification criterion **based on risk potential level** of the proposed job.
- For jobs executed, **directly** by locations involving labor contractors through approved agencies, may not require detailed pre-qualification criteria.
- Contractor's safety pre-qualification evaluations shall be performed by a team of designated officials from User's Department Representative, Procurement, HSSE, Finance etc.
- Contract department shall maintain a **database of competent contractors** and their safety pre-qualifications information.



# Implementation Status at BPCL-Refineries

- Implemented on 1<sup>st</sup> September 2020
- Formulated based on the guidelines as per CSMS TS-01
- Assessment during bid stage and work execution stage
- The process of **safety competency assessment** is carried out for the following types of tenders
  - All Projects jobs where the estimate value exceeds 5 crores (Rupees Five Crores)
  - All turn around jobs where estimate value exceeds 1 crore (Rupees One Crore)
  - All other jobs including rate contract (RC) jobs where estimate value exceeds 1 crore (Rupees One Crore)



# Competency assessment at BPCL

Sl. No	Competency measure	Weightage
1	Manpower	15
2	Tools and Tackles	20
3	Safety Records	20
4	High risk jobs executed	15
5	Safety accreditations	16
6	Safety practices	14
	<b>Total</b>	<b>100</b>



<b>MANPOWER Criteria</b>	<b>Evaluation procedure</b>	<b>Max credit</b>
Having one <b>safety steward</b> with required qualification, <b>for every 30 workers</b>	The bidder shall submit the copy of the safety steward's Industrial diploma/ NEBOSH certificate and the previous job experience certificate.	<b>5</b>
Having one <b>safety officer</b> with required qualification, <b>for every 100 workers</b>	The bidder shall submit the copy of the safety officer's Industrial diploma or equivalent degree from Govt recognized institute and the previous job experience certificate.	<b>5</b>
Having <b>Skilled workers</b> such as scaffolders, welders, electricians, rigger, fitter, line men etc. with <b>minimum 2 years experience</b>	<p>The bidder shall submit the copy of qualification certificate and the previous job experience in the relevant field</p> <ol style="list-style-type: none"> <li>1. Scaffolders shall be qualified as per the requirements of BS EN 12811 and BS EN 12810 – TG20:08 / OSHA: 29 CFR Part 1926, Subpart L.</li> <li>2. Welder - BPCL approved welder shall produce welder number issued by the advisory section.</li> <li>3. Electricians and line man - Electrician / electrical wireman license issued by competent authority.</li> <li>4. Any other skilled worker shall produce competency certificate in the relevant field from a Govt recognized institute.</li> </ol> <p>A credit of one mark will be given for each skill category for the submission of the records, subject to a maximum of 5 mark</p>	<b>5</b>



<b>TOOLS AND TACKLES</b> <b>Criteria</b>	<b>Evaluation procedure</b>	<b>Max Credit</b>
<b>Submitted list</b> of all tools and tackles	The bidder shall submit list of all tools and tackles including chain blocks, different types of slings, welding and various cutting tools, electrical tools, cranes etc. The list of tools and tackles shall contain tool category/type, date of purchase, make, intended use, TPI certificate (if applicable) etc.	5
<b>Suitability</b> for the intended work	2.5 will be given if it is moderate suitability. Zero credit will be given for inappropriate.	5
<b>Make and age</b> of tools and tackles	Evaluation committee to give due weightage. Preference to be given to Modern tools with added safety features and savings in work time and labour	5
<b>Certified</b> by competent authority	The bidder shall submit the list of tools along with the TPI certificate copy. A credit of 5 will be given if all the tools are having TPI certificates (Only for applicable tools).	5



SAFETY RECORDS Criteria	Evaluation procedure	Max Credit
<b>Reportable incidents</b> (Absence more than 48 hrs) in the past 3 years. No incident- 7 marks 2 or less – 2 marks more than 2 – Nil mark	The bidder shall submit a declaration in contractor's letter head stating the number of reportable incidents happened for his employees for <b>the last 3 years</b> . Evaluation committee may also compare the available safety report of contractor from HSE dept. and based on the report, if no accident a credit of 7 marks will be given, 2 or less incidents a credit of 2 marks will be given and if more than 2 zero marks will be given.	7
<b>Fatal accidents</b> in the last 3 years. No fatality. 1 or more fatality	The bidder shall submit a declaration in his letter head stating the number of fatal accidents that happened for his employees for the <b>last 3 years</b> . Evaluation committee may cross check with HSE dept. for any available data and if no fatality a credit of 7 marks will be given, 1 or more Nil credit.	7
No. of <b>safety violations</b> charged in last 3 years.	The bidder shall submit a declaration in his letter head stating the number of safety violations charged for the <b>last 3 years</b> . Evaluation committee may cross check with HSE dept. for any available data and 1 mark will be deducted for every safety violation charged, subjected to a maximum of 6 marks. If safety violation charged is zero, a credit of 6 marks will be awarded.	6



HIGH RISK JOBS EXECUTED Criteria	Evaluation procedure	Max credit
Jobs involving <b>working at height</b> more than 30 meters in the past three years	The bidder shall submit the copy of work permit of the job carried out along with the Job Safety Analysis prepared by the contractor. A credit of 5 marks will be given for the submission of both document	5
Jobs involving working in <b>confined space / inert atmosphere</b> in the past three years	The bidder shall submit the copy of work permit of the job carried out along with the Job Safety Analysis prepared by the contractor. A credit of 5 marks will be given for the submission of both document	5
Any other <b>critical jobs</b> carried out in the past three years	<p>The bidder shall submit the copy of work permit of the job carried out along the Job Safety Analysis prepared by the contractor. A credit of 5 marks will be given for the submission of both documents.</p> <p>Critical jobs are those involving serious immediate safety threats to the workers as well as to the plant operation such as working in inert atmosphere, vessel or column replacement jobs involving large capacity cranes (&gt;400T) etc. Decision regarding Job criticality will be under the discretion of evaluation committee.</p>	5



<b>SAFETY ACCREDITATIONS</b> <b>Criteria</b>	<b>Evaluation procedure</b>	<b>Max credit</b>
ISO 9001	The bidder shall submit ISO 9001 certificate copy. A credit of 2 marks will be given for valid certificate.	2
ISO 14001	The bidder shall submit ISO 14001 certificate copy. A credit of 2 marks will be given for valid certificate.	2
ISO 45001 / OSHAS 18001	The bidder shall submit ISO 45001 / OSHAS 18001 certificate copy. A credit of 5 marks will be given for valid certificate	5
Safety / excellency awards from other accredited institutions	The bidder shall submit a copy of safety excellency letter/certificate/award issued by other organizations, institutions etc. A credit of 5 marks will be given for genuine accreditation.	5
Safety award for any employee from any firm during the execution of work	The bidder shall submit a copy of safety excellency letter/certificate/award or any appreciation letter issued by other organizations, institutions etc. A credit of 2 marks will be given for genuine accreditation.	2



<b>SAFETY PRACTICES Criteria</b>	<b>Evaluation procedure</b>	<b>Max credit</b>
HSE policy	The bidder shall submit copy of HSE policy of his firm / agency. A credit of 5 marks will be given for updated and valid HSE policy.	5
HSE manual	The bidder shall submit copy of HSE manual of his firm / agency. A credit of 5 marks will be given for updated and valid HSE manual.	5
Specialized safety training for the employees	Specialized safety training includes confined space entry safety, first aid, trauma care, electrical safety, working at height, radiography etc. The bidder shall submit the list of persons along with the certificate copy of the concerned training. Evaluation committee will check the relevancy of the training for the awarded job and a credit of maximum 4 marks will be given	4

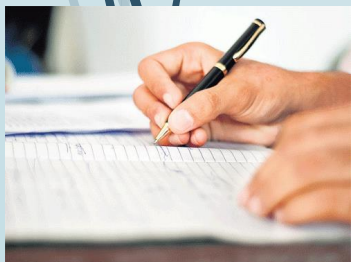
# TIER – 2: Communicating Contract Specific Safety Requirements in Contract Documents

Contract specific safety requirements are determined based on risk level of the proposed job and shall be communicated to all pre-qualified contractors in bid documents by contracting department.

S.No	Item
1	<b>Enlistment/ Registration Letter</b> as issued by Company
2	Contractor's <b>safety staffing specific to work</b> at Company Location & <b>safety committee</b> details
3	Required <b>safety staffing</b> at Company Location and <b>qualifications</b> and Contractor's <b>HSSE Policy</b>
4	<b>Method statements/safe work procedure</b> as relevant and determined by Company contract officer-in-charge.
5	<b>Job Safety Plan (JSP)</b> for all hazardous or potentially hazardous jobs as identified by Company
6	List of <b>competent persons for safety critical activities</b> approved by government agencies, etc.
7	Financial deterrent clauses

**Contracting department** shall ensure that contractor submit all the applicable safety requirements as listed above.

**HSSE department** shall be consulted if needed.





# Safety officer requirements



Each contractor must provide a nominated manager, supervisor or foreman with authority to give and receive **safety instructions** from Company. The recommended guidelines for contractor' safety prescribed below:

- If a contractor is employing less than 30 employees, he shall **designate** one dedicated supervisors as a **safety steward**.
- For every 30 persons or more contractor shall appoint one **qualified safety steward** (diploma in industrial safety from recognized government institute). For more than one safety steward, one of them shall be appointed as Chief safety steward.
- In addition to above, contractor shall also appoint one **safety officer**, if he employs more than 100 workers. Safety officer shall have Diploma in Industrial Safety or any equivalent qualification from Government Recognized Institute and **minimum 2 years of experience**. For more than one safety officer, one of them shall be appointed as Chief safety officer.

# Safety Regulations for Contractors given along with the tender documents



- Observance and Adherence to Safety Regulations
- Use of Refinery Facilities
- Emergencies
- Temporary Fixtures
- Compressed Gas Cylinders
- House Keeping
- Personal Protective Equipment
- Clothing
- Unsafe Practices
- Personal Conduct
- Material Handling
- Owner's Equipment, Machinery and Construction Aids

- Scaffolding
- Motor Vehicle Driving
- Fire Protection Equipment
- Report on Accidents
- Warning Notices
- Special Safety Conditions
- Special Safety Features for the Vehicle to Run Inside Refinery Premises
- Health, Safety and Environment Training
- Compliance of BPCL's Health, Safety and Environment Plans
- Use of Mobile phone



# Safety Training at BPCCL

- **One day job specific safety training** for Contractor workers & Contractors
- **Three days job specific safety training** for Contractor supervisors
- **Job category**
  - General hydrocarbon safety
  - Working at height safety
  - Confined space safety
  - Electrical safety



# TIER – 3: Pre-Job Meeting and Contractor's Training

## Each location will:

- Implement and maintain a **process to communicate with, and train contractors** on the specific hazards and requirements in place at the location.
- **Conduct pre-job meetings with contractors** prior to start of the work to **communicate specific contract safety requirements.**

The pre-job meeting shall be conducted by the **Company-User's Department Representative/ Officer -in- Charge.**

Participants may include the following depending upon the scope of work, duration of the work, and the **relative level of risk associated with the work:**

- Contractor Job Representatives
- Contractor's safety officer/ stewards
- Location maintenance representatives
- Location operations representatives
- Location HSSE Role Holder
- Any Other



# Purpose of the pre-job meeting



- Provide **on-site job orientation** for the contractor and to **verify the contractor's ability** to comply with regulatory and Location's safety requirements specific to the scope of work.
- **Communicate** with the contractor regarding the **hazards at the job location** and for the contractor to communicate any hazards that may be brought into by the contractor.
- Obtain agreement between Location and the contractor on **the safety plan** to ensure the work can be safely executed.

# Contractor specific documentation for Pre-job review meeting

- **Documented Safety Plan**, if necessary
- **CVs** of safety representatives
- List of **equipment / tools** the contractor will be bringing on site including the intended service.
- Verification that portable equipment / tools **meet integrity** requirements
- **Inspection records** for lifting equipment such as cranes and forklifts.
- Verification that **personnel lift equipment** is being used as intended by the manufacturer.
- Verification of **electrical generating equipment integrity** by a certified electrician.
- Verification that **pressure equipment** meets regulatory standards.
- Craft **skills verification**.
- Verification that subcontractors are on original proposal and on the **HSSE Qualified list**.

**The outcome of pre job meeting shall be documented and record maintained.**



# Training

Contractor shall be responsible for all of his employees to receive the **Safety Induction training** from location, prior to beginning the work.

Duration of contractor's workmen induction training shall be **minimum 3 hours and supervisors 8 hours**. This shall be **valid for one year**.

Induction training shall be conducted prior to start of the work and thereafter at least once a year or as frequently as the Location HSSE role holder deems necessary to ensure the contractors remain aware of these requirements.

The **training shall address:**

- Overview of the **work-place and potential safety risks**
- **Policies & procedures** that address potential safety risks
- **Emergency procedures**
- Alcohol and drug **prohibition policy**
- Company **Life Saving Rules**



The training requirements shall conform to **OISD-GDN-206 for contract workers** and **OISD-STD-154 for contractor's supervisors**.

# Training

**Competency Training** - Contractors shall be responsible for providing competency training related to their subject domain (examples include Lifting, Scaffold, Blasting, Electrical work, Hazardous goods transportation etc.) to their personnel and shall provide training certificates from government recognized institutes, prior to start of the work.



## Work Force Management

- Each Location shall develop and maintain a designated contractor's training facilities.
- Necessary training records of contractor employees shall be maintained
- ID cards shall be issued by only after safety orientation participation record and medical fitness certificate and any other requirements prescribed by the Location.
- Job specific SOP training is given
- Job is supervised until adequate skills are demonstrated by him.
- Centralized E- resources for safety videos to be used by respective locations

## TIER – 4: Execution of the Work & Performance Monitoring

**Contractor employees** shall not be permitted to work at the Locations without formally being given:

- **Orientation / induction training** on Location safety rules / procedures and **Emergency Response Procedures**
- **Medical fitness** assessment
- Issue of **valid Gate Pass** as per Location's notified procedure for persons ,materials and vehicles
- **Job safety plan** and issuance of **valid work permit** by Location's designated person
- Possession of the **competency certificate** if applicable for the specific job
- Availability of proper **supervision**
- **Fire extinguisher** available at workplace
- **Personal Protective Equipment**



# Execution of Work



**Daily Job Safety Plan:** The Contractor Job Representative shall prepare daily job safety plan to identify specific tasks, their hazards and risks and control measures. This shall be approved by Company job owner/ HSSE staff. This is a formal review of all tasks and to be documented.

**Periodic Inspections:** The Location and Contractor Job Representative shall conduct periodic safety field inspections of the physical facilities and work practices: Housekeeping, Tools and portable equipment, PPE usage, Scaffolds, Excavations, Electricals, Hot work, Lifting, etc.

- **For major risk activities, the inspection should be done daily. The inspections shall be documented using appropriate checklist.**

# Execution of Work



**Monthly Safety Performance Data:** Major or Serious Risk Potential work contractors shall submit monthly safety performance data to the Company representative using the Monthly Contractor Safety form:

- **Total man-hour** worked in the month
- Number of Company **12 Life Saving Rule Violations**
- Number of **Lost Time Incidents**
- % Attendance in **Induction Training**
- Any **safety concerns**



# Performance Monitoring



Periodic Performance Reviews to be conducted for **Major / Serious Risk Work contractors** to review, discuss, and evaluate the contractor's safety performance.

## Participants shall include:

- User Department Representative/ Designated Job Representative
- Contractor Job Representative
- Contractor Managers
- Contractor Safety staff

## Topics to be typically addressed:

- Safety performance
- Incident summary
- Inspections and follow-up actions
- Safety concerns/ issues
- Opportunities for improvement



# Performance monitoring matrix



Description	Marks	Criteria
Safety officer/steward	15	As per company policy - 15 marks ,Else - 5 marks
Risk potential	10	MJRP- 10 marks, SRP- 5 marks, MNRP - 3 marks
Accident free MMH	0	If <.5M = 5, .5M-1M=10, 1M-2M=15, >5M=20
Absenteeism	5	If No absenteeism - 5 marks, else -1 for each
Injury	0	If no injury - 0 marks, else -2 for each
Near-miss	0	1-5 =2mrks,6-10=5mrks,11-25=10mrks,>25=15mrks
Unsafe condition	0	1-5 =2mrks,6-10=5mrks,11-25=10mrks,>25=15mrks
Safety violation	-16	If zero - 0 marks, else -1 for each
Financial deterrent	-12	If zero - 0 marks, else -2 for each
ISO 9001	0	If yes - 5 Marks, if no - zero marks
ISO 14001	0	If yes - 5 Marks, if no - zero marks
ISO 18001 / ISO 45001	0	If yes - 10 Marks, if no - zero marks

# TIER – 5: Post Contract Evaluation

- Contractor management's **Safety commitment**
- Contractor's **execution of the safety plan**
- **Safety performance**
- **Compliance** with regulatory and Location's contract conditions
- Use of proper **safety equipment and PPE**
- Promptness and effectiveness in **implementing corrective actions** for identified deficiencies
- **Effectiveness of communication** to the work force
- **Adequacy of pre-job training** of contractor employees



**The results of evaluation shall be documented.**

# POST CONTRACT EVALUATION



- Post contract evaluation by the evaluation committee consisting of Executing department and contract safety section for all jobs coming under pre job evaluation criteria
- Submission of Safety performance by the executing department along with final bill



