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# HEALTH AND SAFETY SPECIFICATION



## ANNEXURE C

# HEALTH AND SAFETY SPECIFICATION FOR THE ROBINSON DRY DOCK FLOATING CAISSON - PORT OF CAPE TOWN



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## 1. DEFINITIONS & ABBREVIATIONS

For the purpose of the General Health and Safety Specification, the abbreviations or definitions given hereunder shall apply:

**"CR"** refers to the Construction Regulations, 2014

**"HSS"** refers to this document (the Health and Safety Specification) including any project - specific annexures that the engineers could attach.

**"OHSA"** refers to the Occupational Health & Safety Act of 1993

**"S"** refers to a Section in the Occupational Health & Safety Act of 1993

**"H&S"** refers to Health and Safety

**"Agent"** means a competent person who is appointed by the Directorate in terms of Regulation 5 (6) of the Regulations.

**"Client"** means the Transnet National Port Authority Cape Town . (TNPA)

**"Regulations"** means, specifically, the Construction Regulations, 2014 as issued on 07 February 2014, under the Occupational Health & Safety Act of 1993, but not excluding the other applicable regulations existing under the Act.

**"Site"** means the lands and other places, made available by the TNPA for the purposes of the Contract, on under over in or through which the construction work is to be executed or carried out.

**"Principal Contractor" and "Contractor"** shall be as defined in the Regulations.

## 2. INTRODUCTION

### 2.1. Introduction to the Health and Safety Specification

In terms of Construction Regulation 5(1) (b) of the Occupational Health and Safety Act, 1993 (Act 85 of 1993), TNPA, as the Client, shall be responsible to prepare Health & Safety Specifications for any intended construction project and provide any Principal Contractor who is making a bid or appointed to perform construction work for the Client and/or its Agent on its behalf with the same.

The Client's further duties are as described in The Act and the Regulations made there-under. The Principal Contractor shall be responsible for the Health & Safety Policy for the site in terms of Section 7 of the Act and in line with Construction Regulation 7 as well as the Health and Safety Plan for the project.

This 'Health and Safety Specifications' document is governed by the "Occupational Health and Safety Act, 1993 (Act No. 85 of 1993), hereinafter referred to as 'The Act'. Notwithstanding this, cognisance should be taken of the fact that no single Act or its set of Regulations can be read in isolation. Furthermore, although the definition of Health and Safety Specifications stipulates 'a documented specification of all health and safety requirements pertaining to associated works on a construction site, so as to ensure the health and safety of persons', it is required that the entire scope of the Labour legislation, including the Basic Conditions of Employment Act be considered as part of the legal compliance system. With reference to this specification the requirement is limited to health, safety and environmental issues pertaining to the site of the project as referred to here-in. Despite the foregoing it is reiterated that environmental management shall receive due attention.

Due to the wide scope and definition of construction work, every construction activity and site will be different, and circumstances and conditions may change even on a daily basis. Therefore, due caution is to be taken by the Principal Contractor when drafting the Health and Safety Plan based on these Health and

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Safety Specifications. Prior to drafting the Health and Safety Plan, and in consideration of the information contained here-in, the contractor shall develop a Risk Assessment Program to identify and determine the scope and details of any risk associated with any hazard at the construction site, in order to identify the steps needed to be taken to remove, reduce or control such hazard. This Risk Assessment and the steps identified will be the basis or point of departure for the Health and Safety Plan. The Health and Safety Plan shall include documented 'Methods of Statement' detailing the key activities to be performed in order to reduce as far as practicable, the hazards identified in the Risk Assessment.

Every effort has been made to ensure that this specification document is accurate and adequate in all respects. Should it however, contain any errors or omissions they may not be considered as grounds for claims under the contract for additional reimbursement or extension of time, or relieve the Principal Contractor from his responsibilities and accountability in respect of the project to which this specification document pertains. Any such inaccuracies, inconsistencies and/or inadequacies must immediately be brought to the attention of the Agent and/or Client.

TNPA is obligated to implement measures to ensure the health and safety of all people and properties affected under its custodianship or contractual commitments, and is further obligated to monitor that these measures are structured and applied according to the requirements of the Health and Safety Specification.

The purpose of this specification document is to provide the relevant Principal Contractor with any information other than the standard conditions pertaining to construction sites which might affect the health and safety of persons at work and the health and safety of persons in connection with the use of plant and machinery; and to protect persons other than persons at work against hazards to health and safety arising out of or in connection with the activities of persons at work during the carrying out of construction work for TNPA. The Principal Contractor is to be briefed on the significant health and safety aspects of the project and to be provided with information and requirements on inter alia:

- a) Safety considerations affecting the site of the project and its environment;
- b) Health and safety aspects of the associated structures and equipment;
- c) Submissions on health and safety matters required from the Principal Contractor; and
- d) The Principal Contractor's (and his /her contractor) health & safety plan.

To serve to ensure that the Principal Contractor is fully aware of what is expected with regard to the Occupational Health and Safety Act, 1993 (Act No. 85 of 1993) and the Regulations made there-under including the applicable safety standards, and in particular in terms of Section 8 of the Act.

To inform the Principal Contractor that the Occupational Health and Safety Act, 1993 (Act 85 of 1993) in its entirety shall apply to the contract to which this specification document applies

## 2.2. Scope of Health and Safety Specification

The Health and Safety Specifications pertaining to the project **ROBINSON DRY DOCK FLOATING CAISSON - PORT OF CAPE TOWN**, cover the subjects contained in the index and is intended to outline the normal as well as any special requirements of TNPA pertaining to the health and safety matters (including the environment) applicable to the abovementioned project.

These Specifications should be read in conjunction with the Occupational health and safety Act, the Construction Regulations and all other Regulations and Safety Standards which were or will be promulgated



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under the Occupational health and safety Act or incorporated into the Occupational health and safety Act and be in force or come into force during the effective duration of the project.

The stipulations in this specification, as well as those contained in all other documentation pertaining to the project, including contract documentation and technical specifications shall not be interpreted, in any way whatsoever, to countermand or nullify any stipulation of the Occupational health and safety Act, Regulations and Safety Standards which are promulgated under, or incorporated into the Act.

### 2.2.1. Special notes

Traffic shall be accommodated with the least delay and discomfort to the public, visitors and TNPA.

**Note: The dry dock precinct is classified as a heavy industrial, operational environment requiring the Works to be planned and executed in a manner which results in minimal operational disruption and this requirement is considered to be a primary concern of the Employer.**

**The Synchro lift and or Sturrock dry dock will be in full operation s during the course of the project and stakeholder engagement is key to ensure that the external stressors does not have a negative impact on the project team.**

All work operations shall be limited within the site Boundaries and all employees shall keep at least 3-5m clear of quays. Life jackets is a must when entering the red zone.



## 2.3. Provision for Health & Safety Cost

The Principal Contractor and their contractors shall make adequate provision for the cost of Health & Safety Measures during the construction process as required by the Construction Regulation 5(1)(g) and must allow for (but not limited to) adequate funds for at least one Full-time Safety Officer until all activities have been completed including Night Work if applicable, Equipment, Signage, Training for all relevant personnel, PPE, Edge Protection, Safe Access, Emergency/Rescue and Equipment, TNPA Hot work permits, on site monitoring, adequate supervision, safe removal of rubble, adequate welfare facilities, Medicals, Gas Test and Monitoring

## 2.4. Implementation of the Occupational Health and Safety Specification

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This Health and Safety Specification forms an integral part of the Contract, and Principal Contractors are required to make it an integral part of their contracts with subcontractors and suppliers. The prospective Principal Contractors shall allow in their tenders for the **cost of complying with the requirements of the health and safety specification** as well as other regulations and standards applicable.

Acceptance by the Principal Contractor of the Contract with TNPA shall constitute acknowledgement that the Principal Contractor has familiarised himself with the content of the Health and Safety Specification and that he will comply with all his obligations in respect thereof.

### 3. GENERAL HEALTH AND SAFETY PROVISIONS

#### 3.1. Mandatory agreement.

Transnet National Ports Authority Cape Town will provide and sign a Mandatory agreement (Section 37.2 of the Occupational Health and safety act) with the Principal Contractor that will be appointed in writing.

This agreement will remain active until the final hand over and completion certificate has been signed.

#### 3.2. Site Access and Site laydown area

Transnet National Ports Authority Cape Town will provide a laydown area suitable for the Principal contractor to site establish for the duration of the Project.

This area and the work area as agreed upon discussion and operational requirements will be the responsibility of the Principal contractor. The Conditions will be made clear in the Site access certificate signed by all parties involved.

#### 3.3. TNPA Rules of Conduct

Principal Contractors, their sub-Contractors and all employees under their control, including any visitor brought onto site must adhere to the following Rules of conduct on site.

##### YOU MAY NOT:

- Partake, possess or sell drugs or alcoholic beverages on site. Any employee or visitor whose action and demeanour show symptoms of possible narcosis or drunkenness shall be removed from site.
- Indulge in practical jokes, horseplay, fighting or gambling.
- Destroy or tamper with safety devices, symbolic signs or wilfully and unnecessarily discharge fire extinguishers.
- Bring onto site or have in your possession a firearm, lethal weapon.
- Assault, intimidate or abuse any other person.
- Operate construction equipment (vehicles or plant) without the necessary training and authorisation.
- Display insubordination toward any supervisor, foreman or Manager in respect to carrying out of properly issued instructions or orders for health and Safety reasons.
- Enter any area where you have no business unless authorised to do so by the person in charge.
- Negligently, carelessly or wilfully cause damage to property of others.
- Refuse to give evidence or deliberately make false statements during investigations.

##### 3.3.1. TNPA 11 Life Saving Rules



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- Rule 1** Do not come to work in possession or consumption of banned substances or being under the influence of alcohol.
- Rule 2** Do not violate traffic rules and do not exceed the prescribed speed limit 40 km p/h within TNPA premises and 20km p/h on the quay side.
- Rule 3** Do not work in the hazardous areas without proper procedure being followed.
- Rule 4** Do not work at height where there is a risk of falling without fall protection equipment, training and a fitness certificate confirming fitness for working at heights. .
- Rule 5** Do not clean or repair any equipment without following isolation or locking out procedure.
- Rule 6** Do not stand or work within the demarcated line of the edge of the quay without the life vest/jacket.
- Rule 7** Adhere to all railway rules, signs and stay out of the close clearance areas.
- Rule 8** Do not enter or work in the confined space alone and without a proper procedure being followed throughout the duration of the task.
- Rule 9** Do not stand under the suspended load.
- Rule 10** Adhered to all the health and safety basic rules, standards and signals and always wear the required PPE.
- Rule 11** Do not tamper with or disable safety devices.

### 3.4. Principal Contractor/Contractors Duties

#### 3.4.1. A Principal Contractor must –

- a) Provide and demonstrate to the client a suitable, sufficiently documented and coherent site specific Health and Safety plan, based on TNPA's documented health and safety specifications contemplated in regulation 5(1)(b), which plan must be applied from the date of commencement of and for the duration of the construction work and which must be reviewed and updated by the Principal Contractor as work progresses.
- b) Open and keep on site a Health and Safety file, which must include all documentation required in terms of the Act and these Regulations, which must be made available on request to an inspector, TNPA; TNPA's agent or a Contractor; and
- c) On appointing any other Contractor, in order to ensure compliance with the provisions of the Act-
  - i) Provide Contractors who are tendering to perform construction work for the Principal Contractor, with the relevant sections of the Health and Safety specifications contemplated in regulation 5(1)(b) pertaining to the construction work which has to be performed;
  - ii) Ensure that potential Contractors submitting tenders have made sufficient provision for Health and Safety measures during the construction process;
  - iii) Ensure that no Contractor is appointed to perform construction work unless the Principal Contractor is reasonably satisfied that the Contractor that he or she intends to appoint, has the necessary competencies and resources to perform the construction work safely;

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- iv) Ensure prior to work commencing on the site that every Contractor is registered and in Good Standing with the Compensation fund or with a licensed Compensation insurer as contemplated in the Compensation for Occupational Injuries and Diseases Act, 1993;
- v) Appoint each Contractor in writing for the part of the project on the construction site;
- vi) Take reasonable steps to ensure that each Contractor's health and safety plan contemplated in sub regulation (2)(a) is implemented and maintained on the construction site;
- vii) Ensure that the periodic site audits and document verification are conducted at intervals mutually agreed upon between the Principal Contractor and any Contractor, but at least once every 30 days;
- viii) Stop any Contractor from executing construction work which is not in accordance with the TNPA's health and safety specifications and the Principal Contractor's Health and Safety plan for the site or which poses a threat to the health and safety of persons;
- ix) Where changes are brought about to the design and construction, make available sufficient health and safety information and appropriate resources to the Contractor to execute the work safely; and
- x) Discuss and negotiate with the Contractor the contents of the health and safety plan contemplated in sub regulation (2)(a), and must thereafter finally approve that plan for implementation;
- d) Ensure that a copy of his or her Health and Safety plan contemplated in paragraph (a), as well as the Contractor's Health and Safety plan contemplated in sub regulation (2)(a), is available on request to an employee, an inspector, a Contractor, TNPA or TNPA's agent;
- e) Hand over a consolidated health and safety file to TNPA upon completion of the construction work and must, in addition to the documentation referred to in sub regulation (2)(b), include a record of all drawings, designs, materials used and other similar information concerning the completed structure;
- f) In addition to the documentation required in the Health and Safety file in terms of paragraph (c)(v) and sub regulation (2)(b), include and make available a comprehensive and updated list of all the Contractors on site accountable to the Principal Contractor, the agreements between the parties and the type of work being done; and
- g) Ensure that all his or her employees have a valid medical certificate of fitness specific to the construction work to be performed and issued by an Occupational Health Practitioner in the form of Annexure 3.

### 3.4.2. Subcontractor must -

A Contractor must prior to performing any construction work -

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- a) Provide and demonstrate to the Principal Contractor a suitable and sufficiently documented Health and Safety plan, based on the relevant sections of TNPA's Health and Safety specification contemplated in regulation 5(1)(b) and provided by the Principal Contractor in terms of sub regulation (1)(a), which plan must be applied from the date of commencement of and for the duration of the construction work and which must be reviewed and updated by the Contractor as work progresses;
- b) Open and keep on site a health and safety file, which must include all documentation required in terms of the Act and these Regulations, and which must be made available on request to an inspector, TNPA; TNPA's Agent or the Principal Contractor;
- c) Before appointing another Contractor to perform construction work be reasonably satisfied that the Contractor that he or she intends to appoint has the necessary competencies and resources to perform the construction work safely;
- d) Co-operate with the Principal Contractor as far as is necessary to enable each of them to comply with the provisions of the Act; and
- e) As far as is reasonably practicable, promptly provide the Principal Contractor with any information which might affect the Health and Safety of any person at work carrying out construction work on the site, any person who might be affected by the work of such a person at work, or which might justify a review of the health and safety plan.

Where a Contractor appoints another Contractor to perform construction work, the duties determined in sub regulation CR 7 (1)(b) to (g) that apply to the Principal Contractor apply to the Contractor as if he or she were the Principal Contractor.

A Principal Contractor must take reasonable steps to ensure co-operation between all Contractors appointed by the Principal Contractor to enable each of those Contractors to comply with these Regulations.

No Contractor may allow or permit any employee or person to enter any site, unless that employee or person has undergone Health and Safety induction training pertaining to the hazards prevalent on the site at the time of entry.

A Contractor must ensure that all visitors to a construction site undergo health and safety induction pertaining to the hazards prevalent on the site and must ensure that such visitors have the necessary personal protective equipment.

A Contractor must at all times keep on his or her construction site records of the health and safety induction training contemplated in sub regulation (6) and such records must be made available on request to an inspector, TNPA; TNPA's agent or the Principal Contractor.

A Contractor must ensure that all his or her employees have a valid medical certificate of fitness specific to the construction work to be performed and issued by an Occupational Health Practitioner in the form of Annexure 3.

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## 4. MINIMUM ADMINISTRATIVE REQUIREMENTS

### 4.1. Compensation of Occupational Injuries and Diseases Act 130 of 1993 (COID Act)

The Principal Contractor shall submit a letter of Good standing with its Compensation Insurer to the TNPA as proof of registration and or with a licensed compensation insurer. (Public Liability)

Sub-Contractors will submit proof of registration to the Principal Contractor before work is commenced on site.

### 4.2. Notification of Construction Work

The nature and scope of the project initiates the requirements of the construction regulation 4, Notification of Construction work.

The Principle contractor will have to notify, at least 7 days in advance the provincial director of such work.

The Notification must be done on the Annexure 2 provided in the Act 85 of 1993, Construction Regulation 4.

All particulars must be completed and signed by the stakeholders before submitting to the Department of Labor.

The signed and stamped copy must be on site and available for audit and inspection purposes.

### 4.3. Principal Contractor/Contractors H&S Plan

The specification as set out in this portion is known as the Health and Safety Specification for the Construction work to be carried out by the Principal Contractor as per regulations of the Construction Regulations 7 February 2014.

Information herein addressed might affect the Health and Safety of employees or persons carrying out the construction work. The Contractor shall ensure that it is fully conversant with the requirements of this Specification.

This Specification is not intended to supersede the OHS Act of 1993 nor the Construction Regulations 2014. Those sections of the OHS Act of 1993 and the Construction Regulations 2014 which apply to the scope of the work to be performed by the Contractor in terms of this contract continue to be a legal requirement of the Contractor.

The Principal Contractor will be appointed in writing to be in overall control of the construction site.

A Health and Safety Plan must be submitted by the Principal Contractor to TNPA or the TNPA's Agent containing all the relevant documents as required by this Specification and terms of the provisions of this Specification, the OHS Act of 1993 and the Construction Regulations 2014 (Construction Regulation 7).

A Health and Safety Plan must also be submitted by the Sub-Contractor to the Principal Contractor containing all the relevant documentation as required by this specification and terms of the provisions of this Specification, the OHS Act of 1993 and the Construction Regulations 2014 – (Construction Regulation 7 c).

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The Health and Safety Plan shall be submitted before commencement of any work on site.

The Health and Safety Plan must be approved by TNPA's Project Management team. Any alterations required in the Plan shall be done before commencement of work.

Should the scope of work changes during the construction period, alterations to the plan shall be done accordingly.

The Health and Safety Plan provide for by the Principal Contractor may be adjusted by the TNPA to suit the requirements.

The approved Health and Safety Plan will be implemented on the construction site.

The Health and Safety Plan of the Principal Contractor shall include all relevant health and safety plans of Contractors and sub-Contractors on site. The Contractor shall, through execution of the Contract, ensure that all sub-Contractors have similar Health and Safety Plans in place which must be available on Site.

The execution of the Health and Safety plan shall be documented in the form of a Health and Safety File which shall contain items as described elsewhere in this Specification. A large file (lever arch file) shall be used with a clear index and dividers. Numbering and items shall be done clearly with numbers as specified elsewhere.

The File shall be available at all times and kept on site and made available for inspection by an inspector, TNPA SHEQ Department or Principal Contractor.

The Contractor will only be allowed to start work once the submitted Health and Safety Plan is approved by the TNPA or the TNPA's Agent.

#### **4.4. Appointments, Management and Supervision of Construction Work.**

A Principal Contractor must in writing appoint one full-time competent person as the Construction Manager with the duty of managing all the construction work on a single site, registered with SACPCMP as per Project and Construction Management Professions Act 48 of 2000, including the duty of ensuring occupational health and safety compliance, and in the absence of the Construction Manager an alternate must be appointed by the Principal Contractor.

A Principal Contractor must upon having considered the size of the project, in writing appoint one or more assistant Construction Managers for different sections thereof: Provided that the designation of any such person does not relieve the Construction Manager of any personal accountability for failing in his or her management duties in terms of this regulation.

Where the Construction Manager has not appointed assistant Construction Managers as contemplated in sub regulation (2), or, in the opinion of an inspector, a sufficient number of such assistant Construction Managers have not been appointed, that inspector must direct the Construction Manager in writing to appoint the number of assistant Construction Managers indicated by the inspector, and those assistant Construction Managers must be regarded as having been appointed under sub regulation (2).

No Construction Manager appointed under sub regulation (1) may manage any construction work on or in any construction site other than the site in respect of which he or she has been appointed.

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A Contractor must, after consultation with the client and having considered the size of the project, the degree of danger likely to be encountered or the accumulation of hazards or risks on the site, appoint a **full-time registered Construction Health, Safety & Environmental Officer in writing** to assist in the control of all health, safety and environmental related aspects on the site: Provided that, where the question arises as to whether a construction health and safety officer is necessary, the decision of an inspector is decisive.

No Contractor may appoint a Construction Health, Safety & Environmental Officer to assist in the control of all health, safety and environmental aspects on the site unless he or she is reasonably satisfied that the Construction Health, Safety & Environmental Officer that he or she intends to appoint is registered with a statutory body approved by the Chief Inspector and has necessary competencies and resources to assist the Contractor.

A Construction Manager must in writing appoint Construction Supervisors responsible for Construction activities and ensuring Occupational Health, Safety Environmental compliance on the construction site.

A Contractor must, upon having considered the size of the project, in writing appoint one or more competent employees for different sections thereof to assist the Construction Supervisor contemplated in sub regulation (7), and every such employee has, to the extent clearly defined by the Contractor in the letter of appointment, the same duties as the construction supervisor: Provided that the designation of any such employee does not relieve the construction supervisor of any personal accountability for failing in his or her supervisory duties in terms of this regulation.

Where the Contractor has not appointed an employee as contemplated in sub regulation (8), or, in the opinion of an inspector, a sufficient number of such employees have not been appointed, that inspector must instruct the employer to appoint the number of employees indicated by the inspector, and those employees must be regarded as having been appointed under sub regulation (8).

No Construction Supervisor appointed under sub regulation (7) may supervise any construction work on or in any construction site other than the site in respect of which he or she has been appointed: Provided that if a sufficient number of competent employees have been appropriately designated under sub regulation (7) on all the relevant construction sites, the appointed construction supervisor may supervise more than one site.

## 4.5. Health and Safety File

The health and safety file must be submitted to the TNPA Safety department for approval. A pre start up safety file checklist will be done and the status of the file will be submitted to the Principle contractor.

Once the file is approved by the TNPA project manager and the safety department, then only may any works activity commence on site.

The Safety file will also be consolidated and signed off at the end of the project and handed over to the TNPA Project manager. This will be done as a hard copy (all the actual documents signed) as well a soft copy of the safety file.

The following documentation shall be in the Health and Safety File of the Principal Contractor and Sub-Contractors:



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## **CONTRACTOR INDEX**

1. **Site Specific Organogram of reporting structure.** This document must provide all persons appointed in terms of OHS Act No. 85 of 1993 including contact details. (rev, date, approval)
2. **Contractor scope of work information** (Company Profile)
3. **Construction work permit:** Document to display required information as per OHS Act No.85 of 1993 – Construction Regulations Annexure 1 Must carry the stamp of acceptance from the Department of Labour.
4. **Valid Letter of Good Standing with FEM/WCA:** And proof of relevant insurances to carry out work.\
5. **Mandatory agreement- Section 37(2)**
6. **CR 7(1)(c)(v) Sub Contractor appointment**
7. **Copy of the signed contract**

## **MANAGEMENT PLANS**

### **1) Copy of reference documents:**

Health, Safety and Environmental Specification

Including a signed register of communication to Managers, Supervisors & Safety Officers

- 2) Contractor Health & Safety Plan correlating with TNPA Health and Safety Specification
- 3) Contractors Health and Safety Policy signed by CEO including the date of appointment.
- 4) Contractors Incident Management Plan
- 5) Site Specific Emergency Plan
- 6) Contractors Traffic Management Plan (if applicable)
- 7) Contractor Environmental Management Plan correlating with TNPA Environmental Plan
- 8) Procedure for handling Hazardous Chemical Substances and Applicable MSDS.
- 9) List of Contractors (Sub-Contractors)
- 10) Method Statements
- 11) Health and safety Risk Assessments
- 12) Emergency Contact Numbers

## **APPOINTMENTS**





### **13) Fully completed Appointments of the following but not limited to:**

OH&S Act Reference	Appointment	Note
16(1)	Chief Executive Officer	
16(2)	Persons assigned functions to assist the Chief Executive Officer (if required)	
17	Health and Safety Representative	
19	Health and Safety Committee Member (if there are 2 or more H&S reps there will be a H&S committee)	
-	Chairperson of Health and Safety Committee	
GSR 3	First Aiders	
GSR 5(1)	Person that pronounces & certifies a confined space safe for the duration of work being conducted (applicable for confined spaces)	
DMR 17(2)	Goods Hoist Inspector	
GAR 9(2)	Incident / Accident Investigator	
DMR18(11)	Lifting Machinery Operator (Appointment or Permit)	
DMR18(5)	Lifting Machinery Inspector	
DMR 18(10)(e)	Lifting Tackle Inspector	
EMR 9	Portable Electrical Equipment Inspector	
VUP 10	Portable Gas Container Inspector	
VUP 13(1)(b)	Pressure Vessels Inspector	

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Lifts, Escalators & Passenger Conveyor Regulations (6)(1)	Competent Person to examine and maintain lift, escalator or passenger conveyor	
HCS 3(3)	Hazardous Chemical Substances Co-coordinator	
Asbestos Regulation 21	Person registered as an Asbestos Contractor (Asbestos AIA) by the Department of Labour	
CR 5(1)(k)	Appointment of the Contractor by the Employer	
CR 7(1)(c)(1)	Subcontractors Appointment by the Contractor	
CR 8(1)	Construction Manager appointed by the Contractor's OH&S Act Section 16(2) assignee	
CR 8(2)	Assistant Construction Manager appointed by the Contractor's OH&S Act Section 16(2) assignee	
CR 8(5)	Construction Health and Safety Officer (fully registered with SACPCMP)	
CR 9(1)	Person to Compile Risk Assessments	
CR 10(1)(a)	Competent person to compile Fall Protection Plan	
CR 12(1)	Designer of Temporary Works	
CR 12(2)	Operations Supervisor for Temp Works	
CR 13(1)(a)	Excavation Supervisor - Note: must be competent to certify in writing that the excavation does not require shoring or bracing.	
CR 14(1)	Demolition Supervisor	
CR 16(1)	Operations Supervisor for Scaffolds	
CR 17(1)	Operations Supervisor for Suspended Platforms	
CR 17(2)	Competent Person to conduct Performance Test for Suspended Platforms	
CR 18(1)(a)	Rope Access Works Supervisor	
CR 19(8)(a)	Material Hoist Inspector	
CR 20(1)	Bulk Mixing Plant Supervisor	
CR 21(2)(g)(i)	Explosive Actuated Fastening Devices Controller	
CR 23(1)(d)(i)	Authorized Operator of Construction Vehicles / Mobile Plant	
CR 24(c)	Electrical Installations Supervisor. Regulation (d) also requires an inspector but does not require a written appointment	
CR 28(a)	Stacking & Storage Supervisor	
CR 29(h)	Fire Equipment Inspector - must inspect FFE according to manufacturer's instructions.	
-	Emergency Planning Co-coordinator	
-	Fire Official	
-	Environmental Officer	

Notes to the appointments listed above:

Number	Notes
a	Section 16(1) creates a legal presumption, and therefore no appointment is required. The Contractor shall provide the full names, contact telephone number and business address of the Chief Executive Officer.
b	Required Competencies: <ul style="list-style-type: none"> <li> General health and safety training</li> <li> Health and Safety Representative Training</li> <li> Hazard identification and Risk assessment Training</li> <li> Incident investigation and root cause analysis</li> </ul>

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c	<p>Required Competencies:</p> <ul style="list-style-type: none"> <li>✚ Three years applicable experience in construction management</li> <li>✚ General Health and Safety course</li> <li>✚ OH&amp;S Act and Regulations course, as applicable (latest version of the Act and Regulations)</li> <li>✚ Incident Investigation and Root Cause Analysis</li> <li>✚ Hazard Identification and Risk Assessment Training</li> <li>✚ Job Observations training</li> <li>✚ Attended an accredited supervisor's safety course</li> </ul> <p>If the Commencement date precedes the date of issue of this Schedule (rev <b>1</b>), the Contractor shall have a period of three months to comply with the above competency requirements; except to the extent required by applicable Law in which case immediate compliance is required.</p>
d	<p>In determining the number of appointed competent Construction Health and Safety Officers to the number of employees, the nature and scope of work being performed shall be taken into consideration. A minimum average ratio of 1 Construction Health and Safety Officer to 50 employees shall be applied.</p> <p>Typical Qualifications:</p> <ul style="list-style-type: none"> <li>✚ National Diploma in Safety Management or Environmental Health or;</li> <li>✚ A recognised safety certification (minimum: of 2 weeks training) (e.g. SAMTRAC/Modern SHEQ Management course) and registration and accreditation from a recognised Health and safety professional body South African Council for the Project and Construction Management Professions (SACPCMP)</li> </ul> <p>Typical Competencies:</p> <ul style="list-style-type: none"> <li>✚ OH&amp;S Act and regulations (latest version of the Act and regulations);</li> <li>✚ COID Act (latest version of the Act);</li> <li>✚ Incident investigation and root cause analysis;</li> <li>✚ Hazard identification and Risk assessment Training;</li> <li>✚ Fall protection plan</li> <li>✚ H&amp;S Auditing;</li> <li>✚ Environmental recognised course;</li> <li>✚ Emergency Preparedness coordination training</li> </ul>
e	<p>The Contractor shall appoint and provide a full time, suitably qualified and competent Environmental Officer (EO) for the duration of the Contract, with a minimum average ratio of 1 EO per 500 employees</p>

- 14) Proof of firefighting training CR 29(h) & list of firefighting team members.
- 15) Elevated work training (Rescue/ Safety harnesses) – accredited Training (If applicable)
- 16) Fall Protection Plan by competent person / Rescue equipment (If applicable)
- 17) Baseline Risk Assessment indicating the full scope of work and risk profile – High risk task inventory registers to be attached.
- 18) (HIRA) Risk Assessment (Method Statement, Safe Work Procedure) to be generated for each specific task to be performed on the project i.e.: Site establishment, confined spaces, working at heights, working near water, excavations etc. Note: before establishment they can supply what they will start with – site establishment, fencing, clear & grub...so only request what is relevant at the time.
- 19) PPE Policy and most recent issue register.

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## **INDUCTION**

**20) Induction application forms completed for every employee of the Contractor performing work on site; The following shall be attached:**




- ✚ Employee scope of work;
- ✚ Proof of site specific induction;
- ✚ Copy of ID Document;
- ✚ Legal Letter of Appointment;
- ✚ Abbreviated CV for Managers, Supervisors & Safety Officers (If not previously included);
- ✚ Proof of competence i.e.: Artisans, drivers, operators etc.;
- ✚ Valid medical certificate of fitness done by an Occupational Health Practitioner

## **REGISTERS**

**21) Copy of equipment registers to be used with copy of each item's inspection checklist. Copy of nominated responsible person to conduct monthly inspections and proof of their competency. All other statutory registers as required by the OHS Act No. 85 of 1993.**

- ✚ **Accident / Incident Register (Annexure 1 of the General Administrative Regulations)**
- ✚ Site visitors register
- ✚ OH&S Representatives Inspection Register
- ✚ Form/Support work Inspection
- ✚ Arc & Gas Welding & Flame Cutting Equipment Inspections
- ✚ Construction Vehicles & Mobile Plant Inspections
- ✚ Electrical Installation and Machinery Inspections
- ✚ Fire Equipment Inspection & Maintenance
- ✚ First Aid
- ✚ Hazardous Chemical Substances
- ✚ Lifting Tackle and Equipment Inspections
- ✚ Inspection of Cranes
- ✚ Inspection of Ladders
- ✚ Inspection of Vessels under Pressure
- ✚ Machinery Inspections
- ✚ Drivers/Operators of Mobile Plant/Construction Vehicles Daily Inspections
- ✚ Accommodation of traffic daily inspection book
- ✚ Excavation Inspection Register
- ✚ Hand tools Inspection register
- ✚ Barricading Inspection Register
- ✚ Traffic Inspection Register
- ✚ Mobile Toilet Inspection Register
- ✚ Daily Risk Assessment and Toolbox Talk
- ✚ PPE Inspection Register
- ✚ PPE Issue Register
- ✚ First Aid kit Inspection Register
- ✚ Portable electrical Equipment Register
- ✚ Pneumatic Tool Register

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-  Compressor Checklist
-  Ladder Inspection Register
-  Working at Height Equipment Register

22) Training Matrix (Management and Supervisors)

23) Copy of the OHS act, COID and Construction Regulation 2014

The Health & Safety File shall be handed over TNPA on completion of the contract. It must contain all the documentation handed to the Contractor by any subcontractors together with a record of all drawings, designs, materials used and other similar information concerning the completed project.

The Consolidated file(S) must be signed off by all stakeholders (Client, Principle Contractors, Sub Contractors) and a Soft and Hard copy submitted via TNPA Document control.

## 4.6. Project Site Specific Risk Assessment

The Principal Contractor as well as all other Contractors shall appoint a competent person in writing to carry out a risk assessment before any construction work is started.

- a) the identification of the risks and hazards to which persons may be exposed to;
- b) an analysis and evaluation of the risks and hazards identified based on a documented method;
- c) a documented plan and applicable safe work procedures to mitigate, reduce or control the risks and hazards that have been identified;
- d) a monitoring plan; and
- e) a review plan.

A Contractor must ensure that as far as is reasonably practicable, ergonomic related hazards are analysed, evaluated and addressed in a risk assessment.

The Principal Contractor shall ensure all risk assessments submitted to TNPA SHEQ Department for approval prior to commencement of work.

TNPA SHE Department will stop any work if such work is not conducted in terms of the recommendations of the risk assessment.

Copies of the Risk Assessment shall be made available on site for inspection

All employees shall be informed, instructed and trained by an appointed competent person regarding all hazards and work related procedures.

A Risk Assessment communication register shall be displayed with each Risk Assessment done to prove communication of the assessment to the relevant workers.

A Contractor must ensure that copies of the risk assessments of the relevant site are available on site for inspection by an inspector, TNPA/s agent, any Contractor, any employee, a representative trade union, a health and safety representative or any member of the health and safety committee.

A Contractor must review the relevant risk assessment-

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- a) where changes are effected to the design and or construction that result in a change to the risk profile; or
- b) when an incident has occurred

## 4.7. Project / Site specific requirements

The following is a list of minimum specific activities and considerations that have been identified but not limited, for the project and site and for which Risk Assessments, Standard Working Procedures (SWP), management and control measures and Method Statements (where necessary) have to be developed by the Principal Contractor:

- ✚ Site Establishment including:
  - Office/s – with an electrical supply accompanied by a COC for the Electrical installation.
  - Secure/Safe Storage and storage areas for materials, plant & equipment
    - Ablution facilities
    - Sheltered dining area
    - Vehicle access to the site
- ✚ Dealing with existing Structures.
- ✚ Location of existing Services
- ✚ Installation & Maintenance of Temporary Construction Electrical Supply, Lighting and Equipment
- ✚ Adjacent Land uses/Surrounding property exposures
- ✚ Boundary & Access control/Public Liability Exposures (Remember: the Employer is also responsible for the OH&S of non-employees affected by his/her work activities.)
- ✚ Health risks arising from neighboring as well as own activities and from the environment e.g. threats by dogs, bees, snakes, lightning, allergies etc.
- ✚ Exposure to Noise
- ✚ Exposure to Vibration
- ✚ Protection against dehydration and heat exhaustion
- ✚ Protection from wet & cold conditions
- ✚ Use of Portable Electrical Equipment including:
  - Angle grinder
  - Electrical Drilling machine
  - Skill saw
- ✚ Excavations including:
  - Ground/soil conditions
  - Trenching
  - Shoring
  - Drainage
  - Daily inspections
- ✚ Welding including:
  - Arc Welding
  - Gas welding
  - Flame Cutting
  - Use of LP Gas torches and appliances
- ✚ Loading & Offloading of Trucks
- ✚ Manual and Mechanical Handling
- ✚ Lifting and Lowering Operation
- ✚ Driving & Operation of Construction Vehicles and Mobile Plant including:
  - Trenching machine



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- Plate Compactor
- Front End Loader and fork lifts
- Mobile Cranes and the ancillary lifting tackle
- Parking of Vehicles & Mobile Plant
- Towing of Vehicles & Mobile Plant
- ✚ Use and Storage of Flammable Liquids and other Hazardous Substances – TNPA/or its Agent on its behalf to be informed of this prior to commencing of the project
- ✚ Installation of Pipes in trenches
- ✚ Backfilling of Trenches
- ✚ Protection against Flooding
- ✚ Protection from Overhead Power Lines
- ✚ Traffic management
- ✚ As discovered by the Principal Contractor's hazard identification exercise
- ✚ As discovered from any inspections and audits conducted by TNPA and/or its Agent on its behalf or by the Principal Contractor or any other Contractor on site
- ✚ As discovered from any accident/incident investigation.

## 4.8. Induction Training

The Principal Contractor and will undergo induction at TNPA SHEQ Department prior to work commencing and provision will be made by the Principal Contractor for his sub-Contractors on the following:

The Principal Contractor/Sub-Contractor shall develop and detail a Site Induction Training Programme as part of the Occupational Health and Safety Plan to be submitted to TNPA SHEQ Department prior to commencement of construction that includes as a minimum:

- a) Training related to hazards likely to be encountered on site and control measures that have been developed in response to these hazards;
- b) Roles and responsibilities;
- c) The requirements of the Health and Safety Plan submitted and approved
- d) Address the identified issues in the FIRE safety, Emergency preparedness, Evacuation and Rescue Plan to ensure that all site personnel are aware of procedures in the event of an incident or emergency occurring;
- e) All visitors and persons entering the site.

The Principal Contractor/Sub-Contractor shall evaluate all persons undertaking the site induction. Training through a written test to ensure that inductees have an understanding of the OHS requirements in terms of the Occupational Health and Safety Act 1993 for the contract at hand. The written tests shall be signed and dated by the person undertaking the induction training to attest to their understanding and be retained by the Principal Contractor/Sub-Contractor as a record that the training has been done and completed.

## 4.9. Health and Safety Training

The Principal Contractor/Contractor shall ensure that all Contractor's Personnel working on the Project Site (or on other places, if any, as may be specified under the Contract as forming part of the Site) are adequately trained in the type of work / tasks to be performed. This training shall extend to include relevant procedures, hazard identification and risk assessment. Contractor's Personnel shall have the appropriate qualifications, certificates and tickets, and shall work under competent supervision. Copies of records of appropriate training and qualifications for all employees shall be kept and maintained.

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## 4.10. Arrangements for Monitoring and Reporting

The Principal Contractor shall carry out daily safety inspections on the site (or more frequent, where so required in the Regulations), and shall take steps to rectify any unsafe condition of which he is aware.

## 4.11. TNPA Audits

TNPA SHEQ Department and/or its Agent on its behalf will be conducting Periodic Audits at intervals mutually agreed upon between the Principal Contractor and any other Contractor, but at least every 30 days. Audit reports will be distributed within 7-10 days after the audit.

## 4.12. Safety management and First Aid Information board

The Contractor shall provide a Safety Management Information Board (sandwich board) where a register of;

- daily safety talk;
- risk assessment;
- project manager/supervisor contact numbers;
- any notices,
- site regulations concerning safe working practices, and;
- information on the location of the nearest first aid station, and;
- first aider, can be conspicuously displayed to all staff.

The size of the notice board shall be at least 600mm x 800mm.

Ensure persons at work receive prompt first aid treatment.

## 4.13. First Aid Box and Equipment

The nature and risks involved in this project is complex in nature due to limited access and egress to and from the service tunnels. It is for this reason that a specialised level of first aid must be available on site. At least two first aid level three designations must be present on site at all times. This will allow the stabilisation of a person in complex situations while being evacuated to the nearest exit point.

- If a contractor has more than 5 employees at workplace, Principal Contractor/Contractor must provide a first aid box.
- Minimum contents of a first aid box are in Annexure of General Safety Regulation 3.
- If more than 10 employees at a work place, one person in every 50 persons must be in possession of certificate of competency in first aid and one in every 100 persons in an office environment must be in possession of certificate of competency in first aid.
- First aider, in work place where there is a high risk substances or toxic, corrosive or similar substances used, he/she must be trained in the applicable first aid and emergency procedure.
- Affix a notices or signs that indicate the location of the first aid box and the name of person in charge of the first aid box must be displayed.
- Ensure an employee with an open wound, cut, sore or similar injury is not working in a work place where a high risk substances or toxic, corrosive or similar substances are being used before the injury has been cleaned with soap and water or with a diluted disinfectant.
- Provide an eyewash fountain or similar facilities where employees are exposed to a potential of eye injury through contact with biological or chemical substances.
- An eyewash fountain must be provided in the immediate vicinity of affected workplace.
- Employees trained in the use of the eyewash fountain.

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- Provide a fast-reacting deluge-shower if employee is or can be exposed to a potential hazard of injury to or absorption through the skin as a result of contact with a high-risk substance or toxic, corrosive or similar substances. Fast-reacting deluge-shower located in the immediate vicinity of the workplace.

#### 4.14. Hazard Notices

The Contractor shall display hazard notices in all areas where hazardous conditions prevail or may occur.

#### 4.15. Reporting of incidents and/or injuries

All incidents in respect of damage to works, property or machinery or injury to persons shall be reported by the Principal Contractor/Contractor SHE Representative to the area supervisor and to the Accident/Incident Investigator.

Minor Injuries and near misses shall also be reported and recorded on the appropriate forms.

##### In cases of –

- ✚ any person dies
- ✚ becomes unconscious
- ✚ lose a limb or part thereof
- ✚ suffer permanent physical disability
- ✚ unable for 14 days to work

A mandatory incident report form (Annexure 1) containing full details of the incident, shall be completed by the appointed Accident/Incident Investigator and submitted to the Site Agent and the Department of Labour (Section 24) within 24 hours of the occurrence of the incident

Within 7 days” notice, the incident report must be given in the form of WCL2 to the Provincial Director.

##### In cases of –


- ✚ Major incident
- ✚ Dangerous substance spill
- ✚ Uncontrolled release of any substance under pressure
- ✚ Machinery fracture resulting in flying, falling objects
- ✚ Machinery out of control

A mandatory incident report form (Annexure 1), containing full details of the incident, shall be completed by the appointed Accident/Incident Investigator and submitted to the Construction Manager and the Department of Labour within 24 hours of the occurrence of the incident.

Refer in this regard to Section 24 of the Act & General Administrative Regulation 8.

The Principal Contractor is required to provide within 24hrs TNPA SHE Department with copies of all internal accident/incident investigation reports. As soon as the occurrence of any accident/incident of whatever nature comes to the notice of the Principal Contractor, it shall be reported immediately to any of the following by means flash report via email to:

**All incident must be reported to Port control: 021 449 2805**

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## 4.16. Emergency preparedness and response

### Emergency response plan

The Principal Contractor shall submit a detailed Emergency Procedure as part of his H&S Plan. The procedure shall detail the following:

- List of key personnel,
- A contact list of all emergency service providers (Fire department, Ambulance, Police, Medical and Hospital, etc.) must be maintained and be available to site personnel.
- ✚ Actions or steps to be taken in the event of the emergency; and
- ✚ Information on any hazardous material and its situation on the site
- ✚ Information on hazardous material's potential impact or risk on the environment or to humans, and measures to be taken in the event of an accident.
- ✚ Emergency procedure(s) shall include, but not be limited to, fire, spills, accidents to employees and injury resulting from the use of hazardous substances, etc.

In the event of an emergency arising, the Principal Contractor shall advise TNPA Cape Town SHEQ Department in writing of the incident via flash report (Annexure H), together with a record of any action taken, within 24 hours of the emergency occurring.

### If based on site for longer than 6 months –

- ✚ The Principal Contractor/Contractor shall develop his own emergency response plan for both work areas and office areas and submit this plan to the appointed Construction Manager for approval. The plan shall be amended as required by the Construction Manager. The Principal Contractor shall ensure that all Contractor's and personnel are aware of and trained in the execution of the emergency plan. The implementation of the safety plan will be audit by TNPA as and when required and the principal contractor will conduct these audit as per requirement.
- ✚ Periodic emergency drills will be undertaken by TNPA Fire Department. The Principal Contractor/Contractor shall also initiate his own emergency drills, with the co-operation, and subject to the approval of the Construction Manager. Details of such drills shall be recorded and such records shall be made available on request.
- ✚ The Principal Contractor/Contractor shall be responsible for ensuring that his emergency plan is reviewed annually, and after every incident which caused the emergency plan to be activated. Any changes made shall be briefed to all persons affected and the information provided to the Construction Manager.

## 4.17. Fire Precautions

- ✚ Where required by the TNPA SHEQ Department, the Principal Contractor shall provide, at strategic positions on the site, portable fire equipment, which shall be serviced regularly, in accordance with the manufacturer's recommendations.
- ✚ Safety signage shall be prominently displayed in all areas where fire equipment is located. The Principal Contractor shall arrange for the training of the relevant personnel, in the use of fire extinguishers.
- ✚ A register shall be kept on all Acetylene and Oxygen cylinders used on site.

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- ✚ Condition of components, sub-components and safety components – e.g. Flame back arrestors, shall be listed in the register and signed by the construction supervisor at regular intervals as required with time and date stamp.
- ✚ Acetylene, Oxygen and LP Gas cylinders shall be stored in suitable places to minimise the risk of fire;
- ✚ Suitable storage to be provided for all flammable liquids e.g. petrol, diesel, paints and thinners;
- ✚ Smoking shall be prohibited in the workplace and notices posted accordingly;
- ✚ Smoking areas with sand buckets or ash trays will be demarcated when site is established;
- ✚ Sufficient and suitable fire fighting equipment shall be provided and placed in strategic positions in the workplace (on vehicles and other positions as dimmed necessary);
- ✚ A Register shall be kept on type and number of equipment for each site in the Health and Safety File;
- ✚ A competent person shall inspect all fire fighting equipment;
- ✚ A sufficient and adequate number of employees shall be trained in the use of fire fighting equipment;
- ✚ A Register shall be kept in the Health and Safety File on site bearing the names of employees and type of fire fighting training received and completed with dates of training and training provider's name;
- ✚ Suitable and sufficient signs shall be erected in the workplaces indicating all escape routes;
- ✚ Escape routes shall be kept clear – a copy of the Evacuation plans shall be kept in the Health and Safety File as part of Induction Training provided;
- ✚ Combustible materials shall not accumulate on site;
- ✚ A siren is installed and sounded in the event of FIRE.

#### 4.18. Personal Protective Equipment (Clothing)

The Principal Contractor/Contractor shall provide the necessary personal protective equipment for its employees as per the mandatory Transnet Ports authority access requirements. The personal protective equipment must be identified in the Risk Assessment for each activity conducted for the entire scope of work. A Personal protective equipment procedure must be included in the H&S Plan. A copy of the register of PPE issues must be filed with the H&S Plan.

#### Hard Hats

All employees of the Contractor shall wear hard hats in areas where appropriate hazard notices are displayed. The Construction Manager shall have rights to ban certain colours if they are similar to the TNPA's identifying colours. Hard hats shall not be painted or otherwise defaced.

#### Colours

- Red - Fire Fighter
- Orange - First Aider
- White - Professional Team/Management
- Blue - Supervisor
- Yellow - Workers
- Green - SHE Representatives

#### Eye Protection

Suitable eye protection shall be worn in areas where appropriate hazard notices are displayed or where grinding, chipping, breaking, drilling, arc welding, cutting with oxy-acetylene equipment or similar activities are taking place.

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### Hearing Protection

Suitable hearing Protection shall be worn in areas where appropriate hazard notices are displayed.

### Foot Wear

All employees of the Contractor shall wear undamaged, laced-up safety boots or safety shoes suitable for the intended purpose in prescribed areas where appropriate hazard notices are displayed.

### Gloves

All employees of the Contractor shall wear suitable protective gloves in areas where appropriate hazard notices are displayed or when handling hot or hazardous materials or chemicals.



### Clothing

All employees of the Contractor shall wear suitable protective clothing when working in proximity of machinery, power tools, hazardous materials or chemicals.

### Lifesaving jackets/floating devises

Working in close proximity of quay side edges (3m from edge) or within red painted line, lifesaving/jackets equipment shall be used.

The Principal Contractor shall clearly outline the procedures to be followed when PPE or Clothing is:

-  Lost or Stolen
-  Worn Out or Damaged

## 4.19. Signage and Notices






The use of colour codes, symbolic signs and notices are means of communication whereby information is visually conveyed to people and also provides early warning of dangers.

Safety signs provide for immediate recognition of danger, information, actions allowed or not allowed and procedures that have to be followed.




There are 5 types of safety signs:

- |   |             |
|---|-------------|
| 1) Black triangle on yellow background => | WARNING     |
| 2) Red circle on white background =>      | PROHIBITORY |
| 3) White on blue background =>            | MANDATORY   |
| 4) White on green background =>           | INFORMATION |
| 5) Red square on white background =>      | FIRE        |

The following signs shall be provided for on site:

- |   |                       |                                |
|---|-----------------------|--------------------------------|
|  | Traffic control signs | - ROAD CLOSED                  |
|   |                       | - DETOUR                       |
|   |                       | - DIRECTION ARROWS             |
|  | Warning signs         | -DANGER – MEN AT WORK          |
|  | Prohibitory signs     | -NO ENTRY                      |
|  | Fire                  | - POSITION OF EQUIPMENT ARROWS |
|  | First Aid             | - INFORMATION SIGNS            |

All signs shall be new or in good condition and approved by the Construction Manager.

-  All temporary signs shall be mounted on portable supports to facilitate moving.
-  Defective or missing items shall be replaced immediately.
-  All signs shall be inspected at twice a day.







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## 4.20. Permit to Work

The Contractor shall prior to commencing with any job on site ensure that they have obtained the necessary permit from TNPA representatives.

Permits may possibly include the following;

-  Hot work (Cost of R345.99)
-  Isolation and lock-out
-  Confined spaces
-  Permit to work

## 5. OCCUPATIONAL SAFETY

### 5.1. Construction site management, Public safety and Security measures.

The Construction site shall be barricaded completely to prevent pedestrians and vehicles from entering the construction area. Access control must be implemented to ensure no unauthorised personnel can enter the construction site.

A physical barrier will be a fence of at least 1.2 meter high. Danger tape is not considered a physical barrier. Danger tape is considered as a signage only. The perimeter fencing should be inspected and maintained weekly. Registers must be kept thereof.

The Principal Contractor shall ensure that each person working on or visiting a site, and the general public in the vicinity of the construction site, shall be made aware of the dangers likely to arise from onsite activities and the precautions to be observed to avoid or minimise those dangers. Providing each person with a site specific induction and signing the induction attendance register.

Notices & Signs at shall be posted at entrances and or along perimeters indicating "No Unauthorised Entry". Mandatory Personnel protective equipment signage must be displayed.

Notices & Signs at entrance instructing visitors and non - employees what to do, where to go and where to report on entering the site/yard with directional signs. e.g. "Visitors to report to Office"

Notices & Signs posted to warn of overhead work and other hazardous activities. e.g. "General Warning Signs"

Security measures

- Access shall be controlled by having a sign in register in operation.
- Security patrols after hours and weekends
- There must be sufficient lighting after dark
- Security guards has access to a telephone or other means of emergency communication

The barricading must not present any hazard to any person that passes by.

### 5.2. Fall and edge protection

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The Principal Contractor must ensure that all exposed edges and openings are guarded and demarcated at all times until permanent protection has been erected. The Principal Contractor's risk assessment must include these items. E.g. protection of decking edges, finished floor slab edges, stairways, floor penetrations, lift shafts, and all other openings and areas where a person may fall.

A Contractor must-

- a) designate a competent person to be responsible for the preparation of a fall protection plan;
- b) ensure that the fall protection plan contemplated in paragraph (a) is implemented, amended where and when necessary and maintained as required; and
- c) take steps to ensure continued adherence to the fall protection plan.


A fall protection plan contemplated in sub regulation (1), must include-

- a) a risk assessment of all work carried out from a fall risk position and the procedures and methods used to address all the risks identified per location;
- b) the processes for the evaluation of the employees' medical fitness necessary to work at a fall risk position and the records thereof;
- c) a programme for the training of employees working from a fall risk position and the records thereof;
- d) the procedure addressing the inspection, testing and maintenance of all fall protection equipment; and
- e) a rescue plan detailing the necessary procedure, personnel and suitable equipment required to affect a rescue of a person in the event of a fall incident to ensure that the rescue procedure is implemented immediately following the incident.

A Contractor must ensure that a Construction Manager appointed under regulation 8(1) is in possession of the most recently updated version of the fall protection plan.

A Contractor must ensure that-

- a) all unprotected openings in floors, edges, slabs, hatchways and stairways are adequately guarded, fenced or barricaded or that similar means are used to safeguard any person from falling through such openings;
- b) no person is required to work in a fall risk position, unless such work is performed safely as contemplated in sub regulation (2);
- c) fall prevention and fall arrest equipment are-

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- (i) approved as suitable and of sufficient strength for the purpose for which they are being used, having regard to the work being carried out and the load, including any person, they are intended to bear; and
  - (ii) securely attached to a structure or plant, and the structure or plant and the means of attachment thereto are suitable and of sufficient strength and stability for the purpose of safely supporting the equipment and any person who could fall; and
- d) fall arrest equipment is used only where it is not reasonably practicable to use fall prevention equipment.

Where roof work is being performed on a construction site, the Contractor must ensure that, in addition to the requirements set out in sub regulations (2) and (4), it is indicated in the fall protection plan that-

- a) the roof work has been properly planned;
- b) the roof erectors are competent to carry out the work;
- c) no employee is permitted to work on roofs during inclement weather conditions or if any conditions are hazardous to the health and safety of the employee;
- d) all covers to openings and fragile material are of sufficient strength to withstand any imposed loads;
- e) suitable and sufficient platforms, coverings or other similar means of support have been provided to be used in such a way that the weight of any person passing across or working on or from fragile material is supported; and
- f) suitable and sufficient guard-rails, barriers and toe-boards or other similar means of protection prevent, as far as is reasonably practicable, the fall of any person, material or equipment.

### 5.3. Temporary works

- A Contractor must appoint a temporary works designer in writing to design, inspect and approve the erected temporary works on site before use.
- A Contractor must ensure that all temporary works operations are carried out under the supervision of a competent person who has been appointed in writing for that purpose.
- A Contractor must ensure that-
  - a) all temporary works structures are adequately erected, supported, braced and maintained by a competent person so that they are capable of supporting all anticipated vertical and lateral loads that may be applied to them, and that no loads are imposed onto the structure that the structure is not designed to withstand;
  - b) all temporary works structures are done with close reference to the structural design drawings, and where any uncertainty exists the structural designer should be consulted;

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- c) detailed activity specific drawings pertaining to the design of temporary works structures are kept on the site and are available on request to an inspector, other Contractors, TNPA's agent or any employee;
- d) all persons required to erect, move or dismantle temporary works structures are provided with adequate training and instruction to perform those operations safely;
- e) all equipment used in temporary works structure are carefully examined and checked for suitability by a competent person, before being used;
- f) all temporary works structures are inspected by a competent person immediately before, during and after the placement of concrete, after inclement weather or any other imposed load and at least on a daily basis until the temporary works structure has been removed and the results have been recorded in a register and made available on site;
- g) no person may cast concrete, until authorization in writing has been given by the competent person contemplated in paragraph (a);
- h) if, after erection, any temporary works structure is found to be damaged or weakened to such a degree that its integrity is affected, it is safely removed or reinforced immediately;
- i) adequate precautionary measures are taken in order to-
  - (i) secure any deck panels against displacement; and
  - (ii) prevent any person from slipping on temporary works due to the application of release agents;
- j) as far as is reasonably practicable, the health of any person is not affected through the use of solvents or oils or any other similar substances;
- k) upon casting concrete, the temporary works structure is left in place until the concrete has acquired sufficient strength to safely support its own weight and any imposed load, and is not removed until authorization in writing has been given by the competent person contemplated in paragraph (a);
- l) the foundation conditions are suitable to withstand the loads caused by the temporary works structure and any imposed load in accordance with the temporary works design.
- m) provision is made for safe access by means of secured ladders or staircases for all work to be carried out above the foundation bearing level;
- n) a temporary works drawing or any other relevant document includes construction sequences and methods statements;
- o) the temporary works designer has been issued with the latest revision of any relevant structural design drawing;

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- p) a temporary works design and drawing is used only for its intended purpose and for a specific portion of a construction site; and
- q) the temporary works drawings are approved by the temporary works designer before the erection of any temporary works.

- No Contractor may use a temporary works design and drawing for any works other than its intended purpose.

## 5.4. Scaffolding

- All scaffolding must be in compliance to SABS 085.
- A competent person shall be appointed in writing to supervise the erection of all scaffolding operations. The scaffolding erected shall have the required accredited qualifications for scaffold erecting.
- A competent Scaffold Inspector shall be appointed in writing to inspect the erected scaffolds and shall not be same person as the Erector.
- An inspection register on scaffolding shall be kept in the Health and Safety File.
- A copy of the SABS 085 as amended shall be available on site and kept in the Health and Safety File.

## 5.5. Ladders

- Ladders used shall be undamaged and are of sound construction.
- Ladders must be numbered and placed on a register and inspected on a monthly basis by an appointed Ladder Inspector.
- Ladders are to be secured during use. If it is necessary to use a ladder before it can be secured, a second person must hold it steady at all times. Place the ladder's feet on a level base – wooden blocks or bricks are not to be used!
- Ladders are not to be used as scaffolds or work platforms.
- When used as access to trenches and work areas, the ladder must extend 1m above the step off point and be placed at an angle where the base of the ladder is  $\frac{1}{4}$  of the ladder height away from the base of the structure – and must be fitted with non-skid devices.
- Ladders must not be used nearer than 3m to any exposed electrical power source and never in substations or on electrical installation work.
- Ladders are not to be used in a horizontal position.
- Maintain a 3-point contact by keeping two hands and one foot or two feet and one hand on the ladder at all times.
- Do not carry objects in your hands while on a ladder.

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- Ladders must be fitted with non-skid devices at the bottom ends and hooks or similar devices at the upper ends.
- Ladders with damaged stiles, or damaged or missing rungs should never be used.
- Ladders must never be fastened together to increase the reach.
- Wooden ladders must never be painted.

## 5.6. Electrical installations and machinery

- A Contractor must, in addition to compliance with the Electrical Installation Regulations, 2009, and the Electrical Machinery Regulations, 1988, promulgated by Government Notice No. R. 1593 of 12 August 1988, ensure that-
  - a) before construction commences and during the progress thereof, adequate steps are taken to ascertain the presence of and guard against danger to workers from any electrical cable or apparatus which is under, over or on the site;
  - b) all parts of electrical installations and machinery are of adequate strength to withstand the working conditions on construction sites;
  - c) the control of all temporary electrical installations on the construction site is designated to a competent person who has been appointed in writing for that purpose;
  - d) all temporary electrical installations used by the contractor are inspected at least once a week by a competent person and the inspection findings are recorded in a register kept on the construction site; and
  - e) all electrical machinery is inspected by the authorized operator or user on a daily basis using a relevant checklist prior to use and the inspection findings are recorded in a register kept on the construction site.

## 5.7. Use and temporary storage of flammable liquids

- Where flammable liquids are being used, applied or stored at the workplace concerned, it is done in a manner that does not cause a fire or explosion hazard, and that the workplace is effectively ventilated;
- No person smokes in any place in which flammable liquid is used or stored, and the contractor must affix a suitable and conspicuous notice at all entrances to any such areas prohibiting such smoking;
- An adequate amount of efficient fire-fighting equipment is installed in suitable locations around the flammable liquids store with the recognized symbolic signs;
- Only the quantity of flammable liquid needed for work on one day is taken out of the store for use;
- All containers holding flammable liquids are kept tightly closed when not in actual use and, after their contents have been used up, are removed from the construction site and safely disposed of;



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- Where flammable liquids are decanted, the metal containers are bonded and earthed; and
- No flammable material, including cotton waste, paper, cleaning rags or similar material is stored together with flammable liquids.

## 5.8. Water Environments

- A contractor must ensure that where construction work is done over or in close proximity to water, provision is made for-
  - preventing persons from falling into water; and
  - the rescuing of persons in danger of drowning.
- A contractor must ensure that where a person is exposed to the risk of drowning by falling into the water, the person is provided with and wears a lifejacket.

## 5.9. Housekeeping and general safeguarding

- A contractor must, in addition to compliance with the Environmental Regulations for Workplaces, 1987, promulgated by Government Notice No. R. 2281 of 16 October 1987, ensure that suitable housekeeping is continuously implemented on each construction site, including-
  - the proper storage of materials and equipment;
  - the removal of scrap, waste and debris at appropriate intervals;
  - ensuring that materials required for use, are not placed on the site so as to obstruct means of access to and egress from workplaces and passageways;
  - ensuring that materials which are no longer required for use, do not accumulate on and are removed from the site at appropriate intervals;
  - ensuring that waste and debris are not disposed of from a high place with a chute, unless the chute complies with the requirements set out in regulation 14(6);
  - ensuring that construction sites in built-up areas adjacent to a public way are suitably and sufficiently fenced off and provided with controlled access points to prevent the entry of unauthorized persons; and
  - ensuring that a catch platform or net is erected above an entrance or passageway or above a place where persons work or pass under, or fencing off the danger area if work is being performed above such entrance, passageway, or place so as to ensure that all persons are kept safe in the case of danger or possibility of persons being struck by falling objects.

## 5.10. Stacking and Storage

- A Contractor must, in addition to compliance with the provisions for the stacking of articles in the General Safety Regulations, 2003, ensure that-

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- a competent person is appointed in writing with the duty of supervising all stacking and storage on a construction site;
- adequate storage areas are provided;
- there are demarcated storage areas; and
- storage areas are kept neat and under control.

## 5.11. Fire precautions

- The Principal Contractor shall provide adequate, regularly serviced fire-fighting equipment located at strategic points on site, specific to the classes of fire likely to occur. The appropriate notices and signs must be posted up as required. All fire extinguishers to be handled and inspected by competent persons in compliance with CR 25 & 29.
- The Principal Contractor to provide a Fire Risk Assessment. Note: The Principal Contractor shall ensure that sufficient and suitable storage is provided for all flammable liquids, solids and gases. The Principal Contractor shall ensure that sufficient number of workers is trained in the use of Fire Equipment.
- A contractor must, in addition to compliance with the Environmental Regulations for Workplaces, 1987, ensure that-
  - a) all appropriate measures are taken to avoid the risk of fire;
  - b) sufficient and suitable storage is provided for flammable liquids, solids and gases;
  - c) smoking is prohibited and notices in this regard are prominently displayed in all places containing readily combustible or flammable materials;
  - d) in confined spaces and other places in which flammable gases, vapours or dust can cause danger-
    - ✚ only suitably protected electrical installations and equipment, including portable lights, are used;
    - ✚ there are no flames or similar means of ignition;
    - ✚ there are conspicuous notices prohibiting smoking;
    - ✚ oily rags, waste and other substances liable to ignite are without delay removed to a safe place; and
    - ✚ adequate ventilation is provided;
  - e) combustible materials do not accumulate on the construction site;
  - f) welding, flame cutting and other hot work are done only after appropriate precautions have been taken to reduce the risk of fire;
  - g) suitable and sufficient fire-extinguishing equipment is placed at strategic locations or as may be recommended by the Fire Chief or local authority concerned, and that such equipment is maintained in a good working order;

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- h) the fire equipment contemplated in paragraph (g) is inspected by a competent person, who has been appointed in writing for that purpose, in the manner indicated by the manufacturer thereof;
- i) a sufficient number of workers are trained in the use of fire-extinguishing equipment;
- j) where appropriate, suitable visual signs are provided to clearly indicate the escape routes in the case of a fire;
- k) the means of escape is kept clear at all times;
- l) there is an effective evacuation plan providing for all-
  - ✚ persons to be evacuated speedily without panic;
  - ✚ persons to be accounted for; and
  - ✚ plant and processes to be shut down; and
- m) a siren is installed and sounded in the event of a fire.

## 5.12. Hazardous Chemical Substance (HCSR)

- The Principle contractor/contractors will appoint in writing an Competent person to control the hazardous Chemical substance on site
- Provide safe storage for HCS at the site with well-ventilated and bunded areas with spill response measures. Oil spill kits on site as a minimum.
- The Contractor shall provide suitable and adequate protective equipment when working in an area where hazardous chemicals and materials are being used.
- The Contractor shall ensure that its employees are trained on the hazardous material data sheets applicable to the specific site as well as the location of firefighting equipment, safety showers/baths and other washing facilities prior to commencement of work.  
Material Safety Data Sheets shall be provided with all chemical use and filed in the Health and Safety File.
- All hazardous waste shall be disposed of at an authorised landfill site and proof of disposal shall be provided upon request. Employees shall be provided with suitable PPE including Respirators as and when needed. Adequate control measures shall be taken to avoid exposure to employees and members of the Public.

## 5.13. Waste Management

- The Principle contractor will provide bins for the various types of waste generated on site, domestic, hazardous etc. These bins will be labelled per the content and emptied at 80% of the max holding capacity.
- All the Waste bins will be fitted with a secure lid to prevent any waste from blowing out of the bin.
- All hazardous waste disposal will be accompanied by a waste manifest indicating what waste was disposed accompanied with the waste disposal certificate.
- The Principle Contractor will ensure that all domestic waste generated will be removed and dumped at authorised dump site.

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- No mix of waste will be allowed, and in the event of waste being mixed, the waste will be regarded as hazardous waste.
- Accumulation of empty cement pockets, plastic wrapping / bags, packing materials etc. prevented. Spillage / discarding of oil, chemicals and diesel into storm water and other drains prevented

#### 5.14. Confined space entry.

- The Principal Contractor to prepare a confined space procedure in line with General Safety Regulation (5) OHS Act including the following but is not limited to,
  - The areas have been declared safe to use by a competent person in writing
  - Task Specific Risk Assessments,
  - Method Statements
  - Emergency Procedures
  - Adequate Supervision
  - Permit to work in confined space (Including entry and exit)
  - Adequate Lighting
  - Safe Access
  - Adequate Ventilation and with breathing apparatus available
  - Buddy System with ropes to be implemented
  - Proof that continuous Gas assessments are being conducted
  - Duration of working hours when working inside the chambers/pump stations
  - Competent person/s and equipment to be readily available to assist with resuscitation

**Note, No breaks shall be taken in any confined spaces.**

## 6. PLANT, MACHINERY AND EQUIPMENT

### 6.1. Explosive actuated fastening device


- The user is provided with and uses suitable protective equipment.
- Trained in the operation, maintenance and use of such a device.
- The explosive actuated fastening device is provided with a protective guard around the muzzle end, which effectively confines any flying fragments or particles.
- The firing mechanism is so designed that the explosive actuated fastening device, will not function unless
  - it is held against the surface with a force of at least twice its weight; and
  - the angle of inclination of the barrel to the work surface is not more than 15 degrees from a right angle.
- Only use cartridges suited for the relevant explosive actuated fastening device.
- Inspected daily and controlled by a competent person who has been appointed in writing.

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- When not in use, an explosive actuated fastening device and its cartridges are locked up in a safe place, which is inaccessible to unauthorized persons.
- Not stored in a loaded condition.
- Warning notice is displayed in a conspicuous manner in the immediate vicinity wherever an explosive actuated fastening device is used.
- Recorded in a register by a competent person and that the recipient has accordingly signed for the receipt thereof as well as the returning of any spent and unspent cartridges.

## 6.2. Construction vehicles and mobile plant.

- The Principal Contractor shall ensure that any hired plant and machinery used on site is safe for use. The necessary requirements as stipulated by the OHS Act 85/1993 and Construction Regulations (February 2014) shall apply. The Contractor shall ensure that operators hired with machinery are competent and that certificates are kept on site in the Health and Safety file. All relevant Contractors must ensure the same.
  - The Principle Contractor shall ensure that drivers of motor vehicles are in possession of a driver's licence, valid for the class of vehicle which they are require to drive and shall produce the licence upon request.
  - The Contractor shall not permit any driver to be in control of a vehicle while under the influence of alcohol, drugs or other substance.
  - All vehicles of the Contractor shall display a name board bearing the Contractor's name. Hired vehicles shall bear an identifying sticker.
  - Construction Vehicles used for transporting persons must have seats firmly secured and sufficient for the number of persons being transported (PDP required when transporting employees)
  - A register shall be kept of workers operating construction vehicles and mobile plant.
  - The register shall contain proof of training of operators to operate construction vehicles and mobile plant, certification of competency and authorisation of operators to operate machinery, vehicles and plant.
  - Names of operators and their relevant training with date and time stamps – together with name of course instructor shall be kept in the Health and Safety File on site.
  - Physical and psychological fitness shall be proved by way of a medical certificate of fitness (issued by a registered Occupational Medical Practitioner) of the said operators before allowing operators to operate machinery, vehicles or plant.
  - Each and every driver shall be trained on risks associated with their trade and safety procedures to mitigate the risks.

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- All construction vehicles and mobile plant must be of acceptable design and construction and used according to their design.
- All construction vehicles and mobile plant must be maintained in good working order.
- Registers of all vehicles and plant shall be kept on site together with names of operators responsible for each.
- The register shall report all maintenance activities performed on these vehicles and plant as well as signatures certifying condition of the vehicles as in a good working order.
- All requirements on the vehicles and mobile plant with regard to safety and health shall be inspected and certified.

### **These requirements include:**


- portable fire extinguishers mounted in specified positions on construction vehicles – 2kg DCP Fire extinguisher;
- safety belts and harnesses;
- inspection for leaking fuel or gasses which can cause a fire hazard;
- safe and suitable means of access;
- adequate signalling or other control arrangement to guard against the dangers relating to movement of vehicles and plant;

### **Attention must be paid to –**

- Turn indicators
- Stop lights x2 – where poor visibility conditions warrant
- Reverse siren or acoustic device
- Head lights x2 – where poor visibility conditions warrant
- Rotating amber flashing with lens height of at least 200mm and an output of at least 100Watts on roof or other visible position
- Warning boards mounted at least 1.5m above ground level to be clearly visible
- Inspections of appropriate structures fitted to protect the operator from falling material or from being crushed should the vehicle or mobile plant overturn
- Appropriate seats must be firmly secured and adequate in number on vehicles used to transport employees

### **➤ During use of Construction vehicles or mobile plant, the following rules shall be adhered to:**

- Construction vehicles or mobile plant must be prevented from falling into excavations, water or any other area lower than the working surface. This protection must consist of adequate edge protection e.g. guard rails and/or crash barriers.
- No person shall be allowed to or require to ride on any Construction Vehicle or Mobile Plant in a position otherwise than a safe place provided for on the construction vehicle or mobile plant as designed for that purpose.

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- The construction site must be organised in such a way that as far as is reasonably practical, pedestrians and vehicles can move safely and without risk to health and safety.
- Traffic routes shall of sufficient size, sufficient in number and in suitable positions to be used safely by construction vehicles, mobile plant and pedestrians.
- Each and every route shall be indicated by suitable signs for reasons of safety and health.
- No tools and/or materials shall be transported in the same compartment as the operators/drivers/employees unless the said are secured against movement during transportation.
- All Construction Vehicles and Mobile Plant left unattended at night adjacent to a freeway in normal use or adjacent to construction areas where work is in progress, shall have appropriate lights or reflectors, or barricades equipped with appropriate lights or reflectors in order to identify the location of the vehicles or plant.
- Bulldozers, scrapers, loaders and other similar mobile plant are, when being repaired or when not in use, fully lowered or blocked with controls in a neutral position, motors stopped and brakes set.
- Reflective indicators must be provided to workers in the form of reflective yellow jackets or vests as specified and worn by workers working on/or adjacent to public roads.

### 6.3. Vessels under pressure and gas bottles.

- The Principal Contractor and their contractors shall comply with the Pressure Equipment Regulations and SANS 10087, 10238 etc. including but is not limited to,
  - Providing competency and awareness training to the operators;
  - Providing Personal Protective Equipment or clothing;
  - Providing and maintaining appropriate signage in areas where VUP are used;
  - Inspecting equipment regularly and keeping records of inspections;
  - Providing appropriate firefighting equipment (Fire Extinguishers).

### 6.4. Welding, Flame- Cutting, Soldering and similar operations.

- No Hot work to be carried out without a Hot work Permit from TNPA Fire Services and must be obtained from Port of **Cape Town's Port Control at a cost of R 345.95 (Vat incl.)**
- Persons doing flame cutting or welding fully instructed in the safe use of the equipment.
  - Persons doing flame cutting or welding effectively protected.



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- Leads and electrode holders insulated.
- Workplace effectively partitioned.
- Effective ventilation provided and maintained where welding or flame cutting is done in confined spaces. Masks or hoods maintaining a supply of safe air for breathing provided where welding or flame cutting is done in confined spaces.
- No electrical welding in a damp, wet place, inside metal vessels or in contact with large amount of metal unless:
  - Insulation of the leads is in sound condition
  - Electrode holder is in sound condition
  - Welder is insulated by boots, gloves and rubber mats
  - One other trained person remains in attendance during operations in case of emergency
  - Trained fire watchers to oversee the work and remain onsite for a further 30 minutes after completion of work.
- No welding or flame cutting, grinding, soldering or similar work conducted in or on any tank, drum, vessel or similar objects unless such container is open or the rise in pressure cannot render dangerous.
- No welding or flame cutting, grinding, soldering or similar work is conducted in or on any tank, drum, vessel or similar objects where the container contains a substance that may ignite or explode under heat.
- No welding or flame cutting, grinding, soldering or similar work conducted in or on any tank, drum, vessel or similar objects where the container contains a substance that may react to form dangerous or poisonous substance, unless a person competent to pronounce on the safety thereof has certified in writing that any danger has been removed.
- When hot work (welding, cutting, brazing or soldering operations) is carried out at places other than workplaces designed for hot work proper and adequate fire precautions must be taken.

## 6.5. Portable electrical tools

- The principle contractor/contractor shall ensure that all the portable electrical tools are;
  - a. Numbered and on a register
  - b. inspected by a competent person monthly
  - c. inspected by the user before use daily
  - d. Records are kept of such inspections
  - e. Deviations are reported to the Construction work supervisor
  - f. No alterations or modifications are made to the tool.
  - g. Proper consumables are provided (drill bits, grinding blades etc.)
  - h. All components are kept in a functional and secure state.

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- The Principal Contractor and their contractors shall ensure that the use of all portable electrical tools follows relevant legislation. Compliance with CR 24. The Contractor shall ensure that all electrical tools, electrical distribution boards, extension leads, and plugs are kept in safe working order. Regular inspections and toolbox talks must be conducted to make workers aware of the dangers and control measures to be implemented e.g. Personal protection equipment, guards, etc. A competent person to undertake routine/daily inspections and records are kept. Only authorized trained persons to use the tools, the safe work procedures to apply. Awareness training to be carried out and compliance enforced always, and PPE and clothing are provided and maintained. **Note: All power tools shall be inspected by the Authorised Operator daily with proof placed on file.**

## 7. OCCUPATIONAL HEALTH AND HYGIENE

### 7.1. Occupational Health

The Principal Contractor/Contractor shall ensure that all employees working for or on behalf of the organisation are medical fit and these tests shall be done as per the Annexure 3 in the Construction Regulations 2014, regulation 7 (8) and shall include the minimum (baseline): audiometric, lung function, drug and vision tests.

- Regular monitoring should be done to ensure validation of medical fitness certificates.
- Records should be kept for 40 years.
- Exit medicals to be conducted and records kept when employees leave employment and or completion of the project (which ever event occurs first).
- Copies to form part of the H&S file.

### 7.2. Occupational Hygiene

Occupational exposure is a major problem and all Contractors must ensure that proper health and hygiene measures are put in place to prevent exposure to these hazards.


#### 7.2.1 Ventilation and air monitoring

Adequate ventilation / extraction / exhausting in hazardous areas e.g. chemicals / adhesives / welding / petrol or diesel/ motors running and in confined spaces / basements.

The Artificial air supply from the surface into the service tunnels must be done and maintained throughout the work shift. Backup power supply must be available to ensure that everyone can exit the service tunnels in the event of a break down.

Gas tests must be done prior to access of the service tunnels and continual air monitoring of the area must be done throughout the every shift. In the event of Gas or insufficient oxygen present, the Principle contractor will ensure that a competent person prescribes that correct measures to be put in place for them to work safely. Where required appropriate Personal Protective Equipment must be issued.

Principal Contractor to ensure that employees working with grinders, drills, etc. are issued with the prescribed PPE to protect them from inhaling dust generated from such activates.

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Suitable measures to be implemented by the Principal Contractor to ensure that members of the public are not detrimentally affected by such activities.

### 7.2.2 Poor visibility (lighting and night work)

Where work is required to be done during the night, and approved by TNPA, the Contractor shall make adequate provision for adequate supervision and additional lighting to ensure that the equipment and the areas where work is to be done are lighted.

The Contractor shall also make sure that the additional lighting does not interfere with the general traffic or Ships at the Port. Adequate lighting/illumination to be provided where required with backup generators. All emergency procedures to be in place. Adequate PPE to be provided for all employees e.g. Hi-Viz Vests.

Adequate lighting in places where work is being executed and in Construction Employee Facilities.

Light fittings placed / installed causing no irritating/blinding glare.

### 7.2.3 Noise

Tasks identified where noise exceeds 85 dBA. All reasonable steps to be taken to reduce noise levels at the source. Hearing protection to be used where noise levels cannot be reduced below 85dBA. The contractors shall comply with CR 9, Section 8 of the OH'S Act 85/1993 and the Noise-induced Hearing Loss Regulation.

Where noise is identified as a hazard the requirements of the NIHL regulations must be complied with and the following must be included / referred to in the Health and Safety Plan:

- Proof of training with regards to these regulations.
- Risk assessment
- Medical surveillance programme established and maintained for the necessary employees.
- Engineering methods considered
- Admin control (number of employees exposed) considered
- Personal protective equipment considered/decided on All reasonable steps taken to reduce noise levels at the source.

Measures in place to prevent heat exhaustion in heat stress problem areas e.g. steel decks, when the WBGT index reaches 30. (See Environmental Regulation)

## 7.3. Construction Employee Facilities

➤ A contractor must, in addition to the construction site provisions in the Facilities Regulations, 2004, promulgated by Government Notice No. R. 924 of 3 August 2004, provide at or within reasonable access of every construction site, the following clean, hygienic and maintained facilities:

- Shower facilities after consultation with the employees or employees representatives, or at least one shower facility for every 15 persons;
- at least one sanitary facility for each sex and for every 30 workers with toilet paper free of charge;
- changing facilities for each sex; and
- Cold drinking water – signage indicating that the water is safe for human consumption.
- Ventilated and Sheltered eating areas.
- Ergonomically sound seating

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- Sufficient lighting in storage, offices and eating areas. (ensure electrical supply to site offices)
- A contractor must provide reasonable and suitable living accommodation for the workers at construction sites who are far removed from their homes and where adequate transportation between the site and their homes, or other suitable living accommodation, is not available.

## 7.4. Alcohol and Drugs

- TNPA has a Zero tolerance alcohol and drugs. Breathalysing tests are done randomly by TNPA Security, no person will be allowed on site if found he/she blows positive.
- Any person suspected of being under the influence of alcohol or other drugs must be sent home immediately, report back the next day for a preliminary inquiry. All contractors must follow a disciplinary procedure
- No alcohol and other drugs will be allowed on TNPA site. No person may be under the influence of alcohol or any other drugs while on the construction site.
- Any person on prescription drugs must inform his/her Supervisor, who shall in return report this to the Construction Manager.
- Any person suffering from any illness/condition that may have a negative effect on his/her safety performance must report this to his /her Supervisor and/or Construction Manager

## 7.5. Hazardous biological Agents (COVID 19)

- Ensure that that a COVID – 19 manager and compliance officer has been appointed on site to ensure that control measures are implemented and maintained.
- The contractor must provide accurate information and training regarding the Hazardous Biological agent (HBA);
  - Preventative measure
  - Control measures
  - Reactive measures
  - Reintroduction in the workplace.
- The duties of a person that might be exposed to an HBA as per regulation 5 of HBAR.
- Conduct a risk assessment for the specific operations and the HBA risks included in the daily operations.
- Provide a Covid – 19 Workplace plan for the site/work area.
- Monitor the exposure at the workplace
- Record must be kept with regards to the HBA regulations.
- Provide free of charge Personal Protective equipment to people that may be affected by the operations of the contractor.