



SECTION 1

REQUEST FOR PROPOSAL

TRANSNET NATIONAL PORTS AUTHORITY

an Operating Division **TRANSNET SOC LTD**

[Registration Number 1990/000900/30]

REQUEST FOR PROPOSAL (RFP)

DESCRIPTION OF GOODS AND SERVICES: SUPPLY, DELIVERY, INSTALLATION, INTEGRATION, TESTING AND COMMISSION OF THREE (3) FIRE SUPPRESSION MONITORS AT TANKER BERTH IN THE PORT OF EAST LONDON FOR A PERIOD OF SIX (6) MONTHS

RFP NUMBER : TNPA/2025/06/0016/97939/RFP

ISSUE DATE : 24 JULY 2025

NON-COMPULSORY BRIEFING SESSION : 01 AUGUST 2025 AT 11H00AM

SITE VISIT DATES : 24 JULY 2025 UP TO 07 AUGUST 2025

CLOSING DATE : 08 AUGUST 2025

CLOSING TIME : 16H00PM

TENDER VALIDITY PERIOD : 12 WEEKS FROM CLOSING DATE

Contents

Number	Heading
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The Tender

Part T1: Tendering Procedures

T1.1	Tender Notice and Invitation to Tender
------	--

T1.2	Tender Data
------	-------------

Part T2: Returnable Documents

T2.1	List of Returnable Document
------	-----------------------------

T2.2	Returnable Schedules
------	----------------------

The Contract

Part C1: Agreements and Contract Data

C1.1	Form of Offer and Acceptance
------	------------------------------

C1.2	Contract Data (Parts 1 & 2)
------	-----------------------------

C1.3	Form of Guarantee
------	-------------------

Part C2: Pricing Data

C2.1	Pricing instructions: Option A
------	--------------------------------

C2.2	Activity Schedule
------	-------------------

Part C3: Scope of Work

C3.1	Works Information
------	-------------------

Part C4: Site Information

C4.1	Site Information
------	------------------

**RFP DESCRIPTION OF GOODS AND SERVICES: SUPPLY, DELIVERY, INSTALLATION,
INTEGRATION, TESTING AND COMMISSIONING OF THREE (3) FIRE SUPPRESSION
MONITORS AT TANKER BERTH IN THE PORT OF EAST LONDON**

FOR A PERIOD OF SIX (6) MONTHS

SECTION 1: SBD1 FORM

PART A

INVITATION TO BID

YOU ARE HEREBY INVITED TO BID FOR REQUIREMENTS OF TRANSNET NATIONAL PORTS AUTHORITY, A DIVISION TRANSNET SOC LTD							
BID NUMBER:	TNPA/2025/06/0016/97939/RFP	ISSUE DATE:	24 JULY 2025	CLOSING DATE:	08 AUGUST 2025	CLOSING TIME:	16h00pm
DESCRIPTION	SUPPLY, DELIVERY, INSTALLATION, INTEGRATION, TESTING AND COMMISSIONING OF THREE (3) FIRE SUPPRESSION MONITORS AT TANKER BERTH IN THE PORT OF EAST LONDON FOR A PERIOD OF SIX (6) MONTHS						
BID RESPONSE DOCUMENTS SUBMISSION INSTRUCTIONS							
<p><i>(please refer to section 2, paragraph 3 for a detailed process on how to upload submissions):</i></p> <p>https://transnetetenders.azurewebsites.net</p>							
BIDDING PROCEDURE / TECHNICAL ENQUIRIES MAY BE DIRECTED TO:							
CONTACT PERSON	Xolelwa Gwele						
TELEPHONE NUMBER	Not Applicable						
FACSIMILE NUMBER	Not Applicable						
E-MAIL ADDRESS	TNPAPOELABOVE@transnet.net						
SUPPLIER INFORMATION							
NAME OF BIDDER							
POSTAL ADDRESS							
STREET ADDRESS							
TELEPHONE NUMBER	CODE		NUMBER				
CELLPHONE NUMBER							
FACSIMILE NUMBER	CODE		NUMBER				
E-MAIL ADDRESS							
VAT REGISTRATION NUMBER							
<p>IT IS A CONDITION OF THIS BID THAT THE TAX MATTERS OF THE SUCCESSFUL RESPONDENTS BE IN ORDER, OR THAT SATISFACTORY ARRANGEMENTS HAVE BEEN MADE WITH SOUTH AFRICAN REVENUE SERVICE (SARS) TO MEET THE RESPONDENTS TAX OBLIGATIONS.</p>							
	TCP PIN		OR	CSD NO			

SUPPLIER COMPLIANCE STATUS	<input type="checkbox"/> Yes <input type="checkbox"/> No	OR	BBEE STATUS LEVEL SWORN AFFIDAVIT
If Yes, Who was the Certificate issued by?			
AN ACCOUNTING OFFICER AS CONTEMPLATED IN THE CLOSE CORPORATION ACT (CCA) AND NAME THE APPLICABLE IN THE TICK BOX	<input type="checkbox"/>	AN ACCOUNTING OFFICER AS CONTEMPLATED IN THE CLOSE CORPORATION ACT (CCA)	
	<input type="checkbox"/>	A VERIFICATION AGENCY ACCREDITED BY THE SOUTH AFRICAN ACCREDITATION SYSTEM (SANAS)	
	<input type="checkbox"/>	A REGISTERED AUDITOR	
	NAME:		
[A B-BBEE STATUS LEVEL VERIFICATION CERTIFICATE/ SWORN AFFIDAVIT (FOR EMES & QSEs) MUST BE SUBMITTED FOR PURPOSES OF COMPLIANCE WITH THE B-BBEE ACT]			
ARE YOU THE ACCREDITED REPRESENTATIVE IN SOUTH AFRICA FOR THE GOODS /SERVICES /WORKS OFFERED?	<input type="checkbox"/> Yes <input type="checkbox"/> No [IF YES ENCLOSE PROOF]	ARE YOU A FOREIGN BASED SUPPLIER FOR THE GOODS /SERVICES /WORKS OFFERED?	<input type="checkbox"/> Yes <input type="checkbox"/> No [IF YES, ANSWER QUESTIONNAIRE BELOW]
Signature of the Bidder	Date:
QUESTIONNAIRE TO BIDDING FOREIGN SUPPLIERS			
IS THE BIDDER A RESIDENT OF THE REPUBLIC OF SOUTH AFRICA (RSA)?		<input type="checkbox"/> YES <input type="checkbox"/> NO	
DOES THE BIDDER HAVE A BRANCH IN THE RSA?		<input type="checkbox"/> YES <input type="checkbox"/> NO	
DOES THE BIDDER HAVE A PERMANENT ESTABLISHMENT IN THE RSA?		<input type="checkbox"/> YES <input type="checkbox"/> NO	
DOES THE BIDDER HAVE ANY SOURCE OF INCOME IN THE RSA?		<input type="checkbox"/> YES <input type="checkbox"/> NO	
IF THE ANSWER IS "NO" TO ALL OF THE ABOVE, THEN IT IS NOT A REQUIREMENT TO REGISTER FOR A TAX COMPLIANCE STATUS SYSTEM PIN CODE FROM THE SOUTH AFRICAN REVENUE SERVICE (SARS) AND IF NOT REGISTER AS PER 1.3 BELOW.			

PART B

TERMS AND CONDITIONS FOR BIDDING

1. TAX COMPLIANCE REQUIREMENTS
1.1 BIDDERS MUST ENSURE COMPLIANCE WITH THEIR TAX OBLIGATIONS.
1.2 BIDDERS ARE REQUIRED TO SUBMIT THEIR UNIQUE PERSONAL IDENTIFICATION NUMBER (PIN) ISSUED BY SARS TO ENABLE THE ORGAN OF STATE TO VERIFY THE TAXPAYER'S PROFILE AND TAX STATUS.
1.3 APPLICATION FOR TAX COMPLIANCE STATUS (TCS) PIN MAY BE MADE VIA E-FILING THROUGH THE SARS WEBSITE WWW.SARS.GOV.ZA .
1.4 BIDDERS MAY ALSO SUBMIT A PRINTED TCS CERTIFICATE TOGETHER WITH THE BID.

- | |
|---|
| <p>1.5 IN BIDS WHERE UNINCORPORATED CONSORTIA / JOINT VENTURES / SUB-CONTRACTORS ARE INVOLVED, EACH PARTY MUST SUBMIT A SEPARATE TCS CERTIFICATE / PIN / CSD NUMBER.</p> <p>1.6 WHERE NO TCS IS AVAILABLE BUT THE BIDDER IS REGISTERED ON THE CENTRAL SUPPLIER DATABASE (CSD), A CSD NUMBER MUST BE PROVIDED.</p> <p>1.7 RESPONDENTS ARE REQUIRED TO SELF-REGISTER ON NATIONAL TREASURY'S CENTRAL SUPPLIER DATABASE (CSD) WHICH HAS BEEN ESTABLISHED TO CENTRALLY ADMINISTER SUPPLIER INFORMATION FOR ALL ORGANS OF STATE AND FACILITATE THE VERIFICATION OF CERTAIN KEY SUPPLIER INFORMATION. ONLY FOREIGN SUPPLIERS WITH NO LOCAL REGISTERED ENTITY NEED NOT REGISTER ON THE CSD. THE CSD CAN BE ACCESSED AT HTTPS://SECURE.CSD.GOV.ZA/.</p> |
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NB: FAILURE TO PROVIDE / OR COMPLY WITH ANY OF THE ABOVE PARTICULARS MAY RENDER THE BID INVALID.

SIGNATURE OF BIDDER:

CAPACITY UNDER WHICH THIS BID IS SIGNED:

(Proof of authority must be submitted e.g. company resolution)

DATE: _____



PART T: THE TENDER



T1.1 TENDER NOTICE AND INVITATION TO TENDER

T1.1 TENDER NOTICE AND INVITATION TO TENDER

SECTION 1: NOTICE TO TENDERERS

1. INVITATION TO TENDER

Responses to this Tender [hereinafter referred to as a **Tender**] are requested from persons, companies, close corporations or enterprises [hereinafter referred to as a Tenderer].

DESCRIPTION	SUPPLY, DELIVERY, INSTALLATION, INTEGRATION, TESTING AND COMMISSIONING OF THREE (3) FIRE SUPPRESSION MONITORS AT TANKER BERTH IN THE PORT OF EAST LONDON FOR A PERIOD OF SIX (6) MONTHS
TENDER DOWNLOADING	This Tender may be downloaded directly from the National Treasury eTender Publication Portal at www.etenders.gov.za and the Transnet website at https://transnetetenders.azurewebsites.net (please use Google Chrome to access Transnet link) FREE OF CHARGE . To view the CIDB Tender notice please refer to: https://www.cidb.org.za/cidb-tenders/currenttenders/

NON-COMPULSORY TENDER CLARIFICATION MEETING	<p>A Non-Compulsory Tender Clarification Meeting will be conducted on Microsoft Teams on the 01st August 2025 at 11h00 [11 O'clock in the morning (am)] for a period of ± 2 (two) hours. [Tenderers are to login on the Microsoft Teams weblink at least 10 minutes before the commencement of clarification meeting].</p> <p>The Non-compulsory tender virtual clarification meeting can be accessed by clicking the below weblink: Join the meeting now</p> <p>The Non-Compulsory Tender Clarification Meeting will start punctually, and information will not be repeated for the benefit of Tenderers arriving late.</p> <p>A site visit to view the current fire suppression monitor's is allowed and not compulsory. Pictures of the site where the removal and installation of the Fire Suppression Monitor's will take place is provided on C4: Site information. The</p>
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	<p>site visit is allowed as from the period of 24th July 2025 up to 07th August 2025.</p> <p>Tenderers who wish to view the site where the Fire Suppression Monitor's will be installed can send an email to TNPAPOELABOVE@transnet.net listing the date, time, company name and contact person/people who will come for the site view. Tenderers must indicate first and get confirmation for attendance; they cannot come unannounced to ensure the relevant Employer's representative is available to take them to site.</p> <ul style="list-style-type: none"> • Tenderers who wish to visit the site are required to wear safety shoes and visibility vests. • Tenderers without the recommended safety shoes and visibility vests will not be allowed on the site visit. • Tenderers and their employees, visitors, clients, and customers entering Transnet Offices, Depots, Workshops and Stores will have to undergo breathalyzer testing. • All forms of firearms are prohibited on Transnet properties and premises. • The relevant person attending the site visit must ensure that their identity documents, passports, or drivers licenses are in the possession for inspection at the access control gates.
CLOSING DATE	<p>16h00pm on 08 August 2025</p> <p>Tenderers must ensure that tenders are uploaded timeously onto the system. If a tender is late, it will not be accepted for consideration.</p>

2. TENDER SUBMISSION

Transnet has implemented a new electronic tender submission system, the e-Tender Submission Portal, in line with the overall Transnet digitalization strategy where suppliers can view advertised tenders, register their information, log their intent to respond to bids and upload their bid quotations on to the system.

a) The Transnet e-Tender Submission Portal can be accessed as follows:

Log on to the Transnet eTenders management platform website

(<https://transnetetenders.azurewebsites.net>);

- Click on "ADVERTISED TENDERS" to view advertised tenders;

- Click on "SIGN IN/REGISTER – for bidder to register their information (must fill in all mandatory information);
 - Click on "SIGN IN/REGISTER" - to sign in if already registered;
 - Toggle (click to switch) the "Log an Intent" button to submit a bid;
 - Submit bid documents by uploading them into the system against each tender selected.
 - **Tenderers are required to ensure that electronic bid submissions are done at least a day before the closing date to prevent issues which they may encounter due to their internet speed, bandwidth, or the size of the number of uploads they are submitting. Transnet will not be held liable for any challenges experienced by bidders as a result of the technical challenges. Please do not wait for the last hour to submit. A Tenderer can upload 30mb per upload and multiple uploads are permitted.**
- b) The tender offers to this tender will be opened as soon as possible after the closing date and time. Transnet shall not, at the opening of tenders, disclose to any other company any confidential details pertaining to the Tender Offers / information received, i.e., pricing, delivery, etc. The names and locations of the Tenderers will be divulged to other Tenderers upon request.
- c) Submissions must not contain documents relating to any Tender other than that shown on the submission.

3. CONFIDENTIALITY

All information related to this RFP is to be treated with strict confidentiality. In this regard Tenderers are required to certify that they have acquainted themselves with the Non-Disclosure Agreement. All information related to a subsequent contract, both during and after completion thereof, will be treated with strict confidence. Should the need however arise to divulge any information gleaned from provision of the goods and or services, which is either directly or indirectly related to Transnet's business, written approval to divulge such information must be obtained from Transnet.

4. DISCLAIMERS

Tenderers are hereby advised that Transnet is not committed to any course of action as a result of its issuance of this Tender and/or its receipt of a tender offer. In particular, please note that Transnet reserves the right to:

- 4.1. Award the business to the highest scoring Tenderer/s unless objective criteria justify the award to another tenderer.
- 4.2. Not necessarily accept the lowest priced tender or an alternative Tender;
- 4.3. Go to the open market if the quoted rates (for award of goods and/or services) are deemed unreasonable;

- 4.4. Should the Tenderers be awarded business on strength of information furnished by the Tenderer, which after conclusion of the contract is proved to have been incorrect, Transnet reserves the right to terminate the contract;
- 4.5. Request audited financial statements or other documentation for the purposes of a due diligence exercise;
- 4.6. Not accept any changes or purported changes by the Tenderer to the tender rates after the closing date;
- 4.7. Verify any information supplied by a Tenderer by submitting a tender, the Tenderer/s hereby irrevocably grant the necessary consent to the Transnet to do so;
- 4.8. Conduct the evaluation process in parallel. The evaluation of Tenderers at any given stage must therefore not be interpreted to mean that Tenderers have necessarily passed any previous stage(s);
- 4.9. Unless otherwise expressly stated, each tender lodged in response to the invitation to tender shall be deemed to be an offer by the Tenderer. The Employer has the right in its sole and unfettered discretion not to accept any offer.
- 4.10. Not be held liable if tenderers do not provide the correct contact details during the clarification session and do not receive the latest information regarding this RFP with the possible consequence of being disadvantaged or disqualified as a result thereof.
- 4.11. Transnet reserves the right to exclude any Tenderers from the tender process who has been convicted of a serious breach of law during the preceding 5 [five] years including but not limited to breaches of the Competition Act 89 of 1998, as amended. Tenderers are required to indicate in tender returnable [clause 12 on T2.2-22], [**Breach of Law**] whether or not they have been found guilty of a serious breach of law during the past 5 [five] years.
- 4.12. Transnet reserves the right to perform a risk analysis on the preferred tenderer to ascertain if any of the following might present an unacceptable commercial risk to the employer :
 - unduly high or unduly low tendered rates or amounts in the tender offer;
 - contract data of contract provided by the tenderer; or
 - the contents of the tender *returnables which are to be included in the contract*.
5. Transnet will not reimburse any Tenderer for any preparatory costs or other work performed in connection with this Tender, whether or not the Tenderer is awarded a contract.

6. NATIONAL TREASURY'S CENTRAL SUPPLIER DATABASE

Tenderer are required to self-register on National Treasury's Central Supplier Database (CSD) which has been established to centrally administer supplier information for all organs of state and facilitate the verification of certain key supplier information. The CSD can be accessed at <https://secure.csd.gov.za/>. Tenderer are required to provide the following to Transnet in order to enable it to verify information on the CSD:

Supplier Number..... and Unique registration reference number..... (Tender Data)

Transnet urges its clients, suppliers and the general public

to report any fraud or corruption to

TIP-OFFS ANONYMOUS: 0800 003 056 OR Transnet@tip-offs.com



T1.2 TENDER DATA



T1.2 TENDER DATA

The conditions of tender are the Standard Conditions of Tender as contained in Annex C of the CIDB Standard for Uniformity in Engineering and Construction Works Contracts. The Standard for Uniformity in Construction Procurement was first published in Board Notice 62 of 2004 in Government Gazette No 26427 of 9 June 2004. It was subsequently amended in Board Notice 67 of 2005 in Government Gazette No 28127 of 14 October 2005, Board Notice 93 of 2006 in Government Gazette No 29138 of 18 August 2006, Board Notice No 9 of 2008 in Government Gazette No 31823 of 30 January 2009, Board Notice 86 of 2010 in Government Gazette No 33239 of 28 May 2010, Board Notice 136 of 2015 in Government Gazette 38960 of 10 July 2015 and Board Notice 423 of 2019 in Government Gazette No 42622 of 8 August 2019.

This edition incorporates the amendments made in Board Notice 423 of 2019 in Government Gazette 42622 of 8 August 2019. (see www.cidb.org.za).

The Standard Conditions of Tender make several references to Tender data for detail that apply specifically to this tender. The Tender Data shall have precedence in the interpretation of any ambiguity or inconsistency between it and the Standard Conditions of Tender.

Each item of data given below is cross-referenced in the left-hand column to the clause in the Standard Conditions of Tender to which it mainly applies.

Clause	Data
C.1.1	<p>The <i>Employer</i> is</p> <p>Transnet SOC Ltd (Reg No. 1990/000900/30)</p>
C.1.2	<p>The tender documents issued by the <i>Employer</i> comprise:</p> <p>Part T: The Tender</p> <p>Part T1: Tendering procedures T1.1 Tender notice and invitation to tender T1.2 Tender data</p> <p>Part T2: Returnable documents T2.1 List of returnable documents T2.2 Returnable schedules</p> <p>Part C: The contract</p> <p>Part C1: Agreements and contract data C1.1 Form of offer and acceptance C1.2 Contract data (Part 1 & 2)</p>

C1.3 Forms of Guarantee

Part C2: Pricing data

C2.1 Pricing Instruction Option A

C2.2 Activity Schedule

Part C3: Scope of Specification

C3.1 Works Information

Part C4: Site Information

C4.1 Site Information

C.1.4

The Employer's agent is:

Commodity Officer

Name:

Xolelwa Gwele

Address:

01 Hely Hutchinson Road, Quigney East London
5201

E – mail

TNPAPOELBetween@transnet.net

In summary the scope of requirements includes the following activities: Refer to Works Information on C3.1

1. Supply: Procure the required Fire Suppression Monitor's that are compliant with the relevant standards.
2. Delivery: Transport materials safely to the site while ensuring no damage or delays.
3. Installation: Physically mount and connect the fire suppression monitor system.
4. Integration: Connect the monitor to existing fire protection and control systems.
5. Testing: Verify system functionality, safety, and compliance.
6. Commissioning: Hand over a fully operational system with documentation.

Maintenance of Fire Suppression Monitors will not be part of this RFP as there is a current Contract in place. The Tenderer is required to submit a Maintenance Manual and provide a formal training on how to operate and conduct the Fire Suppression Monitor's. The training will be for 10 people and a certificate of competency or attendance must be provided.

Technical manuals include all technical data and leaflets of each component used. Where generic manuals will not be accepted. Manuals are of good quality and cover the following as a minimum:

- o Technical descriptions of the equipment and parts
- o General arrangement drawings
- o Installation instructions with drawings or pictures
- o Operating and maintenance instructions for all components
- o Detailed parts lists (accompanied by exploded view type drawings clearly detailing the part

and uniquely identifying it).

- o Spare part ordering instructions.

C.2.1 Only those tenderers who satisfy the following evaluation criteria are eligible to submit tenders:

1.1. STAGE 1 STEP 1 – TESTS FOR ADMINISTRATIVE AND SUBSTANTIVE RESPONSIVENESS (EVALUATION AT BIDDER'S LEVEL)

<i>Administrative & Substantive responsiveness check</i>
<ul style="list-style-type: none"> • Whether the Bid has been lodged on time
<ul style="list-style-type: none"> • Whether all Returnable Documents and/or schedules [where applicable] were completed and returned by the closing date and time
<ul style="list-style-type: none"> • Verify the validity of all returnable documents
<ul style="list-style-type: none"> • Verify if the Bid document has been duly signed by the authorised respondent
<ul style="list-style-type: none"> • Whether any general and legislation qualification criteria set by Transnet, have been met
<ul style="list-style-type: none"> • Whether the Bid contains a mandatory priced offer
<ul style="list-style-type: none"> • Whether the Bid materially complies with the specification given
<ul style="list-style-type: none"> • Whether any Technical Pre-qualification Criteria have been met as follows: <ul style="list-style-type: none"> - CIDB Grading of 3ME or higher for Installation of Fire Suppression Monitor's.

1.2. STAGE 1 STEP 2 - Eligibility in terms of a Valid Construction Industry Development Board (CIDB) Registration for the Installation of the Fire Suppression Monitors (EVALUATION AT BIDDER'S LEVEL):

- a) Only those tenderers who are registered with the **CIDB** or are capable of being so prior to the evaluation of submissions, in a contractor grading designation equal to or higher than a contractor grading designation determined in accordance with the sum tendered or a value determined in accordance with Regulation 25 (1B) or 25(7A) of the Construction Industry Development Regulations, designation of – **3 ME or higher** class of construction work are eligible to have their tenders evaluated.
- b) Joint Venture (JV)
Joint ventures are eligible to submit tenders subject to the following:
 1. every member of the joint venture is registered with the CIDB;



2. the lead partner has a contractor grading designation of not lower than one level below the required class of construction works under consideration and possesses the required recognition status; and
 3. the combined Contractor grading designation calculated in accordance with the Construction Industry Development Regulations is equal to or higher than a contractor grading designation determined in accordance with the sum tendered for a **3ME or higher** class of construction work or a value determined in accordance with Regulation 25(1B) or 25(7A) of the Construction Industry Development Regulations
 4. The tenderer shall provide a certified copy of its signed joint venture agreement.
 5. The most up to date information is always available on the CIDB web site. As a result, TNPA must check the status of contractors on the website and not rely on contractor registration certificates.
- c) Subcontractors for the **installation** of fire suppression monitors
- Any contractor can register on the CIDB Register of Contractors. Subcontractors do not yet need to register and labour only contractors are exempted from registration with the CIDB. For the purposes of the installation required for the fire suppression monitors for this tender, where the Main bidder is not CIDB registered and is not capable of being so prior to the evaluation of submissions, their subcontractor for the installation of the fire suppression monitors must be registered with CIDB in accordance with the sum of the installation at a **3 ME or higher** class of construction work will be able eligible to have their tenders evaluated. Where a Subcontractor will be utilised for the installation of the fire suppression monitors, the schedule T2.2-12: Subcontracting Form should be completed as a returnable.

Any tenderer that fails to meet the stipulated eligibility criteria will be regarded as an unacceptable tender.

2.1. STAGE 2 STEP 1 FUNCTIONALITY (EVALUATION AT BIDDER'S LEVEL)

Only those tenderers who obtain the minimum qualifying score for functionality will be evaluated further in terms of price and the applicable preference point system. The minimum qualifying for score for functionality is **60** points.

The evaluation criteria for measuring functionality and the points for each criterion and, if any, each sub criterion is as stated below.

Only those tenderers who attain the minimum number of evaluation points for Functionality will be eligible for further evaluation, failure to meet the minimum

threshold will result in the tender being disqualified and removed from any further consideration.

Functionality shall be scored independently by not less than 2 (two) evaluators and averaged in accordance with the following schedules:

The Fire Suppression Monitors will be evaluated on the following elements:

- T2.2-02 Company Experience
- T2.2-03 Key Personnel Experience and Qualifications
- T2.2-04 Method Statement
- T2.2-05 Lead Time
- T2.2-06 Health, Environment and Safety Management Plan

Each evaluation criteria will be assessed in terms of scores of 0, 20, 40, 60, 80 or 100. The scores of each of the evaluators will be averaged, weighted, and then totalled to obtain the final score for functionality, unless scored collectively. (See CIDB Inform Practice Note #9).

Note: Any tender not complying with the above-mentioned requirements, will be regarded as non-responsive and will therefore not be considered for further evaluation.

Functionality Criteria	Requirements	Type of Proof/Detail to be submitted	Maximum number of points
T2.2-02 Company Experience	<p>The bidder must submit a minimum of Three [3] signed reference letters or practical completion certificates of previous projects that they have completed with a similar scope as the Supply, Delivery, Installation, Integration, Testing & Commissioning of Fire Suppression Monitors at the Tanker Berth. The reference letters or completion certificates must be on the client's company letterhead.</p> <p>i.e., As a minimum, the reference letters or practical completion certificate must include the following:</p> <p>(1) Project Title;</p>	<p>Signed Reference Letters</p> <p>OR</p> <p>Signed Practical Completion Certificates</p>	30



TRANSNET NATIONAL PORTS AUTHORITY – PORT OF EAST LONDON

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Functionality Criteria	Requirements	Type of Proof/Detail to be submitted	Maximum number of points
	<p>(2) Project Description (Name, Duration & Value), and Scope of Work;</p> <p>(3) Valid Client's Contact details as reference for verification purposes (Client's name, e-mail address, physical address, telephone number).</p> <p>N:B TNPA may request to see the sites where the previous work has been executed.</p>		
T2.2-03 Key Personnel Experience and Qualifications:			30
Qualifications [15 Points]	<p>Mechanical Artisan: a minimum qualification of N6 in Mechanical Engineering and a Trade Test Certificate.</p> <p>OR</p> <p>Electrician: a minimum qualification of N6 in Electrical Engineering and a Trade Test Certificate.</p>	Copy of N6 Qualification and Trade Test Certificates for Mechanical Artisan OR Electrician	5
	Health & Safety Officer: A Minimum SAMTRAC Qualification (NQF Level 5) or Equivalent in Health and Safety Management.	Copy of SAMTRAC Health OR Safety Management Qualification.	5
	Contract /Project Manager: A Minimum of Higher Certificate in Construction/Project/Contract Management Qualification OR Equivalent	Copy of Higher Certificate in Construction/Contract/Project Management Qualification	5
Key Personnel Experience [15 Points]	<p>Mechanical Artisan: with a Minimum of three (3) years relevant working experience in the installation, integration, testing and commissioning of Fire Suppression Monitors OR similar type of work.</p> <p>OR</p>	Curriculum Vitae (CV). CVs to include references and their contact details.	5



Functionality Criteria	Requirements	Type of Proof/Detail to be submitted	Maximum number of points
	Electrician: with a Minimum of three (3) years relevant working experience in the installation, integration, testing and commissioning of Fire Suppression Monitors OR similar type of work. N:B TNPA to confirm working experiences with provided references.		
	Health & Safety Officer with a Minimum of three (3) years relevant working experience in the installation, integration, testing and commissioning of Fire Suppression Monitors OR similar type of work. N:B TNPA to confirm working experiences with provided references.	Curriculum Vitae (CV). CVs to include references and their contact details.	5
	Contract /Project Manage with a Minimum of three (3) years relevant working experience in the installation, integration, testing and commissioning of Fire Suppression Monitors OR similar type of work. N:B TNPA to confirm working experiences with provided references.	Curriculum Vitae (CV). CVs to include references and their contact details.	5
T2.2-04 Method Statement	The bidder must submit a comprehensive method statement that responds to the scope of work and outlines the methodology, including that relating to, but not limited to programme, technical approach, and understanding of the project deliverables. The method statement should also include an outline of processes, procedures, and associated resources to meet the requirements and indicate how risks will be managed. As a minimum, the following critical elements must be highlighted:	A detailed method statement is required detailing the execution method and all aspects as stated in the requirements.	20



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Functionality Criteria	Requirements	Type of Proof/Detail to be submitted	Maximum number of points
	1. Installation of the new Fire monitors (type and specification), complete with all related mechanical and electrical works. 2. Integration of the new Fire monitors and systems into the existing system and control box. 3. Testing and Commissioning of the new Fire Monitors with the complete firefighting system. 4. A programme schedule of the works from the installation to the commissioning phase.		
T2.2-05 Lead Time	The bidder must submit as a minimum, a 12weeks' lead time for the delivery of the fire suppression monitors from the date of issue of the Purchase Order.	Delivery date notice from the original equipment supplier	10
T2.2-06 Health, Environment and Safety Management Plan	The bidder must demonstrate a full understanding of the TNPA Port of East London's scope of requirements by presenting a detailed safety, health, and environmental management plan specific to the project and; <ol style="list-style-type: none"> Must detail how the safety, health, and environmental (SHE) requirements will be met What Health and Safety measures are put in place for personnel working on site? Project Risk Assessment based on the method statement Valid Letter/s of Good Standing with the Workmen's compensation fund 	The tenderer must submit a SHE Management plan that meets the requirements.	10
The minimum qualifying thresholds is 60 points			

2.2. STAGE 2 STEP 2: Technical Datasheet for Fire Suppression Monitors (EVALUATION AT ITEM LEVEL)

Tenderers will be evaluated on technical compliance (quality) of the Fire Suppression Monitor's against the technical specifications as detailed on Works Information.

The Tenderer must submit a **technical datasheet** that must respond to the technical specification of the offered fire suppression monitor's.

N.B The Technical Datasheet must be from the Original Equipment Manufacturer (OEM) or supplier of their fire suppression monitor – self created technical datasheets will not be accepted for evaluation and **will** result in the fire suppression monitor being disqualified for this stage.

As a minimum the technical datasheet for each fire suppression monitor **must** meet **all** the following requirements, the Tenderer may submit a higher technical specification (where possible).

The Technical datasheet can be the same if the 3 fire suppression monitors are the same and if there are different, each technical datasheet must be submitted.

Each Fire Suppression Monitor:

- Must be able to handle Operating pressure 5 to 16 bar.
- Must be able to handle Test pressure up to 24 bar.
- Must be able to operate at flow rate of 4000 L/min.
- Must have a 360° Horizontal rotation.
- Must have a +90° and -65° Vertical rotation.
- Must have corrosion resistant bronze body, inlet and outlet flange.
- Must have water/foam branch-pipe.
- Must have all components for connecting electrical operating box.
- Waterway internal diameter of no less than 115mm.
- Must have stainless steel ball bearings and grease fittings.
- Must have handwheels for manual horizontal and vertical rotation control, worm screw and helical wheel type.
- Finish with polyurethane paint, RAL 3000 red

Note: Any tender not complying with the above-mentioned requirements, will be regarded as non-responsive to the required Fire Monitor's.

C.2.12 No alternative tender offers will be considered.

C.2.13.3 Each tender offer shall be in the **English Language**.

C.2.13.5 The *Employer's* details and identification details that are to be shown on each tender offer are
C2.15.1 as follows:

Identification details: The tender documents must be uploaded with:

- Name of Tenderer:
- Contact person and details:
- The Tender Number:
- The Tender Description

Documents must be marked for the attention of: ***Employer's***
Agent: Xolelwa Gwele

C.2.13.9 Telephonic, telegraphic, facsimile or e-mailed tender offers will not be accepted.

C.2.15 The closing time for submission of tender offers is:

Time: **16:00pm** on the **08th August 2025**

Location: The Transnet e-Tender Submission Portal:
(<https://transnetetenders.azurewebsites.net>);

NO LATE TENDERS WILL BE ACCEPTED

C.2.16 The tender offer validity period is **12 weeks** after the closing date. Tenderers are to note that they may be requested to extend the validity period of their tender, on the same terms and conditions, if Transnet's internal evaluation and governance approval processes has not been finalised within the validity period.

C.2.23 The tenderer is required to submit with his tender:

1. A valid Tax Clearance Certificate issued by the South African Revenue Services. **Tenderers also to provide Transnet with a TCS PIN to verify Tenderers compliance status.**
2. A **valid B-BBEE Certificate** from a Verification Agency accredited by the South African Accreditation System [**SANAS**], or a **sworn affidavit** confirming annual turnover and level of black ownership, in line with the code of good practice, together with the tender;

3. Proof of registration on the Central Supplier Database;

Note: Refer to Section T2.1 for List of Returnable Documents

C.3.11. **STAGE 3 PREFERENCE POINT SYSTEM (EVALUATION AT ITEM LEVEL):**

Only tenders that achieve the minimum qualifying score for functionality will be evaluated further in accordance with the 80/20 or 90/10 preference points systems as described in Preferential Procurement Regulations.

80 where the financial value of one or more responsive tenders received have a value up to R50 million including R50 million, inclusive of all applicable taxes, or

90 where the financial value of one or more responsive tenders received have a value greater than R50 million, inclusive of all applicable taxes.

Thresholds	Minimum Threshold
Functionality	60

Evaluation Criteria	Final Weighted Scores	Final Weighted Scores
Price	80	90
Specific goals	20	10
TOTAL SCORE:	100	100

Specific goal 20/10 tender evaluation points will be awarded to tenderers who complete the preferencing schedule and who are found to be eligible for the preference claimed. **Should the evidence required for any of the specific goals applicable in this tender not be provided, a tenderer will score zero preference points for that particular specific goal.**

In terms of Transnet Preferential Procurement Policy (TPPP) and Procurement Manuals, the following preference points must be awarded to a bidder who provides the relevant required evidence for claiming points (the specific goals points will be added to each qualifying fire suppression monitor price points):

Specific Goals	Number of points (80/20 system)	Number of points (90/10 system)
B-BBEE Status Level of Contributor 1 or 2	10.00	5.00
30% Black Women Owned Entities	10.00	5.00



Non-Compliant and/or B-BBEE Level 3-8 contributors	0.00	0.00
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The following Table represents the evidence to be submitted for claiming preference points for applicable specific goals in a particular tender:

Specific Goals	Acceptable Evidence
B-BBEE Status Level of Contributor 1 or 2	B-BBEE Certificate / Sworn - Affidavit / CIPC B-BBEE Certificate (in case of JV, a consolidated scorecard will be accepted) as per DTIC guidelines
30% Black Women Owned Entities	Certified copy of ID Documents of the Owners

The maximum points for this bid are allocated as follows:

DESCRIPTION	POINTS	POINTS
Price	80	90
B-BBEE Status Level of Contributor 1 or 2	10	5
30% Black Women Owned Entities	10	5
Non-Compliant and/or B-BBEE Level 3-8 contributors	0	0
Total points for Price and Specific Goals must not exceed	100	100

Note: Transnet reserves the right to carry out an independent audit of the tenderer's scorecard components at any stage from the date of close of the tenders until completion of the contract.

C.3.13 Tender offers will only be accepted if:

1. The tenderer or any of its directors/shareholders is not listed on the Register of Tender Defaulters in terms of the Prevention and Combating of Corrupt Activities Act of 2004 as a person prohibited from doing business with the public sector;

2. the tenderer does not appear on Transnet's list for restricted tenderers and National Treasury's list of Tender Defaulters;
3. the tenderer has fully and properly completed the Compulsory Enterprise Questionnaire and there are no conflicts of interest which may impact on the tenderer's ability to perform the contract in the best interests of the Employer or potentially compromise the tender process and persons in the employ of the state.
4. Transnet reserves the right to award the tender to the tenderer who scores the highest number of points overall, unless there are **objective criteria** which will justify the award of the tender to another tenderer. Objective criteria include but are not limited to the outcome of a due diligence exercise to be conducted. The due diligence exercise may take the following factors into account inter alia;

the tenderer:

- a) is not under restrictions, or has principals who are under restrictions, preventing participating in the employer's procurement,
- b) is not undergoing a process of being restricted by Transnet or other state institution that Transnet may be aware of
- c) can, as necessary and in relation to the proposed contract, demonstrate that he or she possesses the professional and technical qualifications, professional and technical competence, financial resources, equipment and other physical facilities, managerial capability, reliability, experience and reputation, expertise and the personnel, to perform the contract,
- d) has the legal capacity to enter into the contract,
- e) is not insolvent, in receivership, under Business Rescue as provided for in chapter 6 of the Companies Act, 2008, bankrupt or being wound up, has his affairs administered by a court or a judicial officer, has suspended his business activities, or is subject to legal proceedings in respect of any of the foregoing,
- f) complies with the legal requirements, if any, stated in the tender data and
- g) is able, in the option of the employer to perform the contract free of conflicts of interest.

C.3.17 The number of paper copies of the signed contract to be provided by the Employer is 1 (one).

TRANSNET NATIONAL PORTS AUTHORITY – PORT OF EAST LONDON

TENDER NUMBER: TNPA/2025/06/0016/97939/RFP

DESCRIPTION OF GOODS AND SERVICES: SUPPLY, DELIVERY, INSTALLATION, INTEGRATION, TESTING AND COMMISSIONING OF THREE (3) FIRE SUPPRESSION MONITORS AT TANKER BERTH IN THE PORT OF EAST LONDON FOR A PERIOD OF SIX (6) MONTHS

Signed

Date

Name

Position

Tenderer



PART T2: RETURNABLE DOCUMENTS



T2.1 LIST OF RETURNABLE DOCUMENTS



T2.1 List of Returnable Documents

2.1.1 These schedules are required for pre-qualification and eligibility purposes:

T2.2-01 Stage One as per CIDB: Eligibility Criteria Schedule - CIDB Registration

2.1.2 Stage Two (2) Step 1: Functionality: This schedule will be utilised for evaluation purposes:

T2.2-02 Company Experience

T2.2-03 Key Personnel Experience and Qualifications

T2.2-04 Method Statement

T2.2-05 Lead Time

T2.2-06 Health, Environment and Safety Management Plan

2.1.3 Stage Two (2) Step 2: This schedule will be utilised for evaluation purposes:

T2.2-07 Technical Datasheet for Fire Suppression Monitor's

2.1.4 Stage Three (3) These schedules will be utilised for evaluation purposes:

T2.2-08 B-BBEE Certificate / Sworn-Affidavit or DTIC Affidavit / a B-BBEE Certificate (in case of JV, a consolidate scorecard will be accepted) as per DTIC guidelines

T2.2-09 Certified copy of ID Documents of the Owners

2.1.5 Returnable Schedules:

General:

T2.2-10 Authority to submit tender

T2.2-11 Record of addenda to tender documents

T2.2-12 Subcontracting Form and Agreement

T2.2-13 Recommended Spare Parts List and Pricing Schedule

T2.2-14 Maintenance Manual

T2.2-15 Letter of Good Standing/COIDA

T2.2-16 Valid Tax Clearance Certificate OR TCS PIN

T2.2-17 Proof of registration on the Central Supplier Database

T2.2-18 Certified copy of signed joint venture agreement (where applicable)

2.1.6 Agreement and Commitment by Tenderer:

- T2.2-19 CIDB SFU ANNEX G Compulsory Enterprise Questionnaire
- T2.2-20 Non-Disclosure Agreement
- T2.2-21 RFP Declaration Form
- T2.2-22 RFP – Breach of Law
- T2.2-23 Certificate of Acquaintance with Tender Document
- T2.2-24 Supplier Integrity Pact
- T2.2-25 Supplier Code of Conduct
- T2.2-26 Agreement in terms of Protection of Personal Information Act, 4 of 2013 ("POPIA")

2.1.7 Bonds/Guarantees/Financial/Insurance:

- T2.2-27 Insurance provided by the Contractor
- T2.2-28 Form of Intent to provide a Performance Guarantee

2.2 C1.1 Form of Offer & Acceptance

2.3 C1.2 Contract Data

2.4 C1.3 Forms of guarantee

2.5 C2.1 Pricing Instructions

2.6 C2.2 Activity Schedule



T2.2 RETURNABLE SCHEDULES

T2.2-01 Eligibility Criteria Schedule - CIDB Grading Designation

Note to tenderers:

Tenderers are to indicate their CIDB Grading by filling in the table below. **Attach a copy of the CIDB Grading Designation or evidence of being capable of being so registered.**

CRS Number	Status	Grading	Expiry Date

- Only those tenderers who are registered with the CIDB, or are capable of being so prior to the evaluation of submissions, in a contractor grading designation equal to or higher than a contractor grading designation determined in accordance with the sum tendered or a value determined in accordance with Regulation 25 (1B) or 25(7A) of the Construction Industry Development Regulations, for a **3ME or higher** class of construction work, are eligible to have their tenders evaluated.

2. Joint Venture (JV)

Joint ventures are eligible to submit tenders subject to the following:

- every member of the joint venture is registered with the CIDB;
- the lead partner has a contractor grading designation of not lower than one level one level below the required grading designation in the class of construction works under consideration and possesses the required recognition status; and
- the combined Contractor grading designation calculated in accordance with the Construction Industry Development Regulations is equal to or higher than a Contractor grading designation determined in accordance with the sum tendered for a **3ME or higher** class of construction work or a value determined in accordance with Regulation 25(1B) or 25(7A) of the Construction Industry Development Regulations
- the Contractor shall provide the employer with a certified copy of its signed joint venture agreement;
- and in the event that the joint venture is an 'Incorporated Joint Venture' the Memorandum of Incorporation to be provided within 4 (four) weeks of the Contract Date.

Signed	_____	Date	_____
Name	_____	Position	_____
Tenderer	_____		

<div> <div>  </div> <div> TECHNICAL FUNCTIONALITY EVALUATION CRITERIA:SUPPLY, DELIVERY, INSTALLATION, INTEGRATION, TESTING AND COMMISSIONING OF THREE (3) FIRE SUPPRESSION MONITORS AT TANKER BERTH IN THE PORT OF EAST LONDON FOR A PERIOD OF SIX (6) MONTHS </div> <div>  </div> </div>						
Nr	Category	Total Weight	Weight	Requirements	Type of Proof for Evaluation / Detail to be submitted	Scoring Guide
	Scope of Requirements : Functionality Evaluation Criteria					100 points - The tenderer has innovative and outstanding solutions to requirements. 80 points - The tenderer exceeds requirements, has adequately mitigated risks in requirements beyond those listed. 60 points - Meets minimum requirements. 40 points - Partially meets requirements. 20 points - Submission made with little to no requirements met. 0 points - Company does not meet requirements, high risk.
1	T2.2.02 Company Experience	30.00		Requirements	Type of Proof for Evaluation / Detail to be submitted	Scoring Guide
1	Previous Completed with Similar SoW of work as the Supply, Installation, Testing and Commissioning of Fire Monitors		30	<p>The bidder must submit a minimum of three [3] signed reference letters or practical completion certificates of previous projects that they have completed with a similar scope as the Supply, Delivery, Installation, Integration, Testing & Commissioning of Fire Suppression Monitors . The reference letters or completion certificates must be on the client's company letterhead.</p> <p>i.e., As a minimum, the reference letters or practical completion certificate must include the following:</p> <p>(1) Project Title; (2) Project Description (Name, Duration & Value), and Scope of Work; (3) Valid Client's Contact details as reference for verification purposes (Client's name, e-mail address, physical address, telephone number). N:B TNPA may request to see the sites where the previous work has been executed.</p>	<p>1) Signed Reference Letters</p> <p>OR</p> <p>2) Signed Practical Completion Certificates</p>	<p>0 = No reference letter/s or practical completion certificate/s are submitted,OR the reference letter/s or practical completion certificates submitted is irrelevant or does not address the scope of requirements</p> <p>20 points = One [1] reference letter or practical completion certificate that meets requirements has been submitted.</p> <p>40 points = Two [2] reference letters or practical completion certificates that meet the requirements have been submitted.</p> <p>60 points = Three [3] reference letters or practical completion certificates that meet the requirements have been submitted.</p> <p>80 points = Four [4] reference letters or practical completion certificates that meet the requirements have been submitted.</p> <p>100 points = Five [5] or more reference letters or practical completion certificates that meet the requirements have been submitted.</p>

2	T2.2.03: Key Personnel Experiences & Qualifications	30.00		Requirements	Type of Proof for Evaluation / Detail to be submitted	Scoring Guide
2	Key Personnel Qualifications	15.00	5	Mechanical Artisan: a minimum qualification of N6 in Mechanical Engineering and a Trade Test Certificate. OR Electrician: a minimum qualification of N6 in Electrical Engineering and a Trade Test Certificate.	Copy of N6 Qualification and Trade Test Certificates for Mechanical Artisan OR Electrician	<p>0 – No submission / irrelevant qualification</p> <p>20 points - Mechanical/Electrical N2-4 Engineering Qualification and Trade Test Certificate.</p> <p>40 points - Mechanical/Electrical N5 Engineering Qualification and Trade Test Certificate</p> <p>60 points - Mechanical/Electrical N6 Engineering Qualification and Trade Test Certificate.</p> <p>80 points - National Diploma Qualification in Mechanical/Electrical Engineering OR ECSA registration as a Professional Engineering Technician</p> <p>100 points - Bachelor's Degree or Advanced Diploma Qualification in Mechanical/Electrical OR ECSA registration as a Professional Engineering Technologist.</p>
			5	Health & Safety Officer: A Minimum SAMTRAC Qualification (NQF Level 5) or Equivalent in Health and Safety Management.	Copy of SAMTRAC Health OR Safety Management Qualification.	<p>0 – No submission / irrelevant qualification</p> <p>20 points - Learnership Certificate in Construction Health OR Safety Management (NQF Level 3)</p> <p>40 points - Programmes in Occupational Health and Safety / Construction Health and Safety (NQF Level 4).</p> <p>60 points - SAMTRAC Qualification in Health OR Safety Management (NQF Level 5).</p> <p>80 points - National Diploma Qualification in Health OR Safety Management (NQF Level 6).</p> <p>100 points - Advanced Diploma or Bachelor's Degree Qualification in Health OR Safety Management (NQF Level 7).</p>
			5	Contract /Project Manager: A Minimum of Higher Certificate in Construction/Project/Contract Management Qualification OR Equivalent	Copy of Higher Certificate in Construction/Contract/Project Management Qualification	<p>0 – No submission / irrelevant qualification</p> <p>20 points - National Certificate or Equivalent in Construction/Contract/Project Management Qualification (NQF level 3)</p> <p>40 points - Further Education and Training Certificate or Equivalent in Construction/Contract/Project Management (NQF Level 4)</p> <p>60 points - Higher Certificate in Construction/Contract/Project Management Qualification (NQF Level 5)</p> <p>80 points - National Diploma in Construction/Contract/Project Management Qualification (NQF Level 6)</p> <p>100 points - Advanced Diploma or Bachelor's Degree in Construction/Contract/Project Management Qualification (NQF Level 7)</p>

2	T2.2.03: Key Personnel Experiences & Qualifications			Requirements	Type of Proof for Evaluation / Detail to be submitted	Scoring Guide
			5	<p>Mechanical Artisan: with a Minimum of three (3) years relevant working experience in the installation, integration, testing and commissioning of Fire Suppression Monitors OR similar type of work.</p> <p>OR</p> <p>Electrician: with a Minimum of three (3) years relevant working experience in the installation, integration, testing and commissioning of Fire Suppression Monitors OR similar type of work.</p> <p>N:B TNPA to confirm working experiences with provided references.</p>	Curriculum Vitae (CV). CVs to include references and their contact details.	<p>0 – No submission / irrelevant qualification</p> <p>20 points - Submitted CV with 1 year but less than 2 years of relevant working experience in the installation, integration, testing and commissioning of Fire Suppression Monitors OR similar type of work.</p> <p>40 points - Submitted CV with 2 years but less than 3 years of relevant working experience in the installation, integration, testing and commissioning of Fire Suppression Monitors OR similar type of work.</p> <p>60 points - Submitted CV with 3 years but less than 4 years of relevant working experience in the installation, integration, testing and commissioning of Fire Suppression Monitors OR similar type of work.</p> <p>80 points - Submitted CV with 4 years but less than 5 years of relevant working experience in the installation, integration, testing and commissioning of Fire Suppression Monitors OR similar type of work.</p> <p>100 points - Submitted CV with 5 years or more of relevant working experience in the installation, integration, testing and commissioning of Fire Suppression Monitors OR similar type of work.</p>

				Requirements	Type of Proof for Evaluation / Detail to be submitted	Scoring Guide
2	Key Personnel Experience	15.00	5	<p>Health & Safety Officer with a Minimum of three (3) years relevant working experience in the installation, integration, testing and commissioning of Fire Suppression Monitors OR similar type of work.</p> <p>N:B TNPA to confirm working experiences with provided references.</p>	Curriculum Vitae (CV). CVs to include references and their contact details.	<p>0 – No submission / irrelevant qualification</p> <p>20 points - Submitted CV with 1 year but less than 2 years of relevant working experience in the installation, integration, testing and commissioning of Fire Suppression Monitors OR similar type of work.</p> <p>40 points - Submitted CV with 2 years but less than 3 years of relevant working experience in the installation, integration, testing and commissioning of Fire Suppression Monitors OR similar type of work.</p> <p>60 points - Submitted CV with 3 years but less than 4 years of relevant working experience in the installation, integration, testing and commissioning of Fire Suppression Monitors OR similar type of work.</p> <p>80 points - Submitted CV with 4 years but less than 5 years of relevant working experience in the installation, integration, testing and commissioning of Fire Suppression Monitors OR similar type of work.</p> <p>100 points - Submitted CV with 5 years or more of relevant working experience in the installation, integration, testing and commissioning of Fire Suppression Monitors OR similar type of work.</p>
			5	<p>Contract /Project Manage with a Minimum of three (3) years relevant working experience in the installation, integration, testing and commissioning of Fire Suppression Monitors OR similar type of work.</p> <p>N:B TNPA to confirm working experiences with provided references.</p>	Curriculum Vitae (CV). CVs to include references and their contact details.	<p>0 – No submission / irrelevant qualification</p> <p>20 points - Submitted CV with 1 year but less than 2 years of relevant working experience in the installation, integration, testing and commissioning of Fire Suppression Monitors OR similar type of work.</p> <p>40 points - Submitted CV with 2 years but less than 3 years of relevant working experience in the installation, integration, testing and commissioning of Fire Suppression Monitors OR similar type of work.</p> <p>60 points - Submitted CV with 3 years but less than 4 years of relevant working experience in the installation, integration, testing and commissioning of Fire Suppression Monitors OR similar type of work.</p> <p>80 points - Submitted CV with 4 years but less than 5 years of relevant working experience in the installation, integration, testing and commissioning of Fire Suppression Monitors OR similar type of work.</p> <p>100 points - Submitted CV with 5 years or more of relevant working experience in the installation, integration, testing and commissioning of Fire Suppression Monitors OR similar type of work.</p>

3	T2.2.04: Methodology	20.00		Requirements	Type of Proof for Evaluation / Detail to be submitted	Scoring Guide
3	Method Statement		20	<p>The bidder must submit a comprehensive method statement that responds to the scope of work and outlines the methodology, including that relating to, but not limited to programme, technical approach, and understanding of the project deliverables. The method statement should also include an outline of processes, procedures, and associated resources to meet the requirements and indicate how risks will be managed. As a minimum, the following critical elements must be highlighted:</p> <ol style="list-style-type: none"> 1. Installation of the new Fire monitors (type and specification), complete with all related mechanical and electrical works. 2. Integration of the new Fire monitors and systems into the existing system and control box. 3. Testing and Commissioning of the new Fire Monitors with the complete firefighting system. 4. A programme schedule of the works from the installation to the commissioning phase. 	A detailed method statement is required detailing the execution method and all aspects as stated in the requirements.	<p>0- No method statement submitted, or submitted document is irrelevant or unusable.</p> <p>20 points - Method statement is submitted, but only addresses one critical aspect with minimal detail or relevance</p> <p>40 points - Method statement addresses some aspects but lacks depth or clarity; missing important details for safe or effective execution.</p> <p>60 points - All 4 aspects are included and adequately addressed; meets minimum technical acceptability.</p> <p>80 points - All aspects are well articulated, showing good understanding of scope, risks, and coordination requirements.</p> <p>100 points - All aspects are addressed comprehensively with innovation, foresight, and added value.</p>
4	T2.2.05: Lead Time	10.00		Requirements	Type of Proof for Evaluation / Detail to be submitted	Scoring Guide
4	Lead Time (Fire Monitors Delivery)		10	<p>The bidder must submit as a minimum, a 12weeks' lead time for the delivery of the fire suppression monitors from the date of issue of the Purchase Order.</p>	Delivery date notice from the original equipment manufacturer or supplier	<p>0 - No submission OR Delivery Lead Time > 16 weeks</p> <p>20 points - Delivery Lead Time > 14 weeks to ≤ 16 weeks.</p> <p>40 points - Delivery Lead Time > 12 weeks to ≤ 14 weeks.</p> <p>60 points - Delivery Lead Time >10 weeks to ≤ 12 weeks.</p> <p>80 points - Delivery Lead Time > 8 weeks to ≤ 10 weeks.</p> <p>100 points - Delivery Lead Times ≤ 8 weeks.</p>
5	T2.2.06: Health, Enviroment and Safety managemet	10.00		Requirements	Type of Proof for Evaluation / Detail to be submitted	Scoring Guide
5	Health, Enviroment and Safety managemet plan		10	<p>The bidder must demonstrate a full understanding of the TNPA Port of East London's scope of requirements by presenting a detailed safety, health, and environmental management plan specific to the project and;</p> <ol style="list-style-type: none"> 1. Must detail how the safety, health, and environmental (SHE) requirements will be met 2. What Health and Safety measures are put in place for personnel working on site? 3. Project Risk Assessment based on the method statement 4. Valid Letter/s of Good Standing with the Workmen's compensation fund 	The tenderer must submit a SHE Management plan that meets the requirements.	<p>0- No method statement submitted, or submitted document is irrelevant or unusable.</p> <p>20 points - SHE Management Plan is submitted, but only addresses one critical aspect with minimal detail or relevance</p> <p>40 points - SHE Management Plan addresses some aspects but lacks depth or clarity; missing important details for safe or effective execution.</p> <p>60 points - All 4 aspects are included and adequately addressed; meets minimum technical acceptability.</p> <p>80 points - All aspects are well articulated, showing good understanding of scope, risks, and coordination requirements.</p> <p>100 points - All aspects are addressed comprehensively with innovation, foresight, and added value.</p>
	Minimum Threshold is 60 points	100.00				

T2.2-07: Evaluation Schedule: Technical Datasheet for Fire Suppression Monitor's

Tenderers will be evaluated on technical compliance (quality) of the Fire Suppression Monitor's against the technical specifications as detailed on Works Information.

The Tenderer must submit a **technical datasheet** that must respond to the technical specification of the offered fire suppression monitor's.

N.B The Technical Datasheet must be from the Original Equipment Manufacturer (OEM) or supplier of their fire suppression monitor – self created technical datasheets will not be accepted for evaluation and **will** result in the fire suppression monitor being disqualified for this stage.

As a minimum the technical datasheet for each fire suppression monitor **must** meet **all** the following requirements, the Tenderer may submit a higher technical specification (where possible).

The Technical datasheet can be the same if the 3 fire suppression monitors are the same and if there are different, each technical datasheet must be submitted.

Hydraulic Fire Suppression Monitor:

- Must be able to handle Operating pressure 5 to 16 bar.
- Must be able to handle Test pressure up to 24 bar.
- Must be able to operate at flow rate of 4000 L/min.
- Must have a 360° Horizontal rotation.
- Must have a +90° and -65° Vertical rotation.
- Must have corrosion resistant bronze body, inlet and outlet flange.
- Must have water/foam branch-pipe.
- Must have all components for connecting electrical operating box.
- Waterway internal diameter of no less than 115mm.
- Must have stainless steel ball bearings and grease fittings.
- Must have handwheels for manual horizontal and vertical rotation control, worm screw and helical wheel type.
- Finish with polyurethane paint, RAL 3000 red

N.B A checklist that listed all the above requirements will be used where a Tenderer will be evaluated on yes/no answer on this schedule after the Tenderer has passed the Functionality requirements.

Signed

Date

Name

Position

Tenderer.....

T2.2-08: Valid B-BBEE Certificate or a Sworn or DTIC affidavit

B-BBEE Certificate / Sworn-Affidavit or DTIC Affidavit / a B-BBEE Certificate (in case of JV, a consolidate scorecard will be accepted) as per DTIC guidelines

Please indicate the submission:

Yes

☐

No

☐

Signed

Date

Name

Position

Tenderer

T2.2-09: Certified copy of ID Documents of the Owners

Please indicate the submission:

Yes ☐

No ☐

Signed

Date

Name

Position

Tenderer

T2.2-10: Authority to submit a Tender

Indicate the status of the tenderer by ticking the appropriate box hereunder. The tenderer must complete the certificate set out below for his category of organisation or alternatively attach a certified copy of a company / organisation document which provides the same information for the relevant category as requested here.

A - COMPANY	B - PARTNERSHIP	C - JOINT VENTURE	D - SOLE PROPRIETOR

A. Certificate for Company

I, _____ chairperson of the board of directors _____
 _____, hereby confirm that by resolution of the board taken
 on _____ (date), Mr/Ms _____, acting in the capacity
 of _____, was authorised to sign all documents in connection
 with this tender offer and any contract resulting from it on behalf of the company.

Signed

Date

Name

Position

Chairman of the Board of Directors

B. Certificate for Partnership

We, the undersigned, being the **key partners** in the business trading as _____

_____ hereby authorise Mr/Ms _____

acting in the capacity of _____, to sign all documents in connection with the tender offer for Contract _____ and any contract resulting from it on our behalf.

Name	Address	Signature	Date

NOTE: This certificate is to be completed and signed by the full number of Partners necessary to commit the Partnership. Attach additional pages if more space is required.

C. Certificate for Joint Venture

We, the undersigned, are submitting this tender offer in Joint Venture and hereby authorise Mr/Ms

_____, an authorised signatory of the company

_____, acting in the capacity of lead partner,

to sign all documents in connection with the tender offer for Contract _____

_____ and any contract resulting from it on our behalf.

This authorisation is evidenced by the attached power of attorney signed by legally authorised signatories of all the partners to the Joint Venture.

Furthermore we attach to this Schedule a copy of the joint venture agreement which incorporates a statement that all partners are liable jointly and severally for the execution of the contract and that the lead partner is authorised to incur liabilities, receive instructions and payments and be responsible for the entire execution of the contract for and on behalf of any and all the partners.

Name of firm	Address	Authorising signature, name (in caps) and capacity

D. Certificate for Sole Proprietor

I, _____, hereby confirm that I am the sole owner of the
business trading as _____.

Signed	Date	
Name	Position	Sole Proprietor

T2.2-11: Record of Addenda to Tender Documents

This schedule as submitted confirms that the following communications received from the Purchaser before the submission of this tender offer, amending the tender documents, have been taken into account in this specific tender offer:

	Date	Title or Details
1		
2		
3		
4		
5		
6		
7		
8		
9		
10		
11		
12		
13		
14		
15		

T2.2-12: Subcontracting Form and Agreement

Subcontractors for the **installation** of fire suppression monitors

Any contractor can register on the CIDB Register of Contractors. Subcontractors do not yet need to register and labour only contractors are exempted from registration with the CIDB. For the purposes of the installation required for the fire suppression monitors for this tender, where the Main bidder is not CIDB registered and is not capable of being so prior to the evaluation of submissions, their subcontractor for the installation of the fire suppression monitors must be registered with CIDB in accordance with the sum of the installation at a **3 ME or higher** class of construction work will be able eligible to have their tenders evaluated. Where a Subcontractor will be utilised for the installation of the fire suppression monitors.

N.B Tenderers are required to attach their Subcontracting agreement to this schedule.

Provide information of the Sub-contractors below:

Name of Proposed Subcontractor	Address	Nature of work	Amount of Work	Percentage of work
CRS Number for the Subcontractor	Status of CIDB	Class	Grade	Expiry Date

Signed

Date

Name

Position

Tenderer

T2.2-13: Recommended Spare Parts List and Pricing Schedule

NOTE: Each spare part shall be supplied with corresponding data sheet/material certificate, instructions for safe storage and installation manual. Tenderers may also provide their own spare parts list and attach the Pricing schedule of each Spare Part.

Critical Parts are those parts that the equipment cannot operate without.

Item No.	Description of Spare Parts			Spare Part Type Required For: Indicate with X (May be more than one Type)	Qty	Unit	Unit Rate (Rand)	Total (Rand)	Originating Vendor	Delivery Time (Weeks)	¹ Replace ment Interval (Hrs)	² Specify Other Spare Part Type
									Catalogue Part No.			
				Commissioning								
				Maintenance ¹								
	Critical	Yes	No	Other ²								
				Commissioning								
				Maintenance ¹								
	Critical	Yes	No	Other ²								
				Commissioning								
				Maintenance ¹								
	Critical	Yes	No	Other ²								
				Commissioning								
				Maintenance ¹								
	Critical	Yes	No	Other ²								

Signed

Date

Name

Position

Tenderer.....

T2.2-14: Maintenance Manual

Note: The tenderer must provide the maintenance Manual for the required Fire Suppression monitors.

Maintenance of Fire Suppression Monitors will not be part of this RFP as there is a current Contract in place. The Tenderer is required to submit a Maintenance Manual and provide a formal training on how to operate and conduct the Fire Suppression Monitor's. The training will be for 10 people and a certificate of competency or attendance must be provided.

Technical manuals include all technical data and leaflets of each component used. Where generic manuals will not be accepted. Manuals are of good quality and cover the following as a minimum:

- o Technical descriptions of the equipment and parts
- o General arrangement drawings
- o Installation instructions with drawings or pictures
- o Operating and maintenance instructions for all components
- o Detailed parts lists (accompanied by exploded view type drawings clearly detailing the part and uniquely identifying it).
- o Spare part ordering instructions.

Signed

Date

Name

Position

Tenderer.....

T2.2-15 Letter/s of Good Standing with the Workmen’s Compensation Fund

Attached to this schedule is the Letter/s of Good Standing.

- 1.
- 2.
- 3.
- 4.

Name of Company/Members of Joint Venture:

.....
.....
.....
.....
.....
.....
.....
.....
.....
.....

T2.2-16: Valid Tax Clearance Certificate OR TCS PIN

Please indicate the submission: Yes ☐ No ☐

Signed

Date

Name

Position

Tenderer

T2.2-17: Proof of registration on the Central Supplier Database

Please indicate the submission:

Yes

☐

No

☐

Signed

Date

Name

Position

Tenderer

T2.2-18: Certified copy of signed joint venture agreement

(Where applicable)

Please indicate the submission:

Yes ☐

No ☐

Signed

Date

Name

Position

Tenderer



AGREEMENT AND COMMITMENT BY TENDERER

T2.2-19: ANNEX G Compulsory Enterprise Questionnaire

The following particulars hereunder must be furnished.

In the case of a Joint Venture, separate enterprise questionnaires in respect of each partner/member must be completed and submitted.

Section 1: Name of enterprise: _____

Section 2: VAT registration number, if any: _____

Section 3: CIDB registration number, if any: _____

Section 4: CSD number: _____

Section 5: Particulars of sole proprietors and partners in partnerships

Name	Identity number	Personal income tax number

* Complete only if sole proprietor or partnership and attach separate page if more than 3 partners

Section 6: Particulars of companies and close corporations

Company registration number _____

Close corporation number _____

Tax reference number: _____

Section 7: The attached SBD4 must be completed for each tender and be attached as a tender requirement.

Section 8: The attached SBD 6 must be completed for each tender and be attached as a requirement.

The undersigned, who warrants that he / she is duly authorised to do so on behalf of the enterprise:

- i) authorizes the Employer to obtain a tax clearance certificate from the South African Revenue Services that my / our tax matters are in order;
- ii) confirms that the neither the name of the enterprise or the name of any partner, manager, director or other person, who wholly or partly exercises, or may exercise, control over the enterprise appears on the Register of Tender Defaulters established in terms of the Prevention and Combating of Corrupt Activities Act of 2004;
- iii) confirms that no partner, member, director or other person, who wholly or partly exercises, or may exercise, control over the enterprise appears, has within the last five years been convicted of fraud or corruption;
- iv) confirms that I / we are not associated, linked or involved with any other tendering entities submitting tender offers and have no other relationship with any of the tenderers or those responsible for compiling the scope of work that could cause or be interpreted as a conflict of interest; and
- v) confirms that the contents of this questionnaire are within my personal knowledge and are to the best of my belief both true and correct.

Signed

Date

Name

Position

Enterprise
name

SBD 6.1

PREFERENCE POINTS CLAIM FORM

This preference form must form part of all bids invited. It contains general information and serves as a claim for preference points for Specific Goals contribution. Transnet will award preference points to companies who provide valid proof of evidence as per the table of evidence in paragraph 4.1 below.

1. GENERAL CONDITIONS

1.1 The following preference point systems are applicable to all bids:

- the 80/20 system for requirements with a Rand value of up to R50 000 000 (all applicable taxes included); and
- the 90/10 system for requirements with a Rand value above R50 000 000 (all applicable taxes included).

1.2 The value of this bid is estimated not to exceed R50 000 000 (all applicable taxes included) and therefore the **80/20** preference point system shall be applicable.

1.3 The value of this bid is estimated to exceed R50 000 000 (all applicable taxes included) and therefore the **90/10** preference point system shall be applicable.

1.4 Despite the stipulated preference point system, Transnet shall use the lowest acceptable bid to determine the applicable preference point system in a situation where all received acceptable bids are received outside the stated preference point system.

1.5 Preference points for this bid shall be awarded for:

- (a) Price;
- (b) B-BBEE Status Level of Contribution; and
- (c) Any other specific goal determined in the Transnet preferential procurement policy

1.6 The maximum points for this bid are allocated as follows:

	POINTS	POINTS
PRICE	80	90
B-BBEE Status Level of Contributor 1 or 2	10	5
30% Black Women Owned Entities	10	5

Non-Compliant and/or B-BBEE Level 3-8 contributors	0	0
Total points for Price and B-BBEE must not exceed	100	100

1.7 **Failure on the part of a bidder to submit proof of evidence required for any of the specific goals together with the bid will be interpreted to mean that preference points for that specific goal are not claimed.**

1.8 The purchaser reserves the right to require of a bidder, either before a bid is adjudicated or at any time subsequently, to substantiate any claim in regard to preferences, in any manner required by the purchaser.

2. DEFINITIONS

- (a) **"all applicable taxes"** includes value-added tax, pay as you earn, income tax, unemployment insurance fund contributions and skills development levies;
- (b) **"B-BBEE"** means broad-based black economic empowerment as defined in section 1 of the Broad-Based Black Economic Empowerment Act;
- (c) **"B-BBEE status level of contributor"** means the B-BBEE status received by a measured entity based on its overall performance using the relevant scorecard contained in the Codes of Good Practice on Black Economic Empowerment, issued in terms of section 9(1) of the Broad-Based Black Economic Empowerment Act;
- (d) **"bid"** means a written offer in a prescribed or stipulated form in response to an invitation by an organ of state for the supply/provision of services, works or goods, through price quotations, advertised competitive bidding processes or proposals;
- (e) **"Broad-Based Black Economic Empowerment Act"** means the Broad-Based Black Economic Empowerment Act, 2003 (Act No. 53 of 2003);
- (f) **"EME"** means an Exempted Micro Enterprise as defines by Codes of Good Practice under section 9 (1) of the Broad-Based Black Economic Empowerment Act, 2003 (Act No. 53 of 2003);
- (g) **"functionality"** means the ability of a bidder to provide goods or services in accordance with specification as set out in the bid documents
- (h) **"Price"** includes all applicable taxes less all unconditional discounts.
- (i) **"Proof of B-BBEE Status Level of Contributor"**
 - i) the B-BBBEE status level certificate issued by an authorised body or person;

- ii) a sworn affidavit as prescribed by the B-BBEE Codes of Good Practice; or
- iii) any other requirement prescribed in terms of the B-BBEE Act.
- (j) **"QSE"** means a Qualifying Small Enterprise as defines by Codes of Good Practice under section 9 (1) of the Broad-Based Black Economic Empowerment Act, 2003 (Act No. 53 of 2003);
- (k) **"rand value"** means the total estimated value of a contract in South African currency, calculated at the time of bid invitations, and includes all applicable taxes and excise duties.
- (l) **"Specific goals"** means targeted advancement areas or categories of persons or groups either previously disadvantaged or falling within the scope of the Reconstruction and Development Programme identified by Transnet to be given preference in allocation of procurement contracts in line with section 2(1) of the PPPFA.

3. POINTS AWARDED FOR PRICE

3.1 THE 80/20 OR 90/10 PREFERENCE POINT SYSTEMS

A maximum of 80/90 points is allocated for price on the following basis:

80/20 or 90/10

$$P_s = 80 \left(1 - \frac{P_t - P_{\min}}{P_{\min}} \right) \quad \text{OR} \quad P_s = 90 \left(1 - \frac{P_t - P_{\min}}{P_{\min}} \right)$$

Where

P_s = Points scored for comparative price of bid under consideration

P_t = Comparative price of bid under consideration

P_{\min} = Comparative price of lowest acceptable bid

4. EVIDENCE REQUIRED FOR CLAIMING SPECIFIC GOALS

- 4.1 In terms of Transnet Preferential Procurement Policy (TPPP) and Procurement Manuals, preference points must be awarded to a bidder for providing evidence in accordance with the table below::

Specific Goals	Acceptable Evidence
B-BBEE Status contributor	B-BBEE Certificate / Sworn- Affidavit / B-BBEE CIPC Certificate (in case of JV, a consolidated scorecard will be accepted) as per DTIC guideline
30% Black Women Owned Entities	Certified copy of ID Documents of the Owners

- 4.2 The table below indicates the required proof of B-BBEE status depending on the category of enterprises:

Enterprise	B-BBEE Certificate & Sworn Affidavit
Large	Certificate issued by SANAS accredited verification agency
QSE	<p>Certificate issued by SANAS accredited verification agency</p> <p>Sworn Affidavit signed by the authorised QSE representative and attested by a Commissioner of Oaths confirming annual turnover and black ownership (only black-owned QSEs - 51% to 100% Black owned)</p> <p>[Sworn affidavits must substantially comply with the format that can be obtained on the DTI's website at www.dti.gov.za/economic_empowerment/bee_codes.jsp.]</p>
EME¹	<p>Sworn Affidavit signed by the authorised EME representative and attested by a Commissioner of Oaths confirming annual turnover and black ownership</p> <p>Certificate issued by CIPC (formerly CIPRO) confirming annual turnover and black ownership</p> <p>Certificate issued by SANAS accredited verification agency only if the EME is being measured on the QSE scorecard</p>

- 4.3 A trust, consortium or joint venture (including unincorporated consortia and joint ventures) must submit a consolidated B-BBEE Status Level verification certificate for every separate bid.
- 4.4 Tertiary Institutions and Public Entities will be required to submit their B-BBEE status level certificates in terms of the specialized scorecard contained in the B-BBEE Codes of Good Practice.
- 4.5 A person will not be awarded points for B-BBEE status level if it is indicated in the bid documents that such a bidder intends sub-contracting more than 25% of the value of the contract to any other enterprise that does not qualify for at least the points that such a bidder qualifies for, unless the intended sub-contractor is an EME that has the capability and ability to execute the sub-contract.
- 4.6 A person awarded a contract may not sub-contract more than 25% of the value of the contract to any other enterprise that does not have an equal or higher B-BBEE status level than the

¹ In terms of the Implementation Guide: Preferential Procurement Regulations, 2017, Version 2, paragraph 11.11 provides that in the Transport Sector, EMEs can provide a letter from accounting officer or get verified and be issued with a B-BBEE certificate by SANAS accredited professional or agency as the Transport Sector Code has not been aligned to the generic Codes. EMEs in the Transport Sector are not allowed to provide a sworn affidavit as the generic codes are not applicable to them.

person concerned, unless the contract is sub-contracted to an EME that has the capability and ability to execute the sub-contract.

- 4.7 Bidders are to note that the rules pertaining to B-BBEE verification and other B-BBEE requirements may be changed from time to time by regulatory bodies such as National Treasury or the DTI. It is the Bidder's responsibility to ensure that his/her bid complies fully with all B-BBEE requirements at the time of the submission of the bid.

5. BID DECLARATION

- 5.1 Bidders who claim points in respect of B-BBEE Status Level of Contribution must complete the following:

6. B-BBEE STATUS LEVEL OF CONTRIBUTION CLAIMED IN TERMS OF PARAGRAPHS 1.4 AND 6.1

- 6.1 B-BBEE Status Level of Contribution: . =(maximum of 20 points)

(Points claimed in respect of paragraph 6.1 must be in accordance with the table reflected in paragraph 4.1 and must be substantiated by relevant proof of B-BBEE status level of contributor.

7. SUB-CONTRACTING

- 7.1 Will any portion of the contract be sub-contracted?

(*Tick applicable box*)

YES		NO	
-----	--	----	--

- 7.1.1 If yes, indicate:

- i) What percentage of the contract will be subcontracted.....%
- ii) The name of the sub-contractor.....
- iii) The B-BBEE status level of the sub-contractor.....
- iv) Whether the sub-contractor is an EME or QSE.

(*Tick applicable box*)

YES		NO	
-----	--	----	--

--	--	--

8. DECLARATION WITH REGARD TO COMPANY/FIRM

8.1 Name of company/firm:.....

8.2 VAT registration number:.....

8.3 Company registration number:.....

8.4 TYPE OF COMPANY/ FIRM

- ☐ Partnership/Joint Venture / Consortium
- ☐ One person business/sole propriety
- ☐ Close corporation
- ☐ Company
- ☐ (Pty) Limited

[TICK APPLICABLE BOX]

8.5 DESCRIBE PRINCIPAL BUSINESS ACTIVITIES

.....

.....

8.6 COMPANY CLASSIFICATION

- ☐ Manufacturer
- ☐ Supplier
- ☐ Professional Supplier
- ☐ Other Suppliers e.g. transporter, etc.

[TICK APPLICABLE BOX]

8.7 Total number of years the company/firm has been in business:.....

8.8 I/we, the undersigned, who is / are duly authorised to do so on behalf of the company/firm, certify that the points claimed, based on the B-BBE status level of contribution indicated in paragraphs 1.4 and 6.1 of the foregoing certificate, qualifies the company/ firm for the preference(s) shown and I / we acknowledge that:

- i) The information furnished is true and correct;
- ii) The preference points claimed are in accordance with the General Conditions as indicated in paragraph 1 of this form;
- iii) In the event of a contract being awarded as a result of points claimed as shown in paragraph 1.4 and 6.1, the contractor may be required to furnish documentary proof to the satisfaction of the purchaser that the claims are correct;
- iv) If a bidder submitted false information regarding its B-BBEE status level of contributor,, which will affect or has affected the evaluation of a bid, or where a bidder has failed to declare any subcontracting arrangements or any of the conditions of contract have not been fulfilled, the purchaser may, in addition to any other remedy it may have
 - (a) disqualify the person from the bidding process;
 - (b) recover costs, losses or damages it has incurred or suffered as a result of that person's conduct;
 - (c) cancel the contract and claim any damages which it has suffered as a result of having to make less favourable arrangements due to such cancellation;
 - (d) if the successful bidder subcontracted a portion of the bid to another person without disclosing it, Transnet reserves the right to penalise the bidder up to 10 percent of the value of the contract;
 - (e) recommend that the bidder or contractor, its shareholders and directors, or only the shareholders and directors who acted on a fraudulent basis, be restricted by the National Treasury from obtaining business from any organ of state for a period not exceeding 10 years, after the audi alteram partem (hear the other side) rule has been applied; and
 - (f) forward the matter for criminal prosecution.

WITNESSES

- 1.
- 2.

.....
SIGNATURE(S) OF BIDDERS(S)

DATE:

ADDRESS

BIDDER'S DISCLOSURE

1. PURPOSE OF THE FORM

Any person (natural or juristic) may make an offer or offers in terms of this invitation to bid. In line with the principles of transparency, accountability, impartiality, and ethics as enshrined in the Constitution of the Republic of South Africa and further expressed in various pieces of legislation, it is required for the bidder to make this declaration in respect of the details required hereunder.

Where a person/s are listed in the Register for Tender Defaulters and / or the List of Restricted Suppliers, that person will automatically be disqualified from the bid process.

2. Bidder's declaration

2.1 Is the bidder, or any of its directors / trustees / shareholders / members / partners or any person having a controlling interest² in the enterprise,
employed by the state? **YES/NO**

2.1.1 If so, furnish particulars of the names, individual identity numbers, and, if applicable, state employee numbers of sole proprietor/ directors / trustees / shareholders / members/ partners or any person having a controlling interest in the enterprise, in table below.

Full Name	Identity Number	Name of State institution

² the power, by one person or a group of persons holding the majority of the equity of an enterprise, alternatively, the person/s having the deciding vote or power to influence or to direct the course and decisions of the enterprise.

--	--	--

2.2 Do you, or any person connected with the bidder, have a relationship with any person who is employed by the procuring institution? **YES/NO**

2.2.1 If so, furnish particulars:

.....
.....

2.3 Does the bidder or any of its directors / trustees / shareholders / members / partners or any person having a controlling interest in the enterprise have any interest in any other related enterprise whether or not they are bidding for this contract?

YES/NO

2.3.1 If so, furnish particulars:

.....
.....

3 DECLARATION

I, the undersigned, (name)..... in submitting the accompanying bid, do hereby make the following statements that I certify to be true and complete in every respect:

- 3.1 I have read and I understand the contents of this disclosure;
- 3.2 I understand that the accompanying bid will be disqualified if this disclosure is found not to be true and complete in every respect;
- 3.3 The bidder has arrived at the accompanying bid independently from, and without consultation, communication, agreement or arrangement with any competitor. However, communication between partners in a joint venture or consortium³ will not be construed as collusive bidding.
- 3.4 In addition, there have been no consultations, communications, agreements or arrangements with any competitor regarding the quality, quantity, specifications, prices, including methods, factors or formulas used to calculate prices, market allocation, the intention or decision to submit or not to submit the bid, bidding with the intention not to win the bid and conditions or delivery particulars of the products or services to which this bid invitation relates.

³ Joint venture or Consortium means an association of persons for the purpose of combining their expertise, property, capital, efforts, skill and knowledge in an activity for the execution of a contract.

- 3.4 The terms of the accompanying bid have not been, and will not be, disclosed by the bidder, directly or indirectly, to any competitor, prior to the date and time of the official bid opening or of the awarding of the contract.
- 3.5 There have been no consultations, communications, agreements or arrangements made by the bidder with any official of the procuring institution in relation to this procurement process prior to and during the bidding process except to provide clarification on the bid submitted where so required by the institution; and the bidder was not involved in the drafting of the specifications or terms of reference for this bid.
- 3.6 I am aware that, in addition and without prejudice to any other remedy provided to combat any restrictive practices related to bids and contracts, bids that are suspicious will be reported to the Competition Commission for investigation and possible imposition of administrative penalties in terms of section 59 of the Competition Act No 89 of 1998 and or may be reported to the National Prosecuting Authority (NPA) for criminal investigation and or may be restricted from conducting business with the public sector for a period not exceeding ten (10) years in terms of the Prevention and Combating of Corrupt Activities Act No 12 of 2004 or any other applicable legislation.

I CERTIFY THAT THE INFORMATION FURNISHED IN PARAGRAPHS 1, 2 and 3 ABOVE IS CORRECT.

I ACCEPT THAT THE STATE MAY REJECT THE BID OR ACT AGAINST ME IN TERMS OF PARAGRAPH 6 OF PFMA SCM INSTRUCTION 03 OF 2021/22 ON PREVENTING AND COMBATING ABUSE IN THE SUPPLY CHAIN MANAGEMENT SYSTEM SHOULD THIS DECLARATION PROVE TO BE FALSE.

.....

Signature

.....

Date

.....

Position

.....

Name of bidder



TRANSNET NATIONAL PORTS AUTHORITY – PORT OF EAST LONDON

TENDER NUMBER: TNPA/2025/06/0016/97939/RFP

DESCRIPTION OF GOODS AND SERVICES: SUPPLY, DELIVERY, INSTALLATION, INTEGRATION, TESTING AND COMMISSIONING OF THREE (3) FIRE SUPPRESSION MONITORS AT TANKER BERTH IN THE PORT OF EAST LONDON FOR A PERIOD OF SIX (6) MONTHS

T2.2-20 NON-DISCLOSURE AGREEMENT

Note to tenderers: This Non-Disclosure Agreement is to be completed and signed by an authorised signatory:

THIS AGREEMENT is made effective as of day of 20..... by and between:

TRANSNET SOC LTD

(Registration No. 1990/000900/30), a company incorporated and existing under the laws of South Africa, having its principal place of business at Transnet Corporate Centre 138 Eloff Street , Braamfontein , Johannesburg 2000

and

.....
.....

(Registration No.), a private company incorporated and existing under the laws of South Africa having its principal place of business at

.....
.....

WHEREAS

Transnet and the Company wish to exchange Information [as defined below] and it is envisaged that each party may from time to time receive Information relating to the other in respect thereof. In consideration of each party making available to the other such Information, the parties jointly agree that any dealings between them shall be subject to the terms and conditions of this Agreement which themselves will be subject to the parameters of the Tender Document.

IT IS HEREBY AGREED

1. INTERPRETATION

In this Agreement:

- 1.1 **Agents** mean directors, officers, employees, agents, professional advisers, contractors or sub-contractors, or any Group member;
- 1.2 **Bid or Bid Document** (hereinafter Tender) means Transnet's Request for Information [**RFI**] Request for Proposal [**RFP**] or Request for Quotation [**RFQ**], as the case may be;
- 1.3 **Confidential Information** means any information or other data relating to one party [the **Disclosing Party**] and/or the business carried on or proposed or intended to be carried on by

that party and which is made available for the purposes of the Bid to the other party [the **Receiving Party**] or its Agents by the Disclosing Party or its Agents or recorded in agreed minutes following oral disclosure and any other information otherwise made available by the Disclosing Party or its Agents to the Receiving Party or its Agents, whether before, on or after the date of this Agreement, and whether in writing or otherwise, including any information, analysis or specifications derived from, containing or reflecting such information but excluding information which:

- 1.3.1 is publicly available at the time of its disclosure or becomes publicly available [other than as a result of disclosure by the Receiving Party or any of its Agents contrary to the terms of this Agreement]; or
- 1.3.2 was lawfully in the possession of the Receiving Party or its Agents [as can be demonstrated by its written records or other reasonable evidence] free of any restriction as to its use or disclosure prior to its being so disclosed; or
- 1.3.3 following such disclosure, becomes available to the Receiving Party or its Agents [as can be demonstrated by its written records or other reasonable evidence] from a source other than the Disclosing Party or its Agents, which source is not bound by any duty of confidentiality owed, directly or indirectly, to the Disclosing Party in relation to such information;
- 1.4 **Group** means any subsidiary, any holding company and any subsidiary of any holding company of either party; and
- 1.5 **Information** means all information in whatever form including, without limitation, any information relating to systems, operations, plans, intentions, market opportunities, know-how, trade secrets and business affairs whether in writing, conveyed orally or by machine-readable medium.

2. CONFIDENTIAL INFORMATION

- 2.1 All Confidential Information given by one party to this Agreement [the **Disclosing Party**] to the other party [the **Receiving Party**] will be treated by the Receiving Party as secret and confidential and will not, without the Disclosing Party's written consent, directly or indirectly communicate or disclose [whether in writing or orally or in any other manner] Confidential Information to any other person other than in accordance with the terms of this Agreement.
- 2.2 The Receiving Party will only use the Confidential Information for the sole purpose of technical and commercial discussions between the parties in relation to the Tender or for the subsequent performance of any contract between the parties in relation to the Tender.
- 2.3 Notwithstanding clause 2.1 above, the Receiving Party may disclose Confidential Information:



- 2.3.1 to those of its Agents who strictly need to know the Confidential Information for the sole purpose set out in clause 2.2 above, provided that the Receiving Party shall ensure that such Agents are made aware prior to the disclosure of any part of the Confidential Information that the same is confidential and that they owe a duty of confidence to the Disclosing Party. The Receiving Party shall at all times remain liable for any actions of such Agents that would constitute a breach of this Agreement; or
- 2.3.2 to the extent required by law or the rules of any applicable regulatory authority, subject to clause 2.4 below.
- 2.4 In the event that the Receiving Party is required to disclose any Confidential Information in accordance with clause 2.3.2 above, it shall promptly notify the Disclosing Party and cooperate with the Disclosing Party regarding the form, nature, content and purpose of such disclosure or any action which the Disclosing Party may reasonably take to challenge the validity of such requirement.
- 2.5 In the event that any Confidential Information shall be copied, disclosed or used otherwise than as permitted under this Agreement then, upon becoming aware of the same, without prejudice to any rights or remedies of the Disclosing Party, the Receiving Party shall as soon as practicable notify the Disclosing Party of such event and if requested take such steps [including the institution of legal proceedings] as shall be necessary to remedy [if capable of remedy] the default and/or to prevent further unauthorised copying, disclosure or use.
- 2.6 All Confidential Information shall remain the property of the Disclosing Party and its disclosure shall not confer on the Receiving Party any rights, including intellectual property rights over the Confidential Information whatsoever, beyond those contained in this Agreement.

3. RECORDS AND RETURN OF INFORMATION

- 3.1 The Receiving Party agrees to ensure proper and secure storage of all Information and any copies thereof.
- 3.2 The Receiving Party shall keep a written record, to be supplied to the Disclosing Party upon request, of the Confidential Information provided and any copies made thereof and, so far as is reasonably practicable, of the location of such Confidential Information and any copies thereof.
- 3.3 The Company shall, within 7 [seven] days of receipt of a written demand from Transnet:
- 3.3.1 return all written Confidential Information [including all copies]; and
- 3.3.2 expunge or destroy any Confidential Information from any computer, word processor or other device whatsoever into which it was copied, read or programmed by the Company or on its behalf.
- 3.4 The Company shall on request supply a certificate signed by a director as to its full compliance with the requirements of clause 3.3.2 above.

4. ANNOUNCEMENTS

- 4.1 Neither party will make or permit to be made any announcement or disclosure of its prospective interest in the Tender without the prior written consent of the other party.
- 4.2 Neither party shall make use of the other party's name or any information acquired through its dealings with the other party for publicity or marketing purposes without the prior written consent of the other party.

5. DURATION

The obligations of each party and its Agents under this Agreement shall survive the termination of any discussions or negotiations between the parties regarding the Tender and continue thereafter for a period of 5 [five] years.

6. PRINCIPAL

Each party confirms that it is acting as principal and not as nominee, agent or broker for any other person and that it will be responsible for any costs incurred by it or its advisers in considering or pursuing the Tender and in complying with the terms of this Agreement.

7. ADEQUACY OF DAMAGES

Nothing contained in this Agreement shall be construed as prohibiting the Disclosing Party from pursuing any other remedies available to it, either at law or in equity, for any such threatened or actual breach of this Agreement, including specific performance, recovery of damages or otherwise.

8. PRIVACY AND DATA PROTECTION

- 8.1 The Receiving Party undertakes to comply with South Africa's general privacy protection in terms Section 14 of the Bill of Rights in connection with this Tender and shall procure that its personnel shall observe the provisions of such Act [as applicable] or any amendments and re-enactments thereof and any regulations made pursuant thereto.
- 8.2 The Receiving Party warrants that it and its Agents have the appropriate technical and organisational measures in place against unauthorised or unlawful processing of data relating to the Tender and against accidental loss or destruction of, or damage to such data held or processed by them.

9. GENERAL

- 9.1 Neither party may assign the benefit of this Agreement, or any interest hereunder, except with the prior written consent of the other, save that Transnet may assign this Agreement at any time to any member of the Transnet Group.



- 9.2 No failure or delay in exercising any right, power or privilege under this Agreement will operate as a waiver of it, nor will any single or partial exercise of it preclude any further exercise or the exercise of any right, power or privilege under this Agreement or otherwise.
- 9.3 The provisions of this Agreement shall be severable in the event that any of its provisions are held by a court of competent jurisdiction or other applicable authority to be invalid, void or otherwise unenforceable, and the remaining provisions shall remain enforceable to the fullest extent permitted by law.
- 9.4 This Agreement may only be modified by a written agreement duly signed by persons authorised on behalf of each party.
- 9.5 Nothing in this Agreement shall constitute the creation of a partnership, joint venture or agency between the parties.
- 9.6 This Agreement will be governed by and construed in accordance with South African law and the parties irrevocably submit to the exclusive jurisdiction of the South African courts.

Signed

Date

Name

Position

Tenderer

T2.2-21: RFP DECLARATION FORM

NAME OF COMPANY: _____

We _____ do hereby certify that:

1. Transnet has supplied and we have received appropriate tender offers to any/all questions (as applicable) which were submitted by ourselves for tender clarification purposes;
2. we have received all information we deemed necessary for the completion of this Tender;
3. at no stage have we received additional information relating to the subject matter of this tender from Transnet sources, other than information formally received from the designated Transnet contact(s) as nominated in the tender documents;
4. we are satisfied, insofar as our company is concerned, that the processes and procedures adopted by Transnet in issuing this tender and the requirements requested from tenderers in responding to this tender have been conducted in a fair and transparent manner; and
5. furthermore, we acknowledge that a direct relationship exists between a family member and/or an owner / member / director / partner / shareholder (unlisted companies) of our company and an employee or board member of the Transnet Group as indicated below: *[Respondent to indicate if this section is not applicable]*

FULL NAME OF OWNER/MEMBER/DIRECTOR/

PARTNER/SHAREHOLDER:

ADDRESS:

Indicate nature of relationship with Transnet:

[Failure to furnish complete and accurate information in this regard may lead to the disqualification of your response and may preclude a Respondent from doing future business with Transnet]

We declare, to the extent that we are aware or become aware of any relationship between ourselves and Transnet (other than any existing and appropriate business relationship with Transnet) which could unfairly advantage our company in the forthcoming adjudication process, we shall notify Transnet immediately in writing of such circumstances.

6. We accept that any dispute pertaining to this tender will be resolved through the Ombudsman process and will be subject to the Terms of Reference of the Ombudsman. The Ombudsman process must first be exhausted before judicial review of a decision is sought. (Refer "Important Notice to respondents" below).
7. We further accept that Transnet reserves the right to reverse a tender award or decision based on the recommendations of the Ombudsman without having to follow a formal court process to have such award or decision set aside.
8. We have acquainted ourselves and agree with the content of T2.2-24 "Supplier Integrity Pact".

For and on behalf of duly authorised thereto
Name:
Signature:
Date:

IMPORTANT NOTICE TO TENDERERS

- Transnet has appointed a Procurement Ombudsman to investigate any material complaint in respect of tenders exceeding R5,000,000.00 (five million S.A. Rand) in value. Should a Tenderer have any material concern regarding an tender process which meets this value threshold, a complaint may be lodged with Transnet's Procurement Ombudsman for further investigation.
- It is incumbent on the Tenderer to familiarise himself/herself with the Terms of Reference for the Transnet Procurement Ombudsman, details of which are available for review at Transnet's website www.transnet.net.
- An official complaint form may be downloaded from this website and submitted, together with any supporting documentation, within the prescribed period, to procurement.ombud@transnet.net
- For transactions below the R5,000,000.00 (five million S.A. Rand) threshold, a complaint may be lodged with the Chief Procurement Officer of the relevant Transnet Operating Division.
- All Tenderers should note that a complaint must be made in good faith. If a complaint is made in bad faith, Transnet reserves the right to place such a tenderer on its List of Excluded Bidders.



TRANSNET NATIONAL PORTS AUTHORITY - PORT OF EAST LONDON

TENDER NUMBER: TNPA/2025/06/0016/97939/RFP

DESCRIPTION OF GOODS AND SERVICES: SUPPLY, DELIVERY, INSTALLATION, INTEGRATION, TESTING AND COMMISSIONING OF THREE (3) FIRE SUPPRESSION MONITORS AT TANKER BERTH IN THE PORT OF EAST LONDON FOR A PERIOD OF SIX (6) MONTHS

T2.2-22: REQUEST FOR PROPOSAL – BREACH OF LAW

NAME OF COMPANY: _____

I / We _____ do hereby certify that ***I/we have/have not been*** found guilty during the preceding 5 (five) years of a serious breach of law, including but not limited to a breach of the Competition Act, 89 of 1998, by a court of law, tribunal or other administrative body. The type of breach that the Tenderer is required to disclose excludes relatively minor offences or misdemeanors, e.g., traffic offences.

Where found guilty of such a serious breach, please disclose:

NATURE OF BREACH:

DATE OF BREACH:

Furthermore, I/we acknowledge that Transnet SOC Ltd reserves the right to exclude any Tenderer from the tendering process, should that person or company have been found guilty of a serious breach of law, tribunal or regulatory obligation.

Signed on this _____ day of _____ 20____

SIGNATURE OF TENDER

T2.2-23 Certificate of Acquaintance with Tender Documents

NAME OF TENDERING ENTITY:

1. By signing this certificate I/we acknowledge that I/we have made myself/ourselves thoroughly familiar with, and agree with all the conditions governing this RFP. This includes those terms and conditions of the Contract, the Supplier Integrity Pact, Non-Disclosure Agreement etc. contained in any printed form stated to form part of the documents thereof, but not limited to those listed in this clause.
2. I/we furthermore agree that Transnet SOC Ltd shall recognise no claim from me/us for relief based on an allegation that I/we overlooked any tender/contract condition or failed to take it into account for the purpose of calculating my/our offered prices or otherwise.
3. I/we understand that the accompanying Tender will be disqualified if this Certificate is found not to be true and complete in every respect.
4. For the purposes of this Certificate and the accompanying Tender, I/we understand that the word "competitor" shall include any individual or organisation, other than the Tenderer, whether or not affiliated with the Tenderer, who:
 - a) has been requested to submit a Tender in response to this Tender invitation;
 - b) could potentially submit a Tender in response to this Tender invitation, based on their qualifications, abilities or experience; and
 - c) provides the same Services as the Tenderer and/or is in the same line of business as the Tenderer
5. The Tenderer has arrived at the accompanying Tender independently from, and without consultation, communication, agreement or arrangement with any competitor. However communication between partners in a joint venture or consortium will not be construed as collusive Tendering.
6. In particular, without limiting the generality of paragraph 5 above, there has been no consultation, communication, agreement or arrangement with any competitor regarding:
 - a) prices;
 - b) geographical area where Services will be rendered [market allocation]

-
- c) methods, factors or formulas used to calculate prices;
 - d) the intention or decision to submit or not to submit, a Tender;
 - e) the submission of a tender which does not meet the specifications and conditions of the tender; or
 - f) Tendering with the intention not winning the tender.
7. In addition, there have been no consultations, communications, agreements or arrangements with any competitor regarding the quality, quantity, specifications and conditions or delivery particulars of the Services to which this tender relates.
8. The terms of the accompanying tender have not been, and will not be, disclosed by the Tenderer, directly or indirectly, to any competitor, prior to the date and time of the official tender opening or of the awarding of the contract.
9. I/We am/are aware that, in addition and without prejudice to any other remedy provided to combat any restrictive practices related to tenders and contracts, tenders that are suspicious will be reported to the Competition Commission for investigation and possible imposition of administrative penalties in terms of section 59 of the Competition Act No 89 of 1998 and/or may be reported to the National Prosecuting Authority [NPA] for criminal investigation. In addition, Tenderers that submit suspicious tenders may be restricted from conducting business with the public sector for a period not exceeding 10 [ten] years in terms of the Prevention and Combating of Corrupt Activities Act No 12 of 2004 or any other applicable legislation.

Signed on this _____ day of _____ 20____

SIGNATURE OF TENDERER

T2.2-24 Supplier Integrity Pact

Important Note: All potential tenderers must read this document and certify in the RFP Declaration Form that they have acquainted themselves with and agree with the content.

The contract with the successful tenderer will automatically incorporate this Integrity Pact and shall be deemed as part of the final concluded contract.

INTEGRITY PACT

Between

TRANSNET SOC LTD

Registration Number: 1990/000900/30

("Transnet")

and

The Contractor (hereinafter referred to as the "Tenderer/Service Providers/Contractor")

PREAMBLE

Transnet values full compliance with all relevant laws and regulations, ethical standards and the principles of economical use of resources, fairness and transparency in its relations with its Tenderers/Service Providers/Contractors.

In order to achieve these goals, Transnet and the Tenderer/Service Provider/Contractor hereby enter into this agreement hereinafter referred to as the "Integrity Pact" which will form part of the Tenderer's/Service Provider's/Contractor's application for registration with Transnet as a vendor.

The general purpose of this Integrity Pact is to agree on avoiding all forms of dishonesty, fraud and corruption by following a system that is fair, transparent and free from any undue influence prior to, during and subsequent to the currency of any procurement and/or reverse logistics event and any further contract to be entered into between the Parties, relating to such event.

All Tenderers/Service Providers/Contractor's will be required to sign and comply with undertakings contained in this Integrity Pact, should they want to be registered as a Transnet vendor.

1 OBJECTIVES

- 1.1 Transnet and the Tenderer/Service Provider/Contractor agree to enter into this Integrity Pact, to avoid all forms of dishonesty, fraud and corruption including practices that are anti-competitive in nature, negotiations made in bad faith and under-pricing by following a system that is fair, transparent and free from any influence/unprejudiced dealings prior to, during and subsequent to the currency of the contract to be entered into with a view to:
 - a) Enable Transnet to obtain the desired contract at a reasonable and competitive price in conformity to the defined specifications of the works, goods and services; and
 - b) Enable Tenderers/Service Providers/Contractors to abstain from bribing or participating in any corrupt practice in order to secure the contract.

2 COMMITMENTS OF TRANSNET

Transnet commits to take all measures necessary to prevent dishonesty, fraud and corruption and to observe the following principles:

- 2.1 Transnet hereby undertakes that no employee of Transnet connected directly or indirectly with the sourcing event and ensuing contract, will demand, take a promise for

or accept directly or through intermediaries any bribe, consideration, gift, reward, favour or any material or immaterial benefit or any other advantage from the Tenderer, either for themselves or for any person, organisation or third party related to the contract in exchange for an advantage in the tendering process, Tender evaluation, contracting or implementation process related to any contract.

- 2.2 Transnet will, during the registration and tendering process treat all Tenderers/ Service Providers/Contractor with equity, transparency and fairness. Transnet will in particular, before and during the registration process, provide to all Tenderers/ Service Providers/Contractors the same information and will not provide to any Tenderers/Service Providers/Contractors confidential/additional information through which the Tenderers/Service Providers/Contractors could obtain an advantage in relation to any tendering process.
- 2.3 Transnet further confirms that its employees will not favour any prospective Tenderers/Service Providers/Contractors in any form that could afford an undue advantage to a particular Tenderer during the tendering stage, and will further treat all Tenderers/Service Providers/Contractors participating in the tendering process in a fair manner.
- 2.4 Transnet will exclude from the tender process such employees who have any personal interest in the Tenderers/Service Providers/Contractors participating in the tendering process.

3 OBLIGATIONS OF THE TENDERER / SERVICE PROVIDER

- 3.1 Transnet has a '**Zero Gifts**' Policy. No employee is allowed to accept gifts, favours or benefits.
 - a) Transnet officials and employees **shall not** solicit, give or accept, or from agreeing to solicit, give, accept or receive directly or indirectly, any gift, gratuity, favour, entertainment, loan, or anything of monetary value, from any person or juridical entities in the course of official duties or in connection with any operation being managed by, or any transaction which may be affected by the functions of their office.
 - b) Transnet officials and employees **shall not** solicit or accept gifts of any kind, from vendors, suppliers, customers, potential employees, potential vendors, and suppliers, or any other individual or organisation irrespective of the value.

- c) Under **no circumstances** should gifts, business courtesies or hospitality packages be accepted from or given to prospective suppliers participating in a tender process at the respective employee's Operating Division, regardless of retail value.
 - d) Gratuities, bribes or kickbacks of any kind must never be solicited, accepted or offered, either directly or indirectly. This includes money, loans, equity, special privileges, personal favours, benefit or services. Such favours will be considered to constitute corruption.
- 3.2 The Tenderer/Service Provider/Contractor commits itself to take all measures necessary to prevent corrupt practices, unfair means and illegal activities during any stage of its Tender or during any ensuing contract stage in order to secure the contract or in furtherance to secure it and in particular the Tenderer/Service Provider/Contractor commits to the following:
- a) The Tenderer/Service Provider/Contractor will not, directly or through any other person or firm, offer, promise or give to Transnet or to any of Transnet's employees involved in the tendering process or to any third person any material or other benefit or payment, in order to obtain in exchange an advantage during the tendering process; and
 - b) The Tenderer/Service Provider/Contractor will not offer, directly or through intermediaries, any bribe, gift, consideration, reward, favour, any material or immaterial benefit or other advantage, commission, fees, brokerage or inducement to any employee of Transnet, connected directly or indirectly with the tendering process, or to any person, organisation or third party related to the contract in exchange for any advantage in the tendering, evaluation, contracting and implementation of the contract.
- 3.3 The Tenderer/Service Provider/Contractor will not collude with other parties interested in the contract to preclude a competitive Tender price, impair the transparency, fairness and progress of the tendering process, Tender evaluation, contracting and implementation of the contract. The Tenderer / Service Provider further commits itself to delivering against all agreed upon conditions as stipulated within the contract.
- 3.4 The Tenderer/Service Provider/Contractor will not enter into any illegal or dishonest agreement or understanding, whether formal or informal with other Tenderers/Service Providers/Contractors. This applies in particular to certifications, submissions or non-

submission of documents or actions that are restrictive or to introduce cartels into the tendering process.

- 3.5 The Tenderer/Service Provider/Contractor will not commit any criminal offence under the relevant anti-corruption laws of South Africa or any other country. Furthermore, the Tenderer/Service Provider/Contractor will not use for illegitimate purposes or for restrictive purposes or personal gain, or pass on to others, any information provided by Transnet as part of the business relationship, regarding plans, technical proposals and business details, including information contained or transmitted electronically.
- 3.6 A Tenderer/Service Provider/Contractor of foreign origin shall disclose the name and address of its agents or representatives in South Africa, if any, involved directly or indirectly in the registration or tendering process. Similarly, the Tenderer / Service Provider / Contractor of South African nationality shall furnish the name and address of the foreign principals, if any, involved directly or indirectly in the registration or tendering process.
- 3.7 The Tenderer/Service Provider/Contractor will not misrepresent facts or furnish false or forged documents or information in order to influence the tendering process to the advantage of the Tenderer/Service Provider/Contractor or detriment of Transnet or other competitors.
- 3.8 Transnet may require the Tenderer/Service Provider/Contractor to furnish Transnet with a copy of its code of conduct. Such code of conduct must address the compliance programme for the implementation of the code of conduct and reject the use of bribes and other dishonest and unethical conduct.
- 3.9 The Tenderer/Service Provider/Contractor will not instigate third persons to commit offences outlined above or be an accessory to such offences.
- 3.10 The Tenderer/Service Provider/Contractor confirms that they will uphold the ten principles of the United Nations Global Compact (UNGC) in the fields of Human Rights, Labour, Anti-Corruption and the Environment when undertaking business with Transnet as follows:

a) Human Rights

- Principle 1: Businesses should support and respect the protection of internationally proclaimed human rights; and

- Principle 2: make sure that they are not complicit in human rights abuses.

b) Labour

- Principle 3: Businesses should uphold the freedom of association and the effective recognition of the right to collective bargaining;

- Principle 4: the elimination of all forms of forced and compulsory labour;

- Principle 5: the effective abolition of child labour; and

- Principle 6: the elimination of discrimination in respect of employment and occupation.

c) Environment

- Principle 7: Businesses should support a precautionary approach to environmental challenges;

- Principle 8: undertake initiatives to promote greater environmental responsibility; and

- Principle 9: encourage the development and diffusion of environmentally friendly technologies.

d) Anti-Corruption

- Principle 10: Businesses should work against corruption in all its forms, including extortion and bribery.

4 INDEPENDENT TENDERING

4.1 For the purposes of that Certificate in relation to any submitted Tender, the Tenderer declares to fully understand that the word "competitor" shall include any individual or organisation, other than the Tenderer, whether or not affiliated with the Tenderer, who:

- a) has been requested to submit a Tender in response to this Tender invitation;
- b) could potentially submit a Tender in response to this Tender invitation, based on their qualifications, abilities or experience; and

- c) provides the same Goods and Services as the Tenderer and/or is in the same line of business as the Tenderer.
- 4.2 The Tenderer has arrived at his submitted Tender independently from, and without consultation, communication, agreement or arrangement with any competitor. However communication between partners in a joint venture or consortium will not be construed as collusive tendering.
- 4.3 In particular, without limiting the generality of paragraph 5 above, there has been no consultation, communication, agreement or arrangement with any competitor regarding:
 - a) prices;
 - b) geographical area where Goods or Services will be rendered [market allocation];
 - c) methods, factors or formulas used to calculate prices;
 - d) the intention or decision to submit or not to submit, a Tender;
 - e) the submission of a Tender which does not meet the specifications and conditions of the RFP; or
 - f) tendering with the intention of not winning the Tender.
- 4.4 In addition, there have been no consultations, communications, agreements or arrangements with any competitor regarding the quality, quantity, specifications and conditions or delivery particulars of the Goods or Services to which his/her tender relates.
- 4.5 The terms of the Tender as submitted have not been, and will not be, disclosed by the Tenderer, directly or indirectly, to any competitor, prior to the date and time of the official Tender opening or of the awarding of the contract.
- 4.6 Tenderers are aware that, in addition and without prejudice to any other remedy provided to combat any restrictive practices related to Tenders and contracts, Tenders that are suspicious will be reported to the Competition Commission for investigation and possible imposition of administrative penalties in terms of section 59 of the Competition Act No 89 of 1998 and/or may be reported to the National Prosecuting Authority [NPA] for criminal investigation and/or may be restricted from conducting business with the public sector for a period not exceeding 10 [ten] years in terms of the Prevention and Combating of Corrupt Activities Act No 12 of 2004 or any other applicable legislation.

- 4.7 Should the Tenderer find any terms or conditions stipulated in any of the relevant documents quoted in the Tender unacceptable, it should indicate which conditions are unacceptable and offer alternatives by written submission on its company letterhead, attached to its submitted Tender. Any such submission shall be subject to review by Transnet's Legal Counsel who shall determine whether the proposed alternative(s) are acceptable or otherwise, as the case may be.

5 DISQUALIFICATION FROM TENDERING PROCESS

- 5.1 If the Tenderer/Service Provider/Contractor has committed a transgression through a violation of section 3 of this Integrity Pact or in any other form such as to put its reliability or credibility as a Tenderer/Service Provider/Contractor into question, Transnet may reject the Tenderer's / Service Provider's / Contractor's application from the registration or tendering process and remove the Tenderer/Service Provider/Contractor from its database, if already registered.
- 5.2 If the Tenderer/Service Provider/Contractor has committed a transgression through a violation of section 3, or any material violation, such as to put its reliability or credibility into question. Transnet may after following due procedures and at its own discretion also exclude the Tenderer/Service Provider /Contractor from future tendering processes. The imposition and duration of the exclusion will be determined by the severity of the transgression. The severity will be determined by the circumstances of the case, which will include amongst others the number of transgressions, the position of the transgressors within the company hierarchy of the Tenderer/Service Provider/Contractor and the amount of the damage. The exclusion will be imposed for up to a maximum of 10 (ten) years. However, Transnet reserves the right to impose a longer period of exclusion, depending on the gravity of the misconduct.
- 5.3 If the Tenderer/Service Provider/Contractor can prove that it has restored the damage caused by it and has installed a suitable corruption prevention system, or taken other remedial measures as the circumstances of the case may require, Transnet may at its own discretion revoke the exclusion or suspend the imposed penalty.

6 TRANSNET'S LIST OF EXCLUDED TENDERERS (BLACKLIST)

- 6.1 The process of restriction is used to exclude a company/person from conducting future business with Transnet and other organs of state for a specified period. No Tender shall be awarded to a Tenderer whose name (or any of its members, directors, partners or

trustees) appear on the Register of Tender Defaulters kept by National Treasury, or who have been placed on National Treasury's List of Restricted Suppliers. Transnet reserves the right to withdraw an award, or cancel a contract concluded with a Tenderer should it be established, at any time, that a tenderer has been restricted with National Treasury by another government institution.

- 6.2 All the stipulations on Transnet's restriction process as laid down in Transnet's Supply Chain Policy and Procurement Procedures Manual (CPM included) are included herein by way of reference. Below follows a condensed summary of this restriction procedure.
- 6.3 On completion of the restriction procedure, Transnet will submit the restricted entity's details (including the identity number of the individuals and registration number of the entity) to National Treasury for placement on National Treasury's Database of Restricted Suppliers for the specified period of exclusion. National Treasury will make the final decision on whether to restrict an entity from doing business with any organ of state for a period not exceeding 10 years and place the entity concerned on the Database of Restricted Suppliers published on its official website.
- 6.4 The decision to restrict is based on one of the grounds for restriction. The standard of proof to commence the restriction process is whether a "*prima facie*" (i.e. on the face of it) case has been established.
- 6.5 Depending on the seriousness of the misconduct and the strategic importance of the Goods/Services, in addition to restricting a company/person from future business, Transnet may decide to terminate some or all existing contracts with the company/person as well.
- 6.6 A Service Provider or Contractor to Transnet may not subcontract any portion of the contract to a blacklisted company.
- 6.7 Grounds for blacklisting include: If any person/Enterprise which has submitted a Tender, concluded a contract, or, in the capacity of agent or subcontractor, has been associated with such Tender or contract:
 - a) Has, in bad faith, withdrawn such Tender after the advertised closing date and time for the receipt of Tenders;

- b) has, after being notified of the acceptance of his Tender, failed or refused to sign a contract when called upon to do so in terms of any condition forming part of the Tender documents;
- c) has carried out any contract resulting from such Tender in an unsatisfactory manner or has breached any condition of the contract;
- d) has offered, promised or given a bribe in relation to the obtaining or execution of the contract;
- e) has acted in a fraudulent or improper manner or in bad faith towards Transnet or any Government Department or towards any public body, Enterprise or person;
- f) has made any incorrect statement in a certificate or other communication with regard to the Local Content of his Goods or his B-BBEE status and is unable to prove to the satisfaction of Transnet that:
 - (i) he made the statement in good faith honestly believing it to be correct; and
 - (ii) before making such statement he took all reasonable steps to satisfy himself of its correctness;
- g) caused Transnet damage, or to incur costs in order to meet the contractor's requirements and which could not be recovered from the contractor;
- h) has litigated against Transnet in bad faith.

6.8 Grounds for blacklisting include a company/person recorded as being a company or person prohibited from doing business with the public sector on National Treasury's database of Restricted Service Providers or Register of Tender Defaulters.

6.9 Companies associated with the person/s guilty of misconduct (i.e. entities owned, controlled or managed by such persons), any companies subsequently formed by the person(s) guilty of the misconduct and/or an existing company where such person(s) acquires a controlling stake may be considered for blacklisting. The decision to extend the blacklist to associated companies will be at the sole discretion of Transnet.

7 PREVIOUS TRANSGRESSIONS

7.1 The Tenderer/Service Provider/Contractor hereby declares that no previous transgressions resulting in a serious breach of any law, including but not limited to, corruption, fraud, theft, extortion and contraventions of the Competition Act 89 of 1998, which occurred in the last 5 (five) years with any other public sector undertaking, government department or private sector company that could justify its exclusion from

its registration on the Tenderer's/Service Provider's/Contractor's database or any tendering process.

- 7.2 If it is found to be that the Tenderer/Service Provider/Contractor made an incorrect statement on this subject, the Tenderer/Service Provider/Contractor can be rejected from the registration process or removed from the Tenderer/ Service Provider/Contractor database, if already registered, for such reason (refer to the Breach of Law Returnable Form contained in the document.)

8 SANCTIONS FOR VIOLATIONS

8.1 Transnet shall also take all or any one of the following actions, wherever required to:

- a) Immediately exclude the Tenderer/Service Provider/Contractor from the tendering process or call off the pre-contract negotiations without giving any compensation the Tenderer/Service Provider/Contractor. However, the proceedings with the other Tenderer/ Service Provider/Contractor may continue;
- b) Immediately cancel the contract, if already awarded or signed, without giving any compensation to the Tenderer/Service Provider/Contractor;
- c) Recover all sums already paid by Transnet;
- d) Encash the advance bank guarantee and performance bond or warranty bond, if furnished by the Tenderer/Service Provider/Contractor, in order to recover the payments, already made by Transnet, along with interest;
- e) Cancel all or any other contracts with the Tenderer/Service Provider/Contractor; and
- f) Exclude the Tenderer/ Service Provider/Contractor from entering into any Tender with Transnet in future.

9 CONFLICTS OF INTEREST

9.1 A conflict of interest includes, inter alia, a situation in which:

- a) A Transnet employee has a personal financial interest in a tendering / supplying entity; and
- b) A Transnet employee has private interests or personal considerations or has an affiliation or a relationship which affects, or may affect, or may be perceived to affect his / her judgment in action in the best interest of Transnet, or could affect the employee's motivations for acting in a particular manner, or which could result in, or be perceived as favouritism or nepotism.

9.2 A Transnet employee uses his / her position, or privileges or information obtained while acting in the capacity as an employee for:

- a) Private gain or advancement; or
- b) The expectation of private gain, or advancement, or any other advantage accruing to the employee must be declared in a prescribed form.

Thus, conflicts of interest of any Tender committee member or any person involved in the sourcing process must be declared in a prescribed form.

9.3 If a Tenderer/Service Provider/Contractor has or becomes aware of a conflict of interest i.e. a family, business and / or social relationship between its owner(s)/ member(s)/director(s)/partner(s)/shareholder(s) and a Transnet employee/ member of Transnet's Board of Directors in respect of a Tender which will be considered for the Tender process, the Tenderer/Service Provider/ Contractor:

- a) must disclose the interest and its general nature, in the Request for Proposal ("RFX") declaration form; or
- b) must notify Transnet immediately in writing once the circumstances has arisen.

9.4 The Tenderer/Service Provider/Contractor shall not lend to or borrow any money from or enter into any monetary dealings or transactions, directly or indirectly, with any committee member or any person involved in the sourcing process, where this is done, Transnet shall be entitled forthwith to rescind the contract and all other contracts with the Tenderer/Service Provider/Contractor.

10 DISPUTE RESOLUTION

10.1 Transnet recognises that trust and good faith are pivotal to its relationship with its Tenderer / Service Provider / Contractor. When a dispute arises between Transnet and its Tenderer / Service Provider / Contractor, the parties should use their best endeavours to resolve the dispute in an amicable manner, whenever possible. Litigation in bad faith negates the principles of trust and good faith on which commercial relationships are based. Accordingly, following a blacklisting process as mentioned in paragraph 6 above, Transnet will not do business with a company that litigates against it in bad faith or is involved in any action that reflects bad faith on its part. Litigation in bad faith includes, but is not limited to the following instances:

- a) **Vexatious proceedings:** these are frivolous proceedings which have been instituted without proper grounds;

- b) **Perjury:** where a Tenderer / Service Provider / Contractor make a false statement either in giving evidence or on an affidavit;
- c) **Scurrilous allegations:** where a Tenderer / Service Provider / Contractor makes allegations regarding a senior Transnet employee which are without proper foundation, scandalous, abusive or defamatory; and
- d) **Abuse of court process:** when a Tenderer / Service Provider / Contractor abuses the court process in order to gain a competitive advantage during a Tender process.

11 GENERAL

- 11.1 This Integrity Pact is governed by and interpreted in accordance with the laws of the Republic of South Africa.
- 11.2 The actions stipulated in this Integrity Pact are without prejudice to any other legal action that may follow in accordance with the provisions of the law relating to any civil or criminal proceedings.
- 11.3 The validity of this Integrity Pact shall cover all the tendering processes and will be valid for an indefinite period unless cancelled by either Party.
- 11.4 Should one or several provisions of this Integrity Pact turn out to be invalid the remainder of this Integrity Pact remains valid.
- 11.5 Should a Tenderer/Service Provider/Contractor be confronted with dishonest, fraudulent or corruptive behaviour of one or more Transnet employees, Transnet expects its Tenderer/Service Provider/Contractor to report this behaviour directly to a senior Transnet official/employee or alternatively by using Transnet's "Tip-Off Anonymous" hotline number 0800 003 056, whereby your confidentiality is guaranteed.

The Parties hereby declare that each of them has read and understood the clauses of this Integrity Pact and shall abide by it. To the best of the Parties' knowledge and belief, the information provided in this Integrity Pact is true and correct.

I duly authorised by the tendering entity, hereby certify that the tendering entity are **fully acquainted** with the contents of the Integrity Pact and further **agree to abide by it** in full.

Signature

Date

T2.2-25 : Supplier Code of Conduct

Transnet SOC Limited aims to achieve the best value for money when buying or selling goods and obtaining services. This however must be done in an open and fair manner that supports and drives a competitive economy. Underpinning our process are several acts and policies that any supplier dealing with Transnet must understand and support. These are:

- The Transnet Procurement Policy – A guide for Tenderers.
- Section 217 of the Constitution - the five pillars of Public PSCM (Procurement and Supply Chain Management): fair, equitable, transparent, competitive and cost effective;
- The Public Finance Management Act (PFMA);
- The Broad Based Black Economic Empowerment Act (BBBEE)
- The Prevention and Combating of Corrupt Activities Act (PRECCA); and
- The Construction Industry Development Board Act (CIDB Act).

This code of conduct has been included in this contract to formally appraise Transnet Suppliers of Transnet's expectations regarding behaviour and conduct of its Suppliers.

Prohibition of Bribes, Kickbacks, Unlawful Payments, and Other Corrupt Practices

Transnet is in the process of transforming itself into a self-sustaining State Owned Enterprise, actively competing in the logistics industry. Our aim is to become a world class, profitable, logistics organisation. As such, our transformation is focused on adopting a performance culture and to adopt behaviours that will enable this transformation.

1. Transnet SOC Limited will not participate in corrupt practices. Therefore, it expects its suppliers to act in a similar manner.

- Transnet and its employees will follow the laws of this country and keep accurate business records that reflect actual transactions with, and payments to, our suppliers.
- Employees must not accept or request money or anything of value, directly or indirectly, from suppliers.
- Employees may not receive anything that is calculated to:
 - Illegally influence their judgement or conduct or to ensure the desired outcome of a sourcing activity;
 - Win or retain business or to influence any act or decision of any person involved in sourcing decisions; or
 - Gain an improper advantage.

-
- There may be times when a supplier is confronted with fraudulent or corrupt behaviour of Transnet employees. We expect our Suppliers to use our “Tip-offs Anonymous” Hot line to report these acts. (0800 003 056).

2. *Transnet SOC Limited is firmly committed to the ideas of free and competitive enterprise.*

- Suppliers are expected to comply with all applicable laws and regulations regarding fair competition and antitrust practices.
- Transnet does not engage with non-value adding agents or representatives solely for the purpose of increasing BBBEE spend (fronting).

3. *Transnet’s relationship with suppliers requires us to clearly define requirements, to exchange information and share mutual benefits.*

- Generally, suppliers have their own business standards and regulations. Although Transnet cannot control the actions of our suppliers, we will not tolerate any illegal activities. These include, but are not limited to:
 - Misrepresentation of their product (origin of manufacture, specifications, intellectual property rights, etc);
 - Collusion;
 - Failure to disclose accurate information required during the sourcing activity (ownership, financial situation, BBBEE status, etc.);
 - Corrupt activities listed above; and
 - Harassment, intimidation or other aggressive actions towards Transnet employees.
- Suppliers must be evaluated and approved before any materials, components, products or services are purchased from them. Rigorous due diligence is conducted and the supplier is expected to participate in an honest and straight forward manner.
- Suppliers must record and report facts accurately, honestly and objectively. Financial records must be accurate in all material respects.

Conflicts of Interest

A conflict of interest arises when personal interests or activities influence (or appear to influence) the ability to act in the best interests of Transnet SOC Limited.

- Doing business with family members.
- Having a financial interest in another company in our industry

Where possible, contracts will be negotiated to include the above in the terms of such contracts. To the extent such terms are not included in contractual obligations and any of the above code is breached, then Transnet reserves its right to review doing business with these suppliers.

I, _____ of _____
(insert name of Director or as per Authority Resolution from Board of Directors) *(insert name of Company)*

hereby acknowledge having read, understood and agree to the terms and conditions set out in the "Transnet Supplier Code of Conduct."

Signed this on day _____ at _____

Signature

T2.2-26 Agreement in terms of Protection of Personal Information Act, 4 of 2013 ("POPIA")

1. PREAMBLE AND INTRODUCTION

- 1.1. The rights and obligation of the Parties in terms of the Protection of Personal Information Act, 4 of 2013 ("POPIA") are included as forming part of the terms and conditions of this contract.

2. PROTECTION OF PERSONAL INFORMATION

- 2.1. The following terms shall bear the same meaning as contemplated in Section 1 of the Protection of Person information act, No. of 2013 "(POPIA)":
consent; data subject; electronic communication; information officer; operator; person; personal information; processing; record; Regulator; responsible party; special information; as well as any terms derived from these terms.
- 2.2. The Operator will process all information by the Transnet in terms of the requirements contemplated in Section 4(1) of the POPIA:
Accountability; Processing limitation; Purpose specification; Further processing limitation; Information quality; Openness; Security safeguards and Data subject participation.
- 2.3. The Parties acknowledge and agree that, in relation to personal information of Transnet and the information of a third party that will be processed pursuant to this Agreement , the Operator is (..... name of Tenderer/Contractor) hereinafter Operator and the Data subject is "Transnet". Operator will process personal information only with the knowledge and authorisation of Transnet and will treat personal information and the information of a third party which comes to its knowledge as confidential and will not disclose it, unless so required by law or subject to the exceptions contained in the POPIA.
- 2.4. Transnet reserves all the rights afforded to it by the POPIA in the processing of any of its information as contained in this Agreement and the Operator is required to comply with all prescripts as detailed in the POPIA relating to all information concerning Transnet.
- 2.5. In terms of this Agreement, the Operator acknowledges that it will obtain and have access to personal information of Transnet and the information of a third party and agrees that it shall only process the information disclosed by Transnet in terms of this Agreement and only for the purposes as detailed in this Agreement and in accordance with any applicable law.
- 2.6. Should there be a need for the Operator to process the personal information and the information of a third party in a way that is not agreed to in this Agreement, the Operator must request consent

from Transnet to the processing of its personal information or and the information of a third party in a manner other than that it was collected for, which consent cannot be unreasonably withheld.

- 2.7. Furthermore, the Operator will not otherwise modify, amend or alter any personal information and the information of a third party submitted by Transnet or disclose or permit the disclosure of any personal information and the information of a third party to any third party without prior written consent from Transnet.
- 2.8. The Operator shall, at all times, ensure compliance with any applicable laws put in place and maintain sufficient measures, policies and systems to manage and secure against all forms of risks to any information that may be shared or accessed pursuant to the services offered to Transnet in terms of this Agreement (physically, through a computer or any other form of electronic communication).
- 2.9. The Operator shall notify Transnet in writing of any unauthorised access to personal information and the information of a third party , cybercrimes or suspected cybercrimes, in its knowledge and report such crimes or suspected crimes to the relevant authorities in accordance with applicable laws, after becoming aware of such crimes or suspected crime. The Operator must inform Transnet of the breach as soon as it has occurred to allow Transnet to take all necessary remedial steps to mitigate the extent of the loss or compromise of personal information and the information of a third party and to restore the integrity of the affected personal information as quickly as is possible.
- 2.10. Transnet may, in writing, request the Operator to confirm and/or make available any personal information and the information of a third party in its possession in relation to Transnet and if such personal information has been accessed by third parties and the identity thereof in terms of the POPIA.
- 2.11. Transnet may further request that the Operator correct, delete, destroy, withdraw consent or object to the processing of any personal information and the information of a third party relating to the Transnet or a third party in the Operator's s possession in terms of the provision of the POPIA and utilizing Form 2 of the POPIA Regulations .
- 2.12. In signing this addendum that is in terms of the POPIA, the Operator hereby agrees that it has adequate measures in place to provide protection of the personal information and the information of a third party given to it by Transnet in line with the 8 conditions of the POPIA and that it will provide to Transnet satisfactory evidence of these measures whenever called upon to do so by Transnet.

The Operator is required to provide confirmation that all measures in terms of the POPIA are in place when processing personal information and the information of a third party received from Transnet:

YES	
------------	--

NO	
-----------	--

2.13. Further, the Operator acknowledges that it will be held liable by Transnet should it fail to process personal information in line with the requirements of the POPIA. The Operator will be subject to any civil or criminal action, administrative fines or other penalty or loss that may arise as a result of the processing of any personal information that Transnet submitted to it.

2.14. Should a Tenderer have any complaints or objections to processing of its personal information, by Transnet, the Tenderer can submit a complaint to the Information Regulator on <https://www.justice.gov.za/inforeg/>, click on contact us, click on complaints.IR@justice.gov.za

3. SOLE AGREEMENT

3.1. The Agreement, constitute the sole agreement between the parties relating to the subject matter referred to in paragraph 1.1 of this and no amendment/variation/change shall be of any force and effect unless reduced to writing and signed by or on behalf of both parties.

Signed at _____ on this _____ day of _____ 2021

Name: _____

Title: _____

Signature: _____

(Operator)

Authorised signatory for and on behalf of

who warrants that he/she is duly authorised to sign this Agreement.

AS WITNESSES:

1. Name: _____ Signature: _____

2. Name: _____ Signature: _____



BONDS/GUARANTEES/ FINANCIAL/INSURANCE

T2.2-27: Insurance provided by the *Contractor*

Clause 84.1 in NEC3 Engineering & Construction Contract (June 2005)(amended June 2006 and April 2013) requires that the *Contractor* provides the insurance stated in the insurance table except any insurance which the *Employer* is to provide as stated in the Contract Data.

Please provide the following details for insurance which the *Contractor* is still to provide. Notwithstanding this information all costs related to insurance are deemed included in the tenderer's rates and prices.

Insurance against (See clause 84.2 of the ECC)	Name of Insurance Company	Cover	Premium
Liability for death of or bodily injury to employees of the <i>Contractor</i> arising out of and in the course of their employment in connection with this contract			
Motor Vehicle Liability Insurance comprising (as a minimum) "Balance of Third Party" Risks including Passenger and Unauthorised Passenger Liability indemnity with a minimum indemnity limit of R5 000 000/R10 000 000.			
Insurance in respect of loss of or damage to own property and equipment.			
(Other)			

Signed

Date

Name

Position

Tenderer

T2.2-28: Form of Intent to Provide a Performance Guarantee

It is hereby agreed by the Tenderer that a Performance Guarantee drafted **exactly** as provided in the tender documents will be provided by the Guarantor named below, which is a **bank or insurer registered in South Africa**:

Name of Guarantor

(Bank/Insurer)

Address

The Performance Guarantee shall be provided within **2 (Two)** weeks after the Contract Date defined in the contract unless otherwise agreed to by the parties.

Signed

Name

Capacity

On behalf of (name of tenderer)

Date

Confirmed by Guarantor's Authorised Representative

Signature(s)

Name (print)

Capacity

On behalf of Guarantor
(Bank/insurer)

Date

TRANSNET NATIONAL PORTS AUTHORITY - PORT OF EAST LONDON

TENDER NUMBER: TNPA/2025/06/0016/97939/RFP

DESCRIPTION OF GOODS AND SERVICES: SUPPLY, DELIVERY, INSTALLATION, INTEGRATION, TESTING AND COMMISSIONING OF THREE (3) FIRE SUPPRESSION MONITORS AT TANKER BERTH IN THE PORT OF EAST LONDON FOR A PERIOD OF SIX (6) MONTHS

APPROVED TRANSNET GUARANTEE ISSUERS

ABSA BANK LIMITED GROUP

BANK OF AMERICA, N.A

BANK OF CHINA LIMITED GROUP

BARCLAYS BANK PLC GROUP

BESA MEMBERS

BNP PARIBAS GROUP

CHINA CONSTRUCTION BANK GROUP

CITIBANK GROUP

CREDIT SUISSE GROUP

DEUTSCHE BANK GROUP

FIRSTRAND BANK LIMITED GROUP

GOLDMAN SACHS INTERNATIONAL

HSBC HOLDINGS GROUP

INVESTEC BANK LTD

JPMORGAN CHASE BANK GROUP

MORGAN STANLEY

MACQUARIE BANK LIMITED

NEDBANK LTD

SOCIETE GENERALE BANK GROUP

STANDARD BANK GROUP

STANDARD CHARTERED BANK GROUP

AFRICAN BANK LTD

BIDVEST BANK LTD

CAPITEC BANK LTD

DISCOVERY BANK LTD

GRINDROD BANK LTD

ABN AMRO Bank N.V.

BANCO BILBAO VIZCAYA ARGENTARIA S.A

Coöperative Rabobank U.A.

CREDIT AGRICOLE CORPORATE AND INVESTMENT BANK

DANSKE BANK

TRANSNET NATIONAL PORTS AUTHORITY - PORT OF EAST LONDON

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INDUSTRIAL DEVELOPMENT CORPORATION
ING Bank N.V.
KBC BANK
LANDESBANK BADEN-WUERTTEMBERG
MIZUHO BANK, LTD
NATIONAL AUSTRALIA BANK LIMITED
APPROVED TRANSNET GUARANTEE ISSUERS
SKANDINAVISKA ENSKILDA BANKEN
SUMITOMO MITSUI BANKING CORPORATION
SVENSKA HANDELSBANKEN AB
AIG SOUTH AFRICA
CONSTANTIA INSURANCE LTD
CREDIT GUARANTEE INSURANCE CORPORATION
GUARDRISK INSURANCE
HOLLARD INSURANCE COMPANY
INFINITY INSURANCE
LOMBARD INSURANCE GROUP
MUTUAL & FEDERAL
RENASA INSURANCE COMPANY
SANTAM
BRYTE INSURANCE COMPANY LTD
ZURICH INSURANCE PLC



PART C: THE CONTRACT



PART C1: AGREEMENTS AND CONTRACT DATA

C1.1: Form of Offer & Acceptance

Offer

The Employer, identified in the Acceptance signature block, has solicited offers to enter into a contract for the procurement of:

Title of the Contract

The tenderer, identified in the Offer signature block, has

<i>either</i>	examined the documents listed in the Tender Data and addenda thereto as listed in the Returnable Schedules, and by submitting this Offer has accepted the Conditions of Tender.
<i>or</i>	examined the draft contract as listed in the Acceptance section and agreed to provide this Offer.

By the representative of the tenderer, deemed to be duly authorised, signing this part of this Form of Offer and Acceptance the tenderer offers to perform all of the obligations and liabilities of the *Contractor* under the contract including compliance with all its terms and conditions according to their true intent and meaning for an amount to be determined in accordance with the *conditions of contract* identified in the Contract Data.

The offered total of the Prices exclusive of VAT is	R
Value Added Tax @ 15% is	R
The offered total of the Prices inclusive of VAT is	R
(in words)	

This Offer may be accepted by the Employer by signing the Acceptance part of this Form of Offer and Acceptance and returning one copy of this document including the Schedule of Deviations (if any) to the tenderer before the end of the period of validity stated in the Tender Data, or other period as agreed, whereupon the tenderer becomes the party named as the *Contractor* in the *conditions of contract* identified in the Contract Data.

Signature(s)

Name(s)

Capacity

**For the
tenderer:**

Name &
signature of
witness

(Insert name and address of
organisation)

Date

Tenderer's CIDB registration number:

Acceptance

By signing this part of this Form of Offer and Acceptance, the *Employer* identified below accepts the tenderer's Offer. In consideration thereof, the *Employer* shall pay the *Contractor* the amount due in accordance with the *conditions of contract* identified in the Contract Data. Acceptance of the tenderer's Offer shall form an agreement between the *Employer* and the tenderer upon the terms and conditions contained in this agreement and in the contract that is the subject of this agreement.

The terms of the contract, are contained in:

Part C1	Agreements and Contract Data, (which includes this Form of Offer and Acceptance)
Part C2	Pricing Data
Part C3	Scope of Work: Works Information
Part C4	Site Information

and drawings and documents (or parts thereof), which may be incorporated by reference into the above listed Parts.

Deviations from and amendments to the documents listed in the Tender Data and any addenda thereto listed in the Returnable Schedules as well as any changes to the terms of the Offer agreed by the tenderer and the Employer during this process of offer and acceptance, are contained in the Schedule of Deviations attached to and forming part of this Form of Offer and Acceptance. No amendments to or deviations from said documents are valid unless contained in this Schedule.

The tenderer shall within two weeks of receiving a completed copy of this agreement, including the Schedule of Deviations (if any), contact the Employer's agent (whose details are given in the Contract Data) to arrange the delivery of any securities, bonds, guarantees, proof of insurance and any other documentation to be provided in terms of the *conditions of contract* identified in the Contract Data at, or just after, the date this agreement comes into effect. Failure to fulfil any of these obligations in accordance with those terms shall constitute a repudiation of this agreement.

Notwithstanding anything contained herein, this agreement comes into effect on the date when the tenderer receives one fully completed original copy of this document, including the Schedule of Deviations (if any).

TRANSNET NATIONAL PORTS AUTHORITY - PORT OF EAST LONDON

TENDER NUMBER: TNPA/2025/06/0016/97939/RFP

DESCRIPTION OF GOODS AND SERVICES: SUPPLY, DELIVERY, INSTALLATION, INTEGRATION, TESTING AND COMMISSIONING OF THREE (3) FIRE SUPPRESSION MONITORS AT TANKER BERTH IN THE PORT OF EAST LONDON FOR A PERIOD OF SIX (6) MONTHS

Unless the tenderer (now *Contractor*) within five working days of the date of such receipt notifies the Employer in writing of any reason why he cannot accept the contents of this agreement, this agreement shall constitute a binding contract between the Parties.

Signature(s)

Name(s)

Capacity

**for the
Employer**

Transnet SOC Ltd

Name &
signature of
witness

*(Insert name and address of
organisation)*

Date

TRANSNET NATIONAL PORTS AUTHORITY - PORT OF EAST LONDON

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DESCRIPTION OF GOODS AND SERVICES: SUPPLY, DELIVERY, INSTALLATION, INTEGRATION, TESTING AND COMMISSIONING OF THREE (3) FIRE SUPPRESSION MONITORS AT TANKER BERTH IN THE PORT OF EAST LONDON FOR A PERIOD OF SIX (6) MONTHS

Schedule of Deviations

Note:

1. To be completed by the Employer prior to award of contract. This part of the Offer & Acceptance would not be required if the contract has been developed by negotiation between the Parties and is not the result of a process of competitive tendering.
2. The extent of deviations from the tender documents issued by the Employer prior to the tender closing date is limited to those permitted in terms of the Conditions of Tender.
3. A tenderer's covering letter must not be included in the final contract document. Should any matter in such letter, which constitutes a deviation as aforesaid be the subject of agreement reached during the process of Offer and Acceptance, the outcome of such agreement shall be recorded here and the final draft of the contract documents shall be revised to incorporate the effect of it.

No.	Subject	Details
1		
2		
3		
4		
5		

By the duly authorised representatives signing this Schedule of Deviations below, the Employer and the tenderer agree to and accept this Schedule of Deviations as the only deviations from and amendments to the documents listed in the Tender Data and any addenda thereto listed in the Tender Schedules, as well as any confirmation, clarification or changes to the terms of the Offer agreed by the tenderer and the Employer during this process of Offer and Acceptance.

It is expressly agreed that no other matter whether in writing, oral communication or implied during the period between the issue of the tender documents and the receipt by the tenderer of a completed signed copy of this Form shall have any meaning or effect in the contract between the parties arising from this Agreement.

For the tenderer:

For the Employer

Signature

Name

Capacity

On behalf
of

(Insert name and address of organisation)

Transnet SOC Ltd

Name &
signature
of witness

Date

C1.2 Contract Data

Part one - Data provided by the *Employer*

Clause	Statement	Data
1	<p>General</p> <p>The <i>conditions of contract</i> are the core clauses and the clauses for main Option</p>	<p>A: Priced contract with activity schedule</p>
	dispute resolution Option	W1: Dispute resolution procedure
	and secondary Options	
		X3: Multiple currencies
		X7: Delay damages
		X13: Performance Bond
		X16: Retention
		X18: Limitation of liability
		Z: <i>Additional conditions of contract</i>

TRANSNET NATIONAL PORTS AUTHORITY - PORT OF EAST LONDON

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DESCRIPTION OF GOODS AND SERVICES: SUPPLY, DELIVERY, INSTALLATION, INTEGRATION, TESTING AND COMMISSIONING OF THREE (3) FIRE SUPPRESSION MONITORS AT TANKER BERTH IN THE PORT OF EAST LONDON FOR A PERIOD OF SIX (6) MONTHS

of the NEC3 Engineering and
Construction Contract June 2005
(amended June 2006 and April 2013)

10.1 The *Employer* is: **Transnet SOC Ltd**
(Registration No. 1990/000900/30)

Address Registered address:
Transnet National Ports Authority
Port Control Building
Ganteaume Crescent
East London
5201

Having elected its Contractual Address for the purposes of this contract as: **Transnet National Ports Authority**
Port Control Building
Ganteaume Crescent
East London
5201

10.1 The *Project Manager* is: (Name) **Nolonwabo Zamani**

Address **Transnet National Ports Authority**
Port Control Building
Ganteaume Crescent
East London
5201

10.1 The *Supervisor* is: (Name) **Thabiso Ntsala**

Address **Transnet National Ports Authority**
Port Control Building
Ganteaume Crescent
East London
5201

11.2(13)	The <i>works</i> are	SUPPLY, DELIVERY, INSTALLATION, INTEGRATION, TESTING AND COMMISSIONING OF THREE (3) FIRE SUPPRESSION MONITORS AT TANKER BERTH IN THE PORT OF EAST LONDON FOR A PERIOD OF SIX (6) MONTHS	
11.2(14)	The following matters will be included in the Risk Register	The Installation of Fire Monitor's can only take place when there is no Tanker Vessel at the berth.	
11.2(15)	The <i>boundaries of the site</i> are	As stated in Part C4.1. "Description of the Site and it surroundings"	
11.2(16)	The Site Information is in	Part C4	
11.2(19)	The Works Information is in	Part C3	
12.2	The <i>law of the contract</i> is the law of	the Republic of South Africa subject to the jurisdiction of the Courts of South Africa.	
13.1	The <i>language of this contract</i> is	English	
13.3	The <i>period for reply</i> is	Two (2) weeks	
2	The Contractor's main responsibilities	No additional data is required for this section of the <i>conditions of contract</i>.	
3	Time		
11.2(3)	The <i>completion date</i> for the whole of the <i>works</i> is	28 February 2026	
11.2(9)	The <i>key dates</i> and the <i>conditions</i> to be met are:	Condition to be met	key date
		1 Starting date	01 September 2025
		2 Completion date	28 February 2026
30.1	The <i>access dates</i> are	Part of the Site	Date
		1 Whole of the site	01 September 2025
31.1	The <i>Contractor</i> is to submit a first programme for acceptance within	Two (2) weeks of the Contract Date.	
31.2	The <i>starting date</i> is	01 September 2025	
32.2	The <i>Contractor</i> submits revised programmes at intervals no longer than	Two (2) weeks.	

35.1	The <i>Employer</i> is not willing to take over the <i>works</i> before the Completion Date.	
4	Testing and Defects	
42.2	The <i>defects date</i> is	Fifty-two (52) weeks after Completion of the whole of the <i>works</i>.
43.2	The <i>defect correction period</i> is	2 weeks
5	Payment	
50.1	The <i>assessment interval</i> is monthly on the	25th (twenty fifth) day of each successive month.
51.1	The <i>currency of this contract</i> is the	South African Rand.
51.2	The period within which payments are made is	Payment will be effected on or before the last day of the month following the month during which a valid Tax Invoice and Statement were received.
51.4	The <i>interest rate</i> is	the prime lending rate of Rand Merchant Bank of South Africa.
6	Compensation events	
60.1(13)	The <i>weather measurements</i> to be recorded for each calendar month are,	the cumulative rainfall (mm)
		the number of days with rainfall more than 10 mm
		the number of days with minimum air temperature less than 0 degrees Celsius
		the number of days with snow lying at 08:00 hours South African Time
	The place where weather is to be recorded (on the Site) is:	The <i>Contractor's</i> Site establishment area
	The <i>weather data</i> are the records of past <i>weather measurements</i> for each calendar month which were recorded at:	Port of East London

and which are available from:

South African Weather Service 012 367 6023 or info3@weathersa.co.za.

7	Title	No additional data is required for this section of the <i>conditions of contract</i>.
8	Risks and insurance	
80.1	These are additional <i>Employer's</i> risks	None
84.1	The <i>Employer</i> provides these insurances from the Insurance Table	
	1 Insurance against:	Loss of or damage to the <i>works</i>, Plant and Materials is as stated in the Insurance policy for Contract Works/ Public Liability.
	Cover / indemnity:	to the extent as stated in the insurance policy for Contract Works / Public Liability
	The deductibles are:	as stated in the insurance policy for Contract Works / Public Liability
	2 Insurance against:	Loss of or damage to property (except the <i>works</i>, Plant and Materials & Equipment) and liability for bodily injury to or death of a person (not an employee of the <i>Contractor</i>) arising out of or in connection with the performance of the Contract as stated in the insurance policy for Contract Works / Public Liability
	Cover / indemnity	Is to the extent as stated in the insurance policy for Contract Works / Public Liability
	The deductibles are	as stated in the insurance policy for Contract Works / Public Liability
	3 Insurance against:	Loss of or damage to Equipment (Temporary Works only) as stated in the insurance policy for contract Works and Public Liability
	Cover / indemnity	Is to the extent as stated in the insurance policy for Contract Works / Public Liability
	The deductibles are:	As stated in the insurance policy for Contract Works / Public Liability
	4 Insurance against:	Contract Works SASRIA insurance subject to the terms, exceptions and conditions of the SASRIA coupon

Cover / indemnity	Cover / indemnity is to the extent provided by the SASRIA coupon
The deductibles are	The deductibles are, in respect of each and every theft claim, 0,1% of the contract value subject to a minimum of R2,500 and a maximum of R25,000.
Note:	The deductibles for the insurance as stated above are listed in the document titled "Certificate of Insurance: Transnet (SOC) Limited Principal Controlled Insurance."
84.1	<p>The minimum limit of indemnity for insurance in respect of death of or bodily injury to employees of the <i>Contractor</i> arising out of and in the course of their employment in connection with this contract for any one event is</p> <p>The <i>Contractor</i> provides these additional Insurances</p> <p>The <i>Contractor</i> must comply at a minimum with the provisions of the Compensation for Occupational Injuries and Diseases Act No. 130 of 1993 as amended.</p> <ol style="list-style-type: none"> 1 Where the contract requires that the design of any part of the <i>works</i> shall be provided by the <i>Contractor</i> the <i>Contractor</i> shall satisfy the <i>Employer</i> that professional indemnity insurance cover in connection therewith has been affected 2 Where the contract involves manufacture, and/or fabrication of Plant & Materials, components or other goods to be incorporated into the <i>works</i> at premises other than the site, the <i>Contractor</i> shall satisfy the <i>Employer</i> that such plant & materials, components or other goods for incorporation in the <i>works</i> are adequately insured during manufacture and/or fabrication and transportation to the site. 3 Should the <i>Employer</i> have an insurable interest in such items during manufacture, and/or fabrication, such interest shall be noted by endorsement to the <i>Contractor's</i> policies of insurance as well as those of any sub-contractor

		<p>4 Motor Vehicle Liability Insurance comprising (as a minimum) "Balance of Third Party" Risks including Passenger and Unauthorised Passenger Liability indemnity with a minimum indemnity limit of R 5 000 000</p> <p>5 The insurance coverage referred to in 1, 2, 3, 4, above shall be obtained from an insurer(s) in terms of an insurance policy approved by the <i>Employer</i>. The <i>Contractor</i> shall arrange with the insurer to submit to the <i>Project Manager</i> the original and the duplicate original of the policy or policies of insurance and the receipts for payment of current premiums, together with a certificate from the insurer or insurance broker concerned, confirming that the policy or policies provide the full coverage as required. The original policy will be returned to the <i>Contractor</i>.</p>
84.2	The minimum limit of indemnity for insurance in respect of loss of or damage to property (except the works, Plant, Materials and Equipment) and liability for bodily injury to or death of a person (not an employee of the <i>Contractor</i>) caused by activity in connection with this contract for any one event is	Whatever the <i>Contractor</i> requires in addition to the amount of insurance taken out by the <i>Employer</i> for the same risk.
84.2	The insurance against loss of or damage to the works, Plant and Materials as stated in the insurance policy for contract works and public liability selected from:	Principal Controlled Insurance policy for Contract
9	Termination	There is no additional Contract Data required for this section of the <i>conditions of contract</i>.
10	Data for main Option clause	
A	Priced contract with Activity Schedule	No additional data is required for this Option.
11	Data for Option W1	

W1.1	The <i>Adjudicator</i> is	Both parties will agree as and when a dispute arises. If the parties cannot reach an agreement on the <i>Adjudicator</i>, the Chairman of the Association of Arbitrators will appoint an <i>Adjudicator</i>.
W1.2(3)	The <i>Adjudicator nominating body</i> is:	The Chairman of the Association of Arbitrators (Southern Africa)
	If no <i>Adjudicator nominating body</i> is entered, it is:	the Association of Arbitrators (Southern Africa)
W1.4(2)	The <i>tribunal</i> is:	Arbitration
W1.4(5)	The <i>arbitration procedure</i> is	The Rules for the Conduct of Arbitrations of the Association of Arbitrators (Southern Africa)
	The place where arbitration is to be held is	Johannesburg, South Africa
	The person or organisation who will choose an arbitrator	
	- if the Parties cannot agree a choice or	The Chairman of the Association of Arbitrators (Southern Africa)
	- if the arbitration procedure does not state who selects an arbitrator, is	
12	Data for secondary Option clauses	
X3	Multiple Currencies (used only with Options A	
X7	Delay damages	
X7.1	Delay damages for Completion of the whole of the <i>works</i> are	R 540,00 per day
X13	Performance bond	
X13.1	The amount of the performance bond is	5% of the total of the Prices
X16	Retention	
X16.1	The retention free amount is	Nil
	The retention percentage is	10% on all payments certified.
X18	Limitation of liability	

TRANSNET NATIONAL PORTS AUTHORITY - PORT OF EAST LONDON

TENDER NUMBER: TNPA/2025/06/0016/97939/RFP

DESCRIPTION OF GOODS AND SERVICES: SUPPLY, DELIVERY, INSTALLATION, INTEGRATION, TESTING AND COMMISSIONING OF THREE (3) FIRE SUPPRESSION MONITORS AT TANKER BERTH IN THE PORT OF EAST LONDON FOR A PERIOD OF SIX (6) MONTHS

X18.1	The <i>Contractor's</i> liability to the <i>Employer</i> for indirect or consequential loss is limited to:	Nil The deductible of the relevant insurance policy
-------	--	--

X18.2	For any one event, the <i>Contractor's</i> liability to the <i>Employer</i> for loss of or damage to the <i>Employer's</i> property is limited to:	The cost of correcting the Defect
-------	--	--

X18.3	The <i>Contractor's</i> liability for Defects due to his design which are not listed on the Defects Certificate is limited to:	The Total of the Prices
-------	--	--------------------------------

X18.4	The <i>Contractor's</i> total liability to the <i>Employer</i> for all matters arising under or in connection with this contract, other than excluded matters, is limited to:	5 years after Completion of the whole of the works
-------	---	---

X18.5	The <i>end of liability date</i> is	
-------	-------------------------------------	--

Z	<i>Additional conditions of contract are:</i>
----------	--

Z2	Additional clause relating to Performance Bonds and/or Guarantees
-----------	--

Z2.1	<p>The Performance Guarantee under X13 above shall be an irrevocable, on-demand performance guarantee, to be issued exactly in the form of the Pro Forma documents provided for this purpose under C1.3 (Forms of Securities), in favour of the <i>Employer</i> by a financial institution reasonably acceptable to the <i>Employer</i>.</p>
------	---

Z3 Additional clauses relating to Joint Venture

Z3.1

Insert the additional core clause 27.5

27.5. In the instance that the *Contractor* is a joint venture, the *Contractor* shall provide the *Employer* with a certified copy of its signed joint venture agreement, and in the instance that the joint venture is an 'Incorporated Joint Venture,' the Memorandum of Incorporation, within 4 (four) weeks of the Contract Date.

The Joint Venture agreement shall contain but not be limited to the following:

- **A brief description of the Contract and the Deliverables;**
- **The name, physical address, communications addresses and domicilium citandi et executandi of each of the constituents and of the Joint Venture;**
- **The constituent's interests;**
- **A schedule of the insurance policies, sureties, indemnities and guarantees which must be taken out by the Joint Venture and by the individual constituents;**
- **Details of an internal dispute resolution procedure;**
- **Written confirmation by all of the constituents:**
 - i. **of their joint and several liabilities to the *Employer* to Provide the Works;**
 - ii. **identification of the lead partner in the joint venture confirming the authority of the lead partner to bind the joint venture through the *Contractor's* representative;**
 - iii. **Identification of the roles and responsibilities of the constituents to provide the Works.**
- **Financial requirements for the Joint Venture:**
 - iv. **the working capital requirements for the Joint Venture and the**

		<p>extent to which and manner whereby this will be provided and/or guaranteed by the constituents from time to time;</p> <p>v. the names of the auditors and others, if any, who will provide auditing and accounting services to the Joint Venture.</p>
Z3.2		<p>Insert additional core clause 27.6</p> <p>27.6. The <i>Contractor</i> shall not alter its composition or legal status of the Joint Venture without the prior approval of the <i>Employer</i>.</p>
Z4	Additional obligations in respect of Termination	
Z4.1		<p>The following will be included under core clause 91.1:</p> <p>In the second main bullet, after the word 'partnership' add 'joint venture whether incorporate or otherwise (including any constituent of the joint venture)' and</p> <p>Under the second main bullet, insert the following additional bullets after the last sub-bullet:</p> <ul style="list-style-type: none"> • commenced business rescue proceedings (R22) • repudiated this Contract (R23)
Z4.2	Termination Table	<p>The following will be included under core clause 90.2 Termination Table as follows:</p> <p>Amend "A reason other than R1 – R21" to "A reason other than R1 – R23"</p>
Z4.3		<p>Amend "R1 – R15 or R18" to "R1 – R15, R18, R22 or R23."</p>
Z5	Right Reserved by the <i>Employer</i> to Conduct Vetting through SSA	

Z5.1		<p>The <i>Employer</i> reserves the right to conduct vetting through State Security Agency (SSA) for security clearances of any <i>Contractor</i> who has access to National Key Points for the following without limitations:</p> <ol style="list-style-type: none"> 1. Confidential – this clearance is based on any information which may be used by malicious, opposing or hostile elements to harm the objectives and functions of an organ of state. 2. Secret – clearance is based on any information which may be used by malicious, opposing or hostile elements to disrupt the objectives and functions of an organ of state. 3. Top Secret – this clearance is based on information which may be used by malicious, opposing or hostile elements to neutralise the objectives and functions of an organ of state.
Z6	Additional Clause Relating to Collusion in the Construction Industry	
Z6.1		<p>The contract award is made without prejudice to any rights the <i>Employer</i> may have to take appropriate action later with regard to any declared tender rigging including blacklisting.</p>
Z7	Protection of Personal Information Act	
Z7.1		<p>The <i>Employer</i> and the <i>Contractor</i> are required to process information obtained for the duration of the Agreement in a manner that is aligned to the Protection of Personal Information Act.</p>

C1.2 Contract Data

Part two - Data provided by the *Contractor*

The tendering *Contractor* is advised to read both the NEC3 Engineering and Construction Contract - June 2005 (with amendments June 2006 and April 2013) and the relevant parts of its Guidance Notes (ECC3-GN) in order to understand the implications of this Data which the tenderer is required to complete. An example of the completed Data is provided on pages 156 to 158 of the ECC3 Guidance Notes.

Completion of the data in full, according to Options chosen, is essential to create a complete contract.

Clause	Statement	Data
10.1	The <i>Contractor</i> is (Name):	
	Address	
	Tel No.	
	Fax No.	
11.2(8)	The <i>direct fee percentage</i> is	%
	The <i>subcontracted fee percentage</i> is	%
11.2(18)	The <i>working areas</i> are the Site and	
24.1	The <i>Contractor's</i> key persons are:	
	1 Name:	
	Job:	
	Responsibilities:	
	Qualifications:	
	Experience:	
	2 Name:	
	Job	
	Responsibilities:	
	Qualifications:	
	Experience:	
		CV's (and further key persons data including CVs) are appended to Tender Schedule entitled.

11.2(14)	The following matters will be included in the Risk Register			
31.1	The programme identified in the Contract Data is			
A	Priced contract with activity schedule			
11.2(20)	The <i>activity schedule</i> is in	C2, Pricing data		
11.2(30)	The tendered total of the Prices is <div>(in figures)</div> <div>(in words), excluding VAT</div>		
	Data for Schedules of Cost Components	Note "SCC" means Schedule of Cost Components starting on page 60 of ECC, and "SSCC" means Shorter Schedule of Cost Components starting on page 63 of ECC.		
A	Priced contract with activity schedule	Data for the Shorter Schedule of Cost Components		
41 in SSCC	The percentage for people overheads is:	%		
21 in SSCC	The published list of Equipment is the last edition of the list published by			
	The percentage for adjustment for Equipment in the published list is	%		
22 in SSCC	The rates of other Equipment are:	Equipment	Size or capacity	Rate
61 in SSCC	The hourly rates for Defined Cost of design outside the Working Areas are	Category of employee		Hourly rate

TRANSNET NATIONAL PORTS AUTHORITY - PORT OF EAST LONDON

TENDER NUMBER: TNPA/2025/06/0016/97939/RFP

DESCRIPTION OF GOODS AND SERVICES: SUPPLY, DELIVERY, INSTALLATION, INTEGRATION, TESTING AND COMMISSIONING OF THREE (3) FIRE SUPPRESSION MONITORS AT TANKER BERTH IN THE PORT OF EAST LONDON FOR A PERIOD OF SIX (6) MONTHS

62 SSCC	in	The percentage for design overheads is	%
63 SSCC	in	The categories of design employees whose travelling expenses to and from the Working Areas are included in Defined Cost are:	

C1.3 Forms of Securities

Pro forma Performance Guarantee

For use with the NEC3 Engineering & Construction Contract - June 2005 (with amendments June 2006 and April 2013)

The *conditions of contract* stated in the Contract Data Part 1 include the following Secondary Option:

Option X13: Performance bond

The pro forma document for this Guarantee is provided here for convenience but is to be treated as part of the *Works Information*.

The organisation providing the Guarantee does so by copying the pro forma document onto its letterhead without any change to the text or format and completing the required details. The completed document is then given to the *Employer* within the time stated in the contract.

The Performance Bond needs to be issued by an institution that are reasonably acceptable to the *Employer*.

Transnet may choose to not to accept an Issuer. Should the issuer not being accepted, the performance bond needs to be replaced by an issuer that are acceptable to Transnet. Issuers need to be verified for acceptance by Transnet before a performance bond is issued.

Pro-forma Performance Bond (for use with Option X13)*(to be reproduced exactly as shown below on the letterhead of the Surety)*

Transnet SOC Ltd
C/o Transnet National Ports Authority
Transnet Corporate Centre
138 Eloff Street
Braamfontein
Johannesburg
2000

Date:

Dear Sirs,

Performance Bond for Contract No.

With reference to the above numbered contract made or to be made between

Transnet SOC Limited, Registration No. 1990/000900/30(the *Employer*) and**{Insert registered name and address of the *Contractor*}**(the *Contractor*), for**SUPPLY, DELIVERY, INSTALLATION, INTEGRATION, TESTING AND
COMMISSIONING OF THREE (3) FIRE SUPPRESSION MONITORS**(the *works*).

I/We the undersigned

on behalf of the
Guarantor

of physical address

and duly authorised thereto do hereby bind ourselves as Guarantor and co-principal debtors in solidum for the due and faithful performance of all the terms and conditions of the Contract by the *Contractor* and for all losses, damages and expenses that may be suffered or incurred by the *Employer* as a result of non-performance of the Contract by the *Contractor*, subject to the following conditions:

1. The terms *Employer*, *Contractor*, *Project Manager*, *works* and Completion Certificate have the meaning as assigned to them by the *conditions of contract* stated in the Contract Data for the aforesaid Contract.
2. We renounce all benefits from the legal exceptions "Benefit of Excussion and Division", "No value received" and all other exceptions which might or could be pleaded against the validity of this bond, with the meaning and effect of which exceptions we declare ourselves to be fully acquainted.
3. The *Employer* has the absolute right to arrange his affairs with the *Contractor* in any manner which the *Employer* deems fit and without being advised thereof the Guarantor shall not have the right to claim his release on account of any conduct alleged to be prejudicial to the Guarantor. Without derogating from the foregoing compromise, extension of the construction period, indulgence, release or variation of the *Contractor's* obligation shall not affect the validity of this performance bond.

4. This bond will lapse on the earlier of
 - the date that the Guarantor receives a notice from the *Project Manager* stating that the Completion Certificate for the whole of the *works* has been issued, that all amounts due from the *Contractor* as certified in terms of the contract have been received by the *Employer* and that the *Contractor* has fulfilled all his obligations under the Contract, or
 - the date that the Surety issues a replacement Performance Bond for such lesser or higher amount as may be required by the *Project Manager*.
5. Always provided that this bond will not lapse in the event the Guarantor is notified by the *Project Manager*, (before the dates above), of the *Employer's* intention to institute claims and the particulars thereof, in which event this bond shall remain in force until all such claims are paid and settled.
6. The amount of the bond shall be payable to the *Employer* upon the *Employer's* demand and no later than 7 days following the submission to the Guarantor of a certificate signed by the *Project Manager* stating the amount of the *Employer's* losses, damages and expenses incurred as a result of the non-performance aforesaid. The signed certificate shall be deemed to be conclusive proof of the extent of the *Employer's* loss, damage and expense.
7. Our total liability hereunder shall not exceed the sum of:
 (say) _____
 R _____
8. This Performance Bond is neither negotiable nor transferable and is governed by the laws of the Republic of South Africa, subject to the jurisdiction of the courts of the Republic of South Africa

Signed at _____ on this _____ day of _____ 201__

Signature(s)

Name(s) (printed)

Position in Guarantor company

Signature of Witness(s)

Name(s) (printed)



PART C2: PRICING DATA

TRANSNET NATIONAL PORTS AUTHORITY - PORT OF EAST LONDON

TENDER NUMBER: TNPA/2025/06/0016/97939/RFP

DESCRIPTION OF GOODS AND SERVICES: SUPPLY, DELIVERY, INSTALLATION, INTEGRATION, TESTING AND COMMISSIONING OF THREE (3) FIRE SUPPRESSION MONITORS AT TANKER BERTH IN THE PORT OF EAST LONDON FOR A PERIOD OF SIX (6) MONTHS.

PART 2: PRICING DATA

Document reference	Title	No of pages
C2.1	Pricing instructions: Option A	2
C2.2	Activity Schedule	3

C2.1 Pricing Instructions: Option A

1. The *conditions of contract*

1.1. How the contract prices work and assesses it for progress payments

Clause 11 in NEC3 Engineering and Construction Contract, June 2005, (with amendments June 2006 and April 2013) (ECC) Option A states:

Identified and defined terms

11
11.2

(20) The Activity Schedule is the *activity schedule* unless later changed in accordance with this contract.

(22) Defined Cost is the cost of the components in the Shorter Schedule of Cost Components whether work is subcontracted or not excluding the cost of preparing quotations for compensation events.

(27) The Price for Work Done to Date is the total of the Prices for

- each group of completed activities and
- each completed activity which is not in a group

A completed activity is one which is without Defects which would either delay or be covered by immediately following work.

(30) The Prices are the lump sums for each of the activities on the Activity Schedule unless later changed in accordance with this contract.

1.2. Measurement and Payment

1.2.1 The Activity Schedule provides the basis of all valuations of the Price for Work Done to Date, payments in multiple currencies, price adjustments for inflation and general progress monitoring.

1.2.2 The amount due at each assessment date is based on **completed activities and/or milestones** as indicated on the Activity Schedule.

1.2.3 The Activity Schedule work breakdown structure provided by the *Contractor* is based on the Activity Schedule provided by the *Employer*. The activities listed by the *Employer* are the minimum activities acceptable and identify the specific activities which are required to achieve Completion. The activity schedule work breakdown structure is compiled to the satisfaction of the *Project Manager* with any additions and/or amendments deemed necessary.

1.2.4 The *Contractor's* detailed Activity Schedule summates back to the Activity Schedule provided by the *Employer* and is in sufficient detail to monitor completion of activities related to the Accepted Programme in order that payment of completed activities may be assessed.

- 1.2.5 The short descriptions in the Activity Schedule are for identification purposes only. All work described in the Works Information is deemed included in the activities.
- 1.2.6 The Activity Schedule is integrated with the Prices, Accepted Programme and where required the forecast rate of payment schedule.
- 1.2.7 Activities in multiple currencies are separately identified on both the Activity Schedule and the Accepted Programme for each currency.
- 1.2.8 The tendered total of the prices as stated in the Contract Data is obtained from the Activity Schedule summary. The tendered total of the prices includes for all direct and indirect costs, overheads, profits, risks, liabilities and obligations relative to the Contract.

C2.2 Activity Schedule

This pricing data will serve as a formal breakdown of the possible cost that will be incurred in order to do the work for Supply, Delivery, Installation, Integration, Testing and Commissioning of Three (3) Fire Suppression Monitors at Tanker Berth.

Item no	Description	Unit	Quantity	Rate	Price
A.	PRELIMINARY AND GENERAL				
1.1	Fixed Charge Items				
1.1.1	Site Establishment (Site facilities, Living Accommodation, and safety board)	Sum	1		
1.2	Site requirements				
1.2.1	Tools & equipment, Plant etc	Sum	1		
1.3	Safety and Environmental Requirements				
1.3.1	Provision of Personal Protective Equipment and Safety File, Disposal of general waste	Sum	1		
2	Contractual Obligations				
2.1.1	2 sets of Operation and Maintenance Manual on hard copy and Universal Serial Bus (USB)	Sum	1		
2.12	Training of 10 Port personnel on the operation of Fire Suppression Monitor's	Sum	1		
	Total P & Gs "A"				
B.	REMOVAL OF EXISTING MONITOR				
B.1.1	Disconnecting, Removing, Transportation of existing monitor to Engineering Maintenance Department (EMD) workshop, Cleaning of the supply pipe and any other related works to ensure replacement is properly fitted.	Sum	1		

TRANSNET NATIONAL PORTS AUTHORITY - PORT OF EAST LONDON

TENDER NUMBER: TNPA/2025/06/0016/97939/RFP

DESCRIPTION OF GOODS AND SERVICES: SUPPLY, DELIVERY, INSTALLATION, INTEGRATION, TESTING AND COMMISSIONING OF THREE (3) FIRE SUPPRESSION MONITORS AT TANKER BERTH IN THE PORT OF EAST LONDON FOR A PERIOD OF SIX (6) MONTHS.

	Note: EMD is 3 kms away from Site.				
B.1.2	Check Control box for any damage and replace any worn parts	Sum	1		
	Total Cost for "B"				
C.	SUPPLY, DELIVERY, INSTALLATION, INTEGRATION, TESTING AND COMMISSIONING OF THE NEW 4000L/MIN FIRE SUPPRESSION MONITOR'S				
C.1.1	Supply of 4000l/min (flow rate) new fire suppression monitor's as per the specification/ scope of work including all necessary cabling requirements, equipment and materials etc. of the new fire suppression monitor	Each	3		
C.1.2	Delivery of 4000l/min (flow rate) new fire suppression monitor's as per the specification/ scope of work including all necessary cabling requirements, equipment, and materials etc. of the new fire suppression monitor	Sum	1		
C.1.3	Installation of 4000l/min (flow rate) new fire suppression monitor's as per the specification/ scope of work including all necessary cabling requirements, equipment, and materials etc. of the new fire suppression monitor	Each	3		
C.1.4	Integration: Test all connecting cables and replace any faulty cables or hydraulic pipes between the monitor and control box	Sum	1		
C.1.5	Testing and Commissioning of the new 4000l/min (flow rate) fire suppression monitor's as per the specification/scope of work.	Sum	1		
	Total Cost for "C"				

TRANSNET NATIONAL PORTS AUTHORITY - PORT OF EAST LONDON

TENDER NUMBER: TNPA/2025/06/0016/97939/RFP

DESCRIPTION OF GOODS AND SERVICES: SUPPLY, DELIVERY, INSTALLATION, INTEGRATION, TESTING AND COMMISSIONING OF THREE (3) FIRE SUPPRESSION MONITORS AT TANKER BERTH IN THE PORT OF EAST LONDON FOR A PERIOD OF SIX (6) MONTHS.

D.	TOTAL PRICE (EXCLUDING VAT) SUB-TOTAL: A+B+C				
E.	ADD 15% VAT (If Applicable)				
F.	TOTAL PRICE (INCLUDING VAT)				
	N.B TOTAL PRICE TO BE CARRIED OVER TO THE FORM OF OFFER & ACCEPTANCE				

PART C3: SCOPE OF SPECIFICATION

Document reference	Title: Supply, Delivery, Installation, Integration, Testing and Commissioning of Three (3) Fire Suppression Monitors at Tanker Berth in the Port of East London	No of page
C3.1	This cover page	1
C3.2	<i>Employer's Works Information</i>	34
	<i>Contractor's Works</i>	0
	Total number of pages	35

C3.1 EMPLOYER'S WORKS INFORMATION

Contents

PART C3: SCOPE OF WORK	1
SECTION 1.....	4
1 DESCRIPTION OF THE <i>WORKS</i>	4
1.1 Executive Overview	4
1.2 <i>Employer's</i> Objectives	4
1.3 Scope of the <i>Works</i>	4
1.4 Interpretation and Terminology	5
2 ENGINEERING AND THE <i>CONTRACTOR'S</i> DESIGN.....	7
2.1 <i>Employer's</i> Design.....	7
2.2 Parts of the <i>Works</i> which the <i>Contractor</i> is to Design	8
2.3 Procedure for submission and acceptance of <i>Contractor's</i> design	8
2.4 Review and Acceptance of <i>Contractor</i> Documentation	8
2.5 Other Requirements of the <i>Contractor's</i> Design.....	8
2.6 Use of <i>Contractor's</i> Design.....	8
2.7 Design of Equipment	9
2.8 Equipment Required to be Included in the <i>Works</i>	9
2.9 Operating Manuals, Procedures, and Maintenance Schedules	9
3 CONSTRUCTION	10
3.1 Temporary <i>Works</i> , Site Services & Construction Constraints.....	10
3.2 Completion, Testing, Commissioning, and Correction of Defects.....	16
4 PLANT AND MATERIALS STANDARDS AND WORKMANSHIP	19
SECTION 2.....	20
5 MANAGEMENT AND START-UP	20
5.1 Management Meetings	20
5.2 Documentation Control.....	20
5.2.1 Documents Submissions	20
5.2.2 Drawings Format and Layout	21
5.2.3 Health and Safety Risk Management.....	21
5.2.4 Health and Safety Obligations	22
5.2.5 Fire Protection.....	22

TRANSNET NATIONAL PORTS AUTHORITY - PORT OF EAST LONDON

TENDER NUMBER: TNPA/2025/06/0016/97939/RFP

DESCRIPTION OF GOODS AND SERVICES: SUPPLY, DELIVERY, INSTALLATION, INTEGRATION, TESTING AND COMMISSIONING OF THREE (3) FIRE SUPPRESSION MONITORS AT TANKER BERTH IN THE PORT OF EAST LONDON FOR A PERIOD OF SIX (6) MONTHS

5.2.6	Environmental Constraints and Management	23
5.2.7	Quality Assurance Requirements	24
5.2.7.1	General.....	24
5.2.7.2	Quality Management Documents Requirements.....	24
5.2.7.3	Quality Responsibility	25
5.2.7.4	Inspections	25
5.2.7.5	Non-Conformances and Defects	25
5.2.7.6	Preservation, Shipping, and Transportation to be Addressed	25
5.3	Programming Constraints	26
5.3.1	Planning and Scheduling Levels.....	26
5.3.2	Planning Programme	27
5.3.3	Procurement and Manufacturing Programme.....	27
5.3.4	Construction and Installation Programme.....	27
5.3.5	Commissioning Programme	27
5.4	<i>Contractor's</i> Management, Supervision, and Key People	28
5.5	Training <i>Workshops</i> and Technology Transfer	28
5.6	Insurance Provided by The <i>Employer</i>	28
5.7	Contract Change Management	28
5.8	Provision of Bonds and Guarantees	29
5.9	The <i>Contractor's</i> Invoices	29
5.10	People.....	29
5.10.1	Minimum Requirements of People Employed On The Site.....	29
5.10.2	<i>Contractor</i> Liability	29
5.10.3	Industrial Action by <i>Contractor</i> Employees	30
5.11	Plant and Materials.....	30
5.12	Tests And Inspections Before Delivery	31
5.13	Site Acceptance Test (SAT).....	31

TRANSNET NATIONAL PORTS AUTHORITY - PORT OF EAST LONDON

TENDER NUMBER: TNPA/2025/06/0016/97939/RFP

DESCRIPTION OF GOODS AND SERVICES: SUPPLY, DELIVERY, INSTALLATION, INTEGRATION, TESTING AND COMMISSIONING OF THREE (3) FIRE SUPPRESSION MONITORS AT TANKER BERTH IN THE PORT OF EAST LONDON FOR A PERIOD OF SIX (6) MONTHS

SECTION 1

1 DESCRIPTION OF THE *WORKS*

1.1 Executive Overview

The Tanker Berth is situated at the West Bank precinct of the Port of East London. The berth forms part of a critical infrastructure asset responsible for handling large quantities of highly flammable petroleum products and gases to the oil industry in the region. The berth has a firefighting system, initially upgraded in the 2015/16 financial to provide readiness and firefighting capabilities, to safeguard personnel, infrastructure, vessels, and the environment in the event of a fire emergency. It comprises diesel and electrical driving pumps, a steel pipe water network, a foam pump and tanks, a booster pump, deluge valves, solenoid valves, three (3) fire monitors that are elevated by concrete towers, and a control panel with electrical connections.

The fire monitors are currently experiencing frequent mechanical failures which compromises the reliability of the firefighting system. Two of the three fire monitors have problems with worn-out brass gears, which have resulted in the failure of the monitors to axially rotate as required for good firefighting capabilities. To replace the brass gears, all monitors have to be taken out of service for custom design, manufacturing, and replacement, with an estimated time of repair of up to 2 months. To restore the reliability and availability of the firefighting system, a complete replacement of all the fire monitors is required, including all necessary cabling and equipment.

1.2 *Employer's Objectives*

The objective and purpose of the *Works* is to provide a safe and reliable infrastructure for port operations, by implementing the complete replacement of the Three (3) Fire Monitors to provide a firefighting system that conforms to all Transnet, industry standards, and code of practice.

1.3 Scope of the *Works*

The scope of the *Works* includes dismantling, procurement, delivery to the Port of East London, installation, site testing, and commissioning of the new Fire Monitors while maintaining quality control over the *Works* to ensure a fully functional firefighting system.

The *Works* include the following:

1.3.1 Site Establishment

- a) The *Contractor* is expected to inspect the Working Area and assess the sequence of the execution of activities for the *Works*.
- b) The *Contractor* is permitted to establish his Working Area at the Tanker Berth, where the execution of *Works* will be done.

1.3.2 Removal/Dismantling of Existing Fire Fighting Monitors and make good to receive new firefighting monitors.

TRANSNET NATIONAL PORTS AUTHORITY - PORT OF EAST LONDON

TENDER NUMBER: TNPA/2025/06/0016/97939/RFP

DESCRIPTION OF GOODS AND SERVICES: SUPPLY, DELIVERY, INSTALLATION, INTEGRATION, TESTING AND COMMISSIONING OF THREE (3) FIRE SUPPRESSION MONITORS AT TANKER BERTH IN THE PORT OF EAST LONDON FOR A PERIOD OF SIX (6) MONTHS

- a) Disconnecting, Removing, and transporting of existing three monitors to the (EMD) *Workshop*. Cleaning of the supply pipe and any other related *Works* to ensure replacement is properly fitted. N:B; EMD is 3 km away from the site.
- b) Test all connecting cables and replace any faulty cables or hydraulic oil pipes between the monitor and control box.
- c) Check the control box for any damage and replace any worn parts.

1.3.3 Supply, Delivery, Installation Testing, and Commissioning of the Three New 4000L/min Fire Suppression Monitor.

- a) Supply and delivery of 4000l/min (flow rate) new fire suppression monitors as per the specification/ scope of work including all necessary cabling requirements, equipment, materials, etc. of the new fire suppression monitors.
- b) Installation of 4000l/min (flow rate) new fire suppression monitors as per the specification/ scope of work including all necessary cabling requirements, equipment, materials, etc. of the new fire suppression monitor
- c) Testing and Commissioning of the new 4000l/min (flow rate) fire suppression monitors.
- d) Provision of maintenance manuals for the firefighting monitors
- e) Provision of a priced list for critical spare parts of the monitors.

1.4 Interpretation and Terminology

The following abbreviations are used in this *Works Information*:

Abbreviation	Meaning given to the abbreviation
AIA	Authorised Inspection Authority
BBBEE	Broad-Based Black Economic Empowerment
CEMP	Construction Environmental Management Plan
CD	Compact Disc
CDR	<i>Contractor</i> Documentation Register
CDS	<i>Contractor</i> Documentation Schedule
CRL	<i>Contractor</i> Review Label
CSHEO	<i>Contractor's</i> Safety, Health and Environmental Officer
CM	Construction Manager
DTI	Department of Trade and Industry
DGN
DWG	Drawings
EDMS
EO	Environmental Officer
HAW	Hazard Assessment <i>Workshop</i>
HAZOP	Hazard and Operability Study

TRANSNET NATIONAL PORTS AUTHORITY - PORT OF EAST LONDON

TENDER NUMBER: TNPA/2025/06/0016/97939/RFP

DESCRIPTION OF GOODS AND SERVICES: SUPPLY, DELIVERY, INSTALLATION, INTEGRATION, TESTING AND COMMISSIONING OF THREE (3) FIRE SUPPRESSION MONITORS AT TANKER BERTH IN THE PORT OF EAST LONDON FOR A PERIOD OF SIX (6) MONTHS

HSSP	Health and Safety Surveillance Plan
INC	Independent Nominated Consultant
IP	Industrial Participation
IR	Industrial Relations
IPP	Industrial Participation Policy
IPO	Industrial Participation Obligation
IPS	Industrial Participation Secretariat
IRCC	Industrial Relations Co-ordinating Committee
JSA	Job Safety Analysis
CIRP	<i>Contractor's</i> Industrial Relations Practitioner
Native	Original electronic file format of documentation
PES	Project Environmental Specifications
PHA	Preliminary Hazard Assessment
PIRM	Project Industrial Relations Manager
PIRPMP	Project Industrial Relations Policy and Management Plan
PLA	Project Labour Agreements
PSIRM	Project Site Industrial Relations Manager
PSPM	Project Safety Program Manager
PSSM	Project Site Safety Manager
ProgEM	Programme Environmental Manager
ProjEM	Project Environmental Manager
QA	Quality Assurance
R&D	Research and Development
SANS	South African National Standards
SASRIA	South African Special Risks Insurance Association
SES	Standard Environmental Specification
SHE	Safety, Health and Environment
SHEC	Safety, Health and Environment Co-ordinator
SIP	Site Induction Programme
SMP	Safety Management Plan
SSRC	Site Safety Review Committee

TRANSNET NATIONAL PORTS AUTHORITY - PORT OF EAST LONDON

TENDER NUMBER: TNPA/2025/06/0016/97939/RFP

DESCRIPTION OF GOODS AND SERVICES: SUPPLY, DELIVERY, INSTALLATION, INTEGRATION, TESTING AND COMMISSIONING OF THREE (3) FIRE SUPPRESSION MONITORS AT TANKER BERTH IN THE PORT OF EAST LONDON FOR A PERIOD OF SIX (6) MONTHS

2 ENGINEERING AND THE *CONTRACTOR'S* DESIGN

2.1 *Employer's* Design

2.1.1 The Supplied Fire Monitors Must Conform to the Following Specifications:

Hydraulic Fire Suppression Monitor:

- Must be able to handle Operating pressure of 5 to 16 bar.
- Must be able to handle Test pressure of up to 24 bar.
- Must be able to operate at a flow rate of 4000 L/min.
- Must have a 360 Horizontal rotation.
- Must have a +90 and -650 Vertical rotation.
- Must have a corrosion-resistant bronze body, inlet, and outlet flange.
- Must have water/foam branch pipe.
- Must have all components for connecting the electrical operating box.
- Waterway internal diameter of no less than 115mm.
- Must have stainless steel ball bearings and grease fittings.
- Must have handwheels for manual horizontal and vertical rotation control, worm screw, and helical wheel type.
- Finish with polyurethane paint, RAL 3000 red.

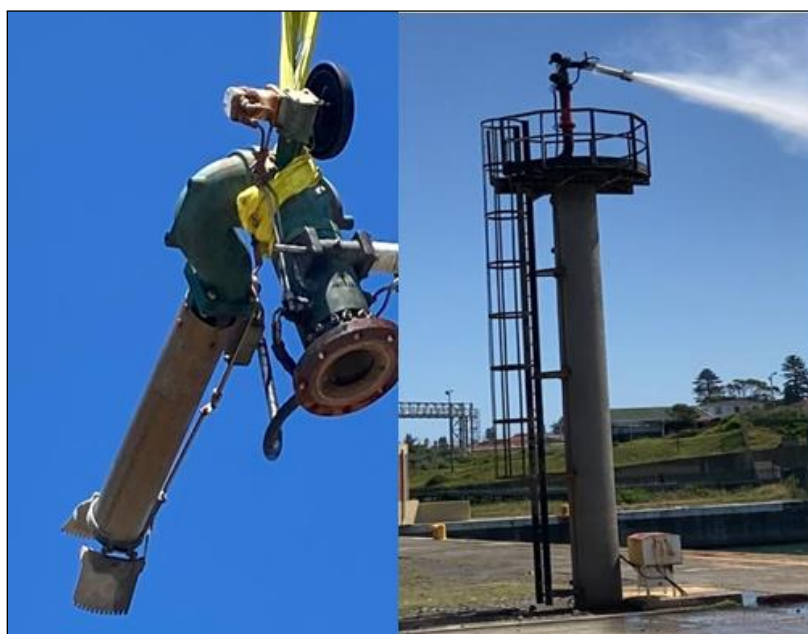


Figure 1: Existing Fire Monitors with Branch and in Operation

TRANSNET NATIONAL PORTS AUTHORITY - PORT OF EAST LONDON

TENDER NUMBER: TNPA/2025/06/0016/97939/RFP

DESCRIPTION OF GOODS AND SERVICES: SUPPLY, DELIVERY, INSTALLATION, INTEGRATION, TESTING AND COMMISSIONING OF THREE (3) FIRE SUPPRESSION MONITORS AT TANKER BERTH IN THE PORT OF EAST LONDON FOR A PERIOD OF SIX (6) MONTHS

2.2 Parts of the *Works* which the *Contractor* is to Design

The *Contractor* is to design the following parts of the *Works*:

- Temporary *Works*; and
- All other items required for the *Works*

As stated under 2.1 *Employer's* design above, the *Contractor* is responsible for integrating the *Works*' design with the *Employer's* design in his design.

Unless expressly stated to form part of the design responsibility of the *Employer* as stated under 2.1 *Employer's* design above and whether or not specifically stated to form part of the design responsibility of the *Contractor* under this paragraph 2.2, all residual design responsibility and overall responsibility for the total design solution for the *Works* rests with the *Contractor*.

2.3 Procedure for submission and acceptance of *Contractor's* design

The *Contractor* undertakes design safety reviews with the *Project Manager* and/or other defined personnel. In undertaking the '*Works*' (including all incidental services required), the Supplier shall conform and adhere to the requirements of the *Employer's Works Information*.

2.4 Review and Acceptance of *Contractor* Documentation

The *Contractor* submits documentation as the '*Works Information*' requires to the *Project Manager* for review and acceptance. In undertaking the '*Works*' (including all incidental services required), the *Contractor* shall conform and adhere to the requirements of the *Employer's Works Information*.

2.5 Other Requirements of the *Contractor's* Design

Changes made to the *Employer's* design and installation specification are to be reviewed and approved by the *Project Manager*.

2.6 Use of *Contractor's* Design

The *Contractor* grants the *Employer* a license to use the copyright in all design data presented to the *Employer* in relation to the *Works* for any purpose in connection with the construction, reconstruction, refurbishment, repair, maintenance, and extension of the *Works* with such license being capable of transfer to any third party without the consent of the *Contractor*.

The *Contractor* vests in the *Employer's* full title guarantee in the intellectual property and copyright in the design data created in relation to the *Works*.

TRANSNET NATIONAL PORTS AUTHORITY - PORT OF EAST LONDON

TENDER NUMBER: TNPA/2025/06/0016/97939/RFP

DESCRIPTION OF GOODS AND SERVICES: SUPPLY, DELIVERY, INSTALLATION, INTEGRATION, TESTING AND COMMISSIONING OF THREE (3) FIRE SUPPRESSION MONITORS AT TANKER BERTH IN THE PORT OF EAST LONDON FOR A PERIOD OF SIX (6) MONTHS

2.7 Design of Equipment

The *Contractor* submits his design details for all temporary *Works* and plant. The *Contractor* ensures that his Equipment is safe and that it complies fully with the applicable statutory requirements including the relevant provisions of the Construction Regulations.

2.8 Equipment Required to be Included in the *Works*

- a) The *Contractor* supplies and delivers all equipment, plant and materials, design drawings, labour, tools, consumables, storage facilities accommodation, and anything deemed necessary to provide the *Works*.
- All measuring and calibration equipment used by the *Contractor* to Provide the *Works* are provided with a SANAS (South African National Accreditation System) Calibration Laboratory test certificate.
 - The *Contractor* supplies all special or dedicated test Equipment for testing, commissioning, fault finding, and maintenance of individual modules, sub-assemblies, and functional groups as part of the requisite criteria for Completion of the section of the *Works*.
 - The *Contractor*, furthermore, describes the operation and use of the equipment in the relevant operating, maintenance, and training manuals.

2.9 Operating Manuals, Procedures, and Maintenance Schedules

All documentation, including reports, manuals, etc., must be in English. The *Contractor* must also supply documentation required by standards referenced within the *Employer's Works Information*.

2.9.1 Operating and Maintenance Manual

- a) The *Contractor* provides operating and maintenance manuals, as well as an Operating Technical Specification for the new Fire Monitors.
- b) Technical manuals include all technical data as well as the technical data and leaflets of each component used provided. Where generic manuals will not be accepted.
- c) Manuals are of good quality and cover the following as a minimum:
- Technical descriptions of the equipment and parts
 - General arrangement drawings
 - Installation instructions with drawings or pictures
 - Operating and maintenance instructions for all components
 - Detailed parts lists (accompanied by exploded view type drawings clearly detailing the part and uniquely identifying it)
 - Spare part ordering instructions
- d) Any special instructions pertaining to the storage of spare parts, or their shelf life are included in the maintenance manual. All drawings requested for component location, dismantling, and re-assembly for maintenance are included in the maintenance manual. All special tools required for the operation and maintenance of the equipment are presented in the form of a schedule in the

TRANSNET NATIONAL PORTS AUTHORITY - PORT OF EAST LONDON

TENDER NUMBER: TNPA/2025/06/0016/97939/RFP

DESCRIPTION OF GOODS AND SERVICES: SUPPLY, DELIVERY, INSTALLATION, INTEGRATION, TESTING AND COMMISSIONING OF THREE (3) FIRE SUPPRESSION MONITORS AT TANKER BERTH IN THE PORT OF EAST LONDON FOR A PERIOD OF SIX (6) MONTHS

operating and maintenance manual, respectively. The content of the training manual is based on the content of the technical, operating, and maintenance manuals.

- e) The *Contractor* provides 3 hard copies and an electronic copy.
- f) The manuals will enable staff to operate and understand the equipment and systems and to utilize the equipment to its full extent.

2.9.2 Procedures

- a) The procedures are provided by the original equipment manufacturer detailing descriptions of operating and maintenance work. The procedure covers the requirements for maintenance of the equipment over the design life.
- b) Engineering, maintenance, and operating procedures are developed by the *Contractor* and accepted by the *Project Manager*.
- c) Maintenance procedures should inform maintenance staff of how to maintain the fire monitors and related equipment. Operating procedures should inform operators of how to respond to faults and fire conditions.
- d) Procedures have to be step-by-step and detailed.

2.9.3 Maintenance Schedule

- a) The *Contractor* submits a detailed maintenance plan that defines the extent and frequency of maintenance and inspections that are carried out on each fire monitor and related equipment by others during the Performance Period to enable the *Contractor* to achieve the reliability target. The plan also details the replacement parts required and at what interval they are replaced during the period.
- b) The *Contractor* provides a maintenance strategy for the life expectancy of the new monitors with a summary schedule.
- c) The *Contractor* provides the life expectancy of the equipment.
- d) The *Contractor* lists maintenance spares (with detailed specifications) for the life expectancy of the equipment.

3 CONSTRUCTION

3.1 Temporary Works, Site Services & Construction Constraints

3.1.1 Employer's Site Entry and Security Control, Permits, and Site Regulations

The *Contractor* complies with the following requirements of the *Employer*:

- a) Access to the site is controlled and it is governed by the terms and conditions lay down by the Port of East London security department. The proposed site will be shown to the *Contractor* during the site meeting or clarification meeting by the *Employer*.
- b) The *Contractor* will be required to register as a *Contractor* with the *Employer's* security department located within the port premises. The *Contractor* will be required to submit a list of names and ID copies for all employees/staff including *Subcontractors* requiring access to the Site. Upon receiving this list, the *Employer's* security department will issue access permits to the

TRANSNET NATIONAL PORTS AUTHORITY - PORT OF EAST LONDON

TENDER NUMBER: TNPA/2025/06/0016/97939/RFP

DESCRIPTION OF GOODS AND SERVICES: SUPPLY, DELIVERY, INSTALLATION, INTEGRATION, TESTING AND COMMISSIONING OF THREE (3) FIRE SUPPRESSION MONITORS AT TANKER BERTH IN THE PORT OF EAST LONDON FOR A PERIOD OF SIX (6) MONTHS

Contractor which will be valid for the duration of the contract. The *Contractor* will be required to always have these access permits on hand to gain access at each security checkpoint.

- c) The *Contractor's* and his/her *Subcontractors* will be granted access which will be limited only to the Site where the *Works* will be carried out. Access to other areas where port operation is active will require approval from the *Project Manager*. The *Contractor* will be required to notify the *Project Manager* within 24 hours prior.
- d) The *Employer* has zero tolerance on any safety related incidents. The *Contractor's* staff shall not be allowed to access the Site if any of his staff has tested positive for alcohol consumption or drug use. This is a daily routine done by the *Employer* to all port users including *Contractors*, *Subcontractors*, suppliers, etc.

3.1.2 People Restrictions on Site; Hours of Work, Conduct and Records:

The *Contractor* complies with the following requirements of the *Employer*:

- a) Restrictions and hours of work may apply at the Port. The *Contractor* keeps records of his people on Site, including those of his *Subcontractors* which the *Project Manager* or Supervisor have access to at any time. These records may be required when assessing compensation events.

3.1.3 Cooperating with and Obtaining Acceptance of Others

The *Contractor* complies with the following requirements of the *Employer*:

- a) Other *Contractors* may be working in the same area as the *work* of this contract. In this regard, the *Contractor* coordinates his work with the *Project Manager* to maintain harmonious working conditions on Site.
- b) During the progress of the *Works* the *Contractor* provides access to Others who also execute *work* in the same area, on an as and when required basis.
- c) The *Contractor* makes his own assessment of the problems and difficulties that may be encountered in providing access to and interfacing with Others (this includes access difficulties experienced during the construction or commissioning phase).

3.1.4 Health and Safety Facilities on Site

The *Contractor* complies with the following requirements of the *Employer*:

- a) The *Contractor* complies with the Occupational Health and Safety Act, 1993 as amended: Construction Regulations, 2014 (the regulations) as promulgated in Government Gazette No 37305 and Regulation Gazette No 10113 of 7 February 2014. Non-compliance with these regulations, in any way whatsoever, will be an adequate reason for stopping the *Works*.
- b) The *Contractor*, in terms of Regulation 7(1)(a) provides a comprehensive health and safety plan detailing his proposed compliance with the regulations. The Health and Safety Management Plan must provide a systematic method of managing hazards and implementing control measures. The Health and Safety Plan is to be accompanied by a Letter of Good Standing.
- c) The *Contractor* prepares and submits the SHE file to the *Employer's* Health and Safety Practitioner for review and approval prior to acceptance by the *Project Manager* and starting with the *Works*.

TRANSNET NATIONAL PORTS AUTHORITY - PORT OF EAST LONDON

TENDER NUMBER: TNPA/2025/06/0016/97939/RFP

DESCRIPTION OF GOODS AND SERVICES: SUPPLY, DELIVERY, INSTALLATION, INTEGRATION, TESTING AND COMMISSIONING OF THREE (3) FIRE SUPPRESSION MONITORS AT TANKER BERTH IN THE PORT OF EAST LONDON FOR A PERIOD OF SIX (6) MONTHS

- d) The *Contractor* shall always be responsible for full compliance with the approved plan as well as the Construction Regulations, and no extension of time will be considered for delays due to non-compliance with the abovementioned plan or regulations.
- e) The *Contractor* ensures that his *Subcontractors* comply with the requirements of the *Contractor's* Health and Safety Management Plan (CHSMP).

3.1.5 Environmental Controls, Fauna & Flora, Dealing with Objects of Historical Interest

The *Contractor* complies with the following requirements of the *Employer*:

- a) The *Contractor* complies with the Construction Environmental Management Plan (CEMP), *Employer's* Standard Environmental Specification (SES) in the construction of the *Works* in matters dealing with environmental controls, fauna & flora dealing with objects of historical interest.
- b) The *Contractor* shall in terms of the Waste Management Act submit a waste management plan to the client. During construction work, the *Contractor* shall ensure that waste is properly stored. The *Contractor* ensures that all the waste generated during construction *Works* is taken out of the Port and properly disposed of in a manner that complies with the National Environmental Management: Waste Act 2008 (Act 59 of 2008).

3.1.6 Publicity and Progress Photographs

The *Contractor* complies with the following requirements of the *Employer*:

- a) The taking of photographs at the Port including the Project *Works* is restricted and subject to the approval by the *Project Manager*.
- b) For the purpose of the Progress Reporting Requirements, the *Project Manager* may prohibit the taking of such photographs and/or require that all such photographs be taken by an official *Employer* photographer. In the latter event, the *Contractor* is required to make arrangements directly with the photographer for the taking of the photographs required by the *Contractor* for the purpose of the Progress Reporting Requirements.
- c) The *Contractor* does not advertise the contract or the project to any third party, nor communicate directly with the media (in any jurisdiction) whatsoever without the express written notification and consent of the *Project Manager*.

3.1.7 Contractor's Equipment

- a) The *Contractor* provides all Equipment that is required to complete the *Works*.
- b) The *Contractor's* Equipment does not impair the operation or access to the Tanker Berth.
- c) The *Contractor* keeps daily records of his *Equipment* used on Site and the Working Areas (distinguishing between owned and hired Equipment) with access to such daily records available for inspection by the *Project Manager* at all reasonable times.
- d) The *Contractor* provides of all, or any temporary or expendable materials required for the storage of material.

3.1.8 Equipment Provided by the Employer

- a) No equipment is provided by the *Employer* for the execution of the *Works*.

TRANSNET NATIONAL PORTS AUTHORITY - PORT OF EAST LONDON

TENDER NUMBER: TNPA/2025/06/0016/97939/RFP

DESCRIPTION OF GOODS AND SERVICES: SUPPLY, DELIVERY, INSTALLATION, INTEGRATION, TESTING AND COMMISSIONING OF THREE (3) FIRE SUPPRESSION MONITORS AT TANKER BERTH IN THE PORT OF EAST LONDON FOR A PERIOD OF SIX (6) MONTHS

3.1.9 Site Services and Facilities:

3.1.9.1 Site Office

- a) **Where required**, and for the proper coordination and execution of the *Works*, the *Contractor* shall erect a site office for the duration of the contract.
- b) A site will be made available to the *Contractor* for his site office within the Port area. The proposed site will be shown to the *Contractor* during site meeting or clarification meeting. The site office will be used by the *Contractor* for the establishment of his offices, *Workshop*, and stores.
- c) The *Contractor's* site office is subject to periodic inspection by the *Project Manager*/delegated person.
- d) The location of the nearest sewer manhole, power distribution point, portable water connection, storm water channel and road access point shall be indicated by the *Employer*. The *Contractor* is responsible for connection to the closest point of supply.

3.1.9.2 Supply of Electricity

- a) Electricity will be made available for construction purposes from power points which will be indicated by the *Project Manager*. The *Contractor* is responsible for the provision of the reticulation system from the point of supply. All points of supply requested by the *Contractor* are provided in terms of quantity and location at the discretion of the *Project Manager*.
- b) No guarantees of power supply quality are given, and power supply breaks of some duration may occur without warning. Planned outages are also a possibility. The *Contractor* makes arrangements at his own expense to improve continuity and quality of power where necessary for any reason and no claim of any nature relating to power failures is considered.

3.1.9.3 Lighting

- a) The *Contractor* at his own expense provides temporary local lighting in accordance with the requirements of the OHS Act as amended. The *Project Manager* provides no local lighting. All construction lighting is the responsibility of the *Contractor*.

3.1.9.4 Water

- a) Water will be made available on request from water points on site.
- b) The *Project Manager* does not guarantee continuity of supply and the *Contractor* makes his own provision for standby supplies to maintain continuity of work.
- c) Claims of any nature relating to the discontinuity of water supply are not considered.

3.1.9.5 Roads

- a) Main access roads are surfaced and complete and may be used by the *Contractor* with the necessary care. The *Employer* maintains the Site roads, described above, to a fair condition. Any costs incurred by the *Project Manager* from damage caused to underground services, structures, etc. as a result of the *Contractor* not using the prescribed routes are recovered from the *Contractor*.

TRANSNET NATIONAL PORTS AUTHORITY - PORT OF EAST LONDON

TENDER NUMBER: TNPA/2025/06/0016/97939/RFP

DESCRIPTION OF GOODS AND SERVICES: SUPPLY, DELIVERY, INSTALLATION, INTEGRATION, TESTING AND COMMISSIONING OF THREE (3) FIRE SUPPRESSION MONITORS AT TANKER BERTH IN THE PORT OF EAST LONDON FOR A PERIOD OF SIX (6) MONTHS

N:B. Wherever the *Employer* provides facilities (including, inter alia, temporary power, water, waste disposal, telecommunications etc) for the *Contractor's* use within the Working Areas and the *Contractor* adapts such facilities for use, then the *Contractor* makes good and provides full reinstatement to the land (including all apparatus of the *Employer* and Others in, on or under the land) and surrounding areas to its original standard upon dismantling of such facilities and hand-back to the *Employer*.

3.1.10 Facilities Provided by The *Contractor*:

Where required, for the proper co-ordination and execution of the *Works*, the *Contractor* has an office on Site for the duration of the contract.

- a) The *Contractor* complies with the environmental policy given in the Site Regulations. The *Contractor* provides, erects, and maintains for his own use adequate size office accommodation and stores together with such drainage, lighting, heating, and hot and cold-water services as may be required. Provision is also made for adequate parking and a turning area adjacent to all the aforesaid structures. The Supervisor prior to the commencement of any *work* on Site accepts all designs and layouts for these provisions.
- b) The *Contractor* dismantles and clears the yard of all such temporary structures and associated foundations and infrastructure at the direction of the Supervisor on Completion of the whole of the *Works*. No such dismantling and clearance work is carried out without prior acceptance from the Supervisor.
- c) The *Contractor* makes good and provides full reinstatement to the land (including all apparatus of the *Employer* and Others in, on or under the land) and surrounding areas to its original standard, upon dismantling of such facilities and items of Equipment.
- d) Unless expressly stated as a responsibility of the *Employer* as stated under Site services and facilities, all residual requirements for the provision of facilities and all items of Equipment necessary for the *Contractor* to Provide the *Works* remains the responsibility of the *Contractor*.

3.1.11 Existing Premises, Inspection of Adjoining Properties, and Checking Work of Others

The *Contractor* complies with the following requirements of the *Employer*:

- a) The *Contractor* is required to inspect the work of Others to which he is required to interface. The *Contractor* identifies all interfaces with Others. The *Contractor* submits an interface plan to the *Project Manager* to ensure no delay on his part.
- b) The *Contractor* is responsible for keeping the *Contractor's* personnel out of areas not designated for the *Contractor's* use, except, in the case of isolated work located within such areas for which the *Contractor* is authorized to do so.

3.1.12 Survey Control and Setting Out of the *Works*

The *Contractor* complies with the following requirements of the *Employer*:

- a) The *Project Manager* designates the working area boundary limits and assigns for the *Contractor's* use access roads, parking areas, storage areas, existing facilities areas, and construction areas. The *Contractor* does not trespass in or on areas not designated for his work.

TRANSNET NATIONAL PORTS AUTHORITY - PORT OF EAST LONDON

TENDER NUMBER: TNPA/2025/06/0016/97939/RFP

DESCRIPTION OF GOODS AND SERVICES: SUPPLY, DELIVERY, INSTALLATION, INTEGRATION, TESTING AND COMMISSIONING OF THREE (3) FIRE SUPPRESSION MONITORS AT TANKER BERTH IN THE PORT OF EAST LONDON FOR A PERIOD OF SIX (6) MONTHS

3.1.13 Excavations, Drilling, and Associated Water Control

The *Contractor* complies with the following requirements of the *Employer*:

- a) The *Contractor* will require an excavation permit before any excavation can be done or undertaken.
- b) All drilling is the responsibility of the *Contractor*.

3.1.14 Barricading

- a) Access to danger zones is restricted using danger tape type guards of at least 1 meter high and able to block access to the danger zone.

3.1.15 Housekeeping

The *Contractor* complies with the following requirements of the *Employer*:

- a) The Site is cleaned daily. All electrical cables and hoses are routed so as not to cross over floors and walkways.
- b) All Equipment is packed neatly without interference to access.
- c) The *Contractor* is responsible for their removal to the designated scrap area daily.

3.1.11 Underground Services, Other Existing Services, Cable and Pipe Trenches and Covers

The *Contractor* complies with the following requirements of the *Employer*:

- a) All known services will be brought to the attention of the *Contractor* by the *Project Manager*. Should the *Contractor* encounter any other services in the work area, he will immediately bring them to the attention of the *Employer's* site representative who will issue instructions as to what actions are to be taken.
- b) The protection of all pipes, gauges, and plant is of extreme importance. Should any damage take place that is due to the *Contractor's* negligence, another *Contractor* will be brought onto the site to affect repairs. All costs will be to the account of the *Contractor* who caused damage.

3.1.12 Control of Noise, Dust, Water and Waste

The *Contractor* complies with the following requirements of the *Employer*:

- a) The *Contractor* maintains a high standard of cleanliness during the conduct of his activities at the Port. This includes areas allocated for storage of materials, site offices, etc. to the satisfaction of the *Project Manager*. The *Contractor* keeps these areas clean and free from accumulation of waste materials and refuse regardless of the source.
- b) The *Contractor* is responsible for the prompt removal of all waste to a designated disposal area. The disposal area will be on or in the vicinity of the Port and be indicated by the *Project Manager*.
- c) For the purpose hereof, "waste" is any matter, whether liquid or solid or any combination thereof, which is a by-product, emission, residue, or remainder of any process or activity carried out in connection with the *Works* and which is not reused on the Site in the ordinary course of carrying out the *Works* within seven days of production.

TRANSNET NATIONAL PORTS AUTHORITY - PORT OF EAST LONDON

TENDER NUMBER: TNPA/2025/06/0016/97939/RFP

DESCRIPTION OF GOODS AND SERVICES: SUPPLY, DELIVERY, INSTALLATION, INTEGRATION, TESTING AND COMMISSIONING OF THREE (3) FIRE SUPPRESSION MONITORS AT TANKER BERTH IN THE PORT OF EAST LONDON FOR A PERIOD OF SIX (6) MONTHS

- d) Bins and containers are emptied, and waste is removed to the designated area at least once a week. All the temporary waste is removed to the designated area at least once a week. All the temporary storage areas for bins and containers are kept tidy and do not constitute a nuisance to others. The *Contractor* takes all required steps to avoid spillage of waste alongside the bins and containers during removal and disposal thereof.
- e) All waste that cannot be contained in either a bin or container is placed on a temporary waste site which the *Project Manager* identifies. The waste is removed as soon as possible but, in any event, at least once a week. No burning of waste is allowed at the Port.
- f) Hazardous waste is dealt with in accordance with the safety, health, and/or environmental requirements of the *Works*, and the *Contractor* is solely responsible for the proper disposal thereof.

3.1.13 Giving Notice of Work to be Covered Up

The *Contractor* notifies the Supervisor of any elements of the *Works* which are to be covered up.

3.2 Completion, Testing, Commissioning, and Correction of Defects

3.2.9 The *Work* to be Done by The Completion Date

- a) On or before the Completion Date the *Contractor* shall have done everything required to Provide the *Works*.
- b) The *Project Manager* cannot certify Completion until all the work has been done and is also free of Defects, which would have, in his opinion, prevented the *Employer* from using the *Works* and Others from doing their work.

3.2.10 Use of the *Works* Before Completion Has Been Certified

- a) The *Employer* uses the *Works* before Completion is certified by the *Project Manager* which does not constitute take over by the *Employer*.

3.2.11 Materials Facilities and Samples for Tests and Inspections

- a) N/A

3.2.12 Mechanical Testing

- a) The new Fire Monitors and the system will be tested for functional and performance standards. This process will include:
 - Verifying that the Fire Monitors are operational as per design specifications.
 - Testing the manual and automated control functions.
 - Ensuring the monitors can be activated both remotely and locally.
 - Assessing system integration.
 - Checking water and foam discharge rates and pressure against required standards.
- b) All test results will be documented, and any deviations or issues will be addressed through corrective actions before the system is fully commissioned for operational use.

TRANSNET NATIONAL PORTS AUTHORITY - PORT OF EAST LONDON

TENDER NUMBER: TNPA/2025/06/0016/97939/RFP

DESCRIPTION OF GOODS AND SERVICES: SUPPLY, DELIVERY, INSTALLATION, INTEGRATION, TESTING AND COMMISSIONING OF THREE (3) FIRE SUPPRESSION MONITORS AT TANKER BERTH IN THE PORT OF EAST LONDON FOR A PERIOD OF SIX (6) MONTHS

3.2.13 Commissioning

- a) The *Contractor* provides the following commissioning tests and checks as part of his commissioning or Site Acceptance Testing (SAT) once the installations of the Fire Monitors have been completed to bring the *Works* in use in liaison with the *Employer*:
 - Repetition of all functional tests (i.e., mechanical, and electrical) on the Fire Monitors.
- b) The *Employer* will witness the tests and checks on the Fire Monitors at his discretion. Once the *Contractor* has satisfactorily completed all his tests, the *Employer* will proceed with his own commissioning checks to ensure conformance to the relevant specifications before declaring the firefighting system ready for operation. These checks by no means release the *Contractor* of his obligation to perform all site inspection, testing, and commissioning.
- c) Upon completion of commissioning, the *Contractor* provides all required documentation within 5 calendar days.
- d) The *Contractor* provides supervision during the erection, installation, site testing and commissioning of the *Works*.
- e) Records are to be kept of each SAT in a logbook defining the test to be undertaken, time and date of the commencement of the test, duration of the test, criteria that need to be met, and results entered of the tests. These records are submitted to the *Project Manager*.
- f) In the event of an error in any test (hardware/software) the fault is logged and analysed. The *Project Manager* determines if the item is minor. The *Contractor* is allowed to rectify the fault and the item re-tested for the full duration.
- g) After Completion of installation and commissioning of the system, a demonstration is required to show that the firefighting system is functioning correctly, this will be demonstrated by:
 - Successful testing of all system interfaces.
 - All the functions and performance requirements as specified in the *Works Information* at all the levels of the process control and monitoring system are exercised.
- h) All control panel functions are to be tested for correct operation.
- i) All cabling and terminations are to be checked for correct installation.
- j) Upon completion, the *Contractor* provides The *Employer* with a design certificate, pressure test certificate, installation certificate, commissioning certificate, and completion certificate.

3.2.14 Take-Over Procedures

The *Contractor* complies with the following requirements of the *Employer*:

- a) The *Contractor* ensures that the documentation as described in the *Works Information* is presented to the *Project Manager* before Completion.
- b) The *Contractor* ensures that the *Project Manager* has a full and accurate dossier of As-built documents that represent the status of the completed *Works* (to include Plant within the *Works*) to present to the *Employer*.
- c) The *Contractor* ensures that the *Project Manager* has a full and accurate dossier of Maintenance and Operating Manuals as appropriate at the earlier of take-over or Completion.

TRANSNET NATIONAL PORTS AUTHORITY - PORT OF EAST LONDON

TENDER NUMBER: TNPA/2025/06/0016/97939/RFP

DESCRIPTION OF GOODS AND SERVICES: SUPPLY, DELIVERY, INSTALLATION, INTEGRATION, TESTING AND COMMISSIONING OF THREE (3) FIRE SUPPRESSION MONITORS AT TANKER BERTH IN THE PORT OF EAST LONDON FOR A PERIOD OF SIX (6) MONTHS

Where the *Contractor* has presented Maintenance and Operating Manuals as appropriate to the *Project Manager* at take-over, the *Contractor* modifies and updates As-built documents as necessary before Completion

3.2.15 Access Given by the *Employer* for correction of Defects

- a) Clause 43.4 requires that the *Project Manager* arrange for the *Employer* to allow the *Contractor* access to and use of a part of the *Works*, which has been taken over if needed to correct a Defect.
- b) After the *Works* have been put into operation, the *Employer* may require the *Contractor* to undertake certain procedures before such access can be granted which include,
 - Meeting *Employer's* safety requirements including method statement and risk assessment
 - Undergoing *Employer's* inductions to obtain access permits
 - Obtaining access permits at the *Employer's* permits office

TRANSNET NATIONAL PORTS AUTHORITY - PORT OF EAST LONDON

TENDER NUMBER: TNPA/2025/06/0016/97939/RFP

DESCRIPTION OF GOODS AND SERVICES: SUPPLY, DELIVERY, INSTALLATION, INTEGRATION, TESTING AND COMMISSIONING OF THREE (3) FIRE SUPPRESSION MONITORS AT TANKER BERTH IN THE PORT OF EAST LONDON FOR A PERIOD OF SIX (6) MONTHS

4 PLANT AND MATERIALS STANDARDS AND WORKMANSHIP

- a) The *Contractor* complies with all standards, specifications, and regulations as highlighted within this *Works Information* and Tables below:

Table 4-1: General Standards

	Document No	Description / Title
1		Applicable Municipal and Supply Authority Regulations.
2		A Lightning Protection Guide for Electronic Installations.
3	ISO 9001	Quality Management System and Standards
4	SANS 10108	The Classification of Hazardous Locations and the Selection of Apparatus for Use in such Locations
5	SANS 1200A	GENERAL

Table 4-2: Fire system Specific Standards

	Document No	Description / Title
1	SANS 10139	Fire detection and alarm systems for buildings
2	SANS 10400	The application of the National Building Regulations, Part T: Fire Protection and Part W: Fire Installation
3		Inspection, Testing, and Maintenance of Water-based Fire Protection Systems

Table 4-3: Mechanical Specifications

	Document No	Description / Title
1	EEAM-Q-008	Transnet Specification for Corrosion Protection
2	SANS 347	Categorization and Conformity Assessment Criteria for All Pressure Equipment

Table 4-4: Electrical Specifications

	Document No	Description / Title
1	SABS 10142	The South African Bureau of Standards Code of Practice for Wiring of Premises
2	SANS 10198	The selection, handling, and installation of electric power cables of rating not exceeding 33kV

SECTION 2

5 MANAGEMENT AND START-UP

5.1 Management Meetings

Regular meetings of a general nature may be convened and chaired by the *Project Manager* as follows:

Table 5-1: Management Meeting Schedule

Title and purpose	Approximate time & interval	Location	Attendance by:
Kick-Off Meeting	Once-Off	Venue to be determined by the <i>Project Manager</i>	<i>Employer, Contractor, Supervisor, and Others as determined by the Project Manager</i>
Risk register and compensation events	Weekly	Venue to be determined by the <i>Project Manager</i>	<i>Employer, Contractor, Supervisor, and Others as determined by the Project Manager</i>
Overall contract progress and feedback	Weekly	Venue to be determined by the <i>Project Manager</i>	<i>Employer, Contractor, Supervisor, and Others as determined by the Project Manager</i>
SHEQ meetings	Weekly	Venue to be determined by the <i>Project Manager</i>	<i>Employer, Contractor, Supervisor, and Others as determined by the Project Manager</i>
Claim Assessment Meeting	As Required	Venue to be determined by the <i>Project Manager</i>	<i>Employer, Contractor, Supervisor, and Others as determined by the Project Manager</i>

Meetings of a specialist nature may be convened as specified elsewhere in this *Works Information* or if not so specified by persons and at times and locations to suit the Parties, the nature, and the progress of the *Works*. Records of these meetings are to be submitted to the *Project Manager* by the person convening the meeting within five days of the meeting.

All meetings are to be recorded using minutes or a register prepared and circulated by the person who convened the meeting. Such minutes or register are not to be used for the purpose of confirming actions or instructions under the contract as these are to be done separately by the person identified in the conditions of contract to carry out such actions or instructions.

5.2 Documentation Control

5.2.1 Documents Submissions

- All project documents must be submitted to the delegated *Employer's Representative*.
- To portray a consistent image, all documents used within the project must follow the same standards of layout, style, and formatting.
- The Contractor* is required to submit documents as electronic and hard copies and must be delivered to the *Project Manager* with a transmittal note.

TRANSNET NATIONAL PORTS AUTHORITY - PORT OF EAST LONDON

TENDER NUMBER: TNPA/2025/06/0016/97939/RFP

DESCRIPTION OF GOODS AND SERVICES: SUPPLY, DELIVERY, INSTALLATION, INTEGRATION, TESTING AND COMMISSIONING OF THREE (3) FIRE SUPPRESSION MONITORS AT TANKER BERTH IN THE PORT OF EAST LONDON FOR A PERIOD OF SIX (6) MONTHS

- d) The *Contractor* is to ensure that the latest versions of the required application software and a suitable 'IT' Infrastructure are in place to support the electronic transmission of documentation.

5.2.2 Drawings Format and Layout

- a) The creation, issuing, and control of all Engineering Drawings will be in accordance with the latest revision of the Engineering Drawing Office and Engineering Documentation Standard and associated Work Instructions to be supplied as part of the inquiry documents.
- b) Drawings issued to the *Employer* will be a minimum of one (1) hard copy and an electronic copy.

5.2.3 Health and Safety Risk Management

The *Contractor* complies with the following requirements of the *Employer*:

- a) In carrying out its obligations to the *Employer* in terms of this contract, which obligations include, amongst others, providing the *Works*, using Plant, Materials, and Equipment; and whilst at the site for any reason, the *Contractor* is the "*Employer*" in terms of the Occupational Health.
- b) The *Contractor* does not consider itself under the supervision or management of the *Employer* with regard to compliance with the Safety Health and Environmental requirements.
- c) Furthermore, the *Contractor* does not consider himself to be a subordinate or under the supervision of the *Project Manager* in respect of these matters.
- d) The *Contractor* is responsible for the supervision of its employees, agents, *Subcontractors*, and mandataries and takes full responsibility and accountability for ensuring that they are competent, and aware of the Safety, Health, and Environmental requirements, whilst executing the *Works* in accordance with the Safety Health and Environmental requirements.
- e) The *Contractor* ensures compliance with the following safety documents/regulations.
- The provisions of the Occupational Health and Safety Act, No. 85 of 1993, and all applicable regulations (as amended), binding in terms thereof.
 - The latest versions of standards, procedures, specifications, rules, systems of work, and requirements of the *Employer*, copies of which will be provided to the *Contractor* on request.
 - The Health and Safety Plan prepared by the *Contractor* in accordance with the *Employer's* Safety Health and Environmental Specification and requirements.
- f) The *Contractor* ensures that its employees, agents, *Subcontractors*, and mandataries comply with the provisions of the Occupational Health and Safety Act, No. 85 of 1993, and all applicable regulations binding in terms thereof as well as the *Employer's* Safety Health and Environmental Specification whilst making use of plant, materials, and equipment and whilst at the Site for any reason whatsoever.
- g) The *Contractor* hereby indemnifies the *Employer* and holds the *Employer* harmless in respect of any loss, costs, claims, demands, liabilities, damage, penalties or expenses that may be made against the *Employer* and/or suffered or incurred by the *Employer* (as the case may be) as a result of, any failure of the *Contractor*, its employees, agents, *Subcontractor's* and mandataries to comply with their obligations, and/or the failure of the *Employer* to procure the compliance by the *Contractor*, its employees, agents, *Subcontractor's* and/or mandataries with their responsibilities and/or obligations in terms of or arising from the Occupational Health and Safety Act, No. 85 of 1993.

TRANSNET NATIONAL PORTS AUTHORITY - PORT OF EAST LONDON

TENDER NUMBER: TNPA/2025/06/0016/97939/RFP

DESCRIPTION OF GOODS AND SERVICES: SUPPLY, DELIVERY, INSTALLATION, INTEGRATION, TESTING AND COMMISSIONING OF THREE (3) FIRE SUPPRESSION MONITORS AT TANKER BERTH IN THE PORT OF EAST LONDON FOR A PERIOD OF SIX (6) MONTHS

5.2.4 Health and Safety Obligations

The *Contractor* complies with the following requirements of the *Employer*:

- a) Ensures that all statutory appointments (as required in terms of the Occupational Health and Safety Act, No. 85 of 1993 and all applicable regulations binding in terms thereof, as amended) and other appointments required in terms of the *Employer's* Safety Health and Environmental Specifications, are in place and that all appointees are cognisant of their duties and responsibilities in terms of such appointments.
- b) Ensures that such appointees execute their duties and responsibilities as required by such an appointment.
- c) Ensures that all personnel brought by itself onto site (including employees of *Contractors* and *Subcontractors*) are suitably qualified and trained for the performance of the task, duties and functions, which will be allocated to them.
- d) Immediately reports any occupational or other injuries, near miss events, property damage, environmental related incidents as well as any potential threat to the health and safety of individuals at the *Works* or on the site, as soon as he becomes aware thereof, to the *Project Manager*.
- e) Complies with the *Employer's* Environmental, Occupational Health & Safety Incident Management Procedure, relating to the reporting and investigation of incidents. The classification of incidents contained in such documents is considered final and must be applied by the *Contractor* relating to any incidents/ injuries relating to its employees, agents, *Subcontractors*, and mandataries whilst on site.
- f) Conducts a risk assessment regarding the utilization of PPE and thereafter ensure that PPE of good quality is issued (at its own cost) to its employees, agents, *Subcontractors*, and mandataries prior to such individuals accessing the site, alternatively performing activities related to the *Works* at the site.

5.2.5 Fire Protection

The *Contractor* complies with the following requirements of the *Employer*:

- a) The *Contractor* complies with the requirements of the *Employer's* Safety Health and Environmental Specification, pertaining to fire protection. The *Contractor* ensures that adequate firefighting apparatus is provided at all his work sites and that his staff is trained in the use of this apparatus.
- b) Precautions are taken to prevent any occurrence of fires or explosions while carrying out the *Works*.
- c) Any tampering with the *Employer's* Fire Equipment is strictly forbidden. All exit doors, fire escape routes, walkways, stairways, and stair landings are kept free of obstruction, and not be used for work or storage at any time. Firefighting equipment remains accessible at all times.

TRANSNET NATIONAL PORTS AUTHORITY - PORT OF EAST LONDON

TENDER NUMBER: TNPA/2025/06/0016/97939/RFP

DESCRIPTION OF GOODS AND SERVICES: SUPPLY, DELIVERY, INSTALLATION, INTEGRATION, TESTING AND COMMISSIONING OF THREE (3) FIRE SUPPRESSION MONITORS AT TANKER BERTH IN THE PORT OF EAST LONDON FOR A PERIOD OF SIX (6) MONTHS

5.2.6 Environmental Constraints and Management

The *Contractor* complies with the following requirements of the *Employer*:

- a) The *Contractor* ensures that all environmental authorization obligations, applicable legislative requirements, and the *Employer's* specific requirements are fulfilled. This includes all national, provincial, and local environmental legislation and requirements.
- b) The *Contractor* complies with the following Construction Environmental Management Plan (CEMP):
 - The *Contractor* performs the *Works* and all construction activities within the Site and Working Areas having due regard to the environment and environmental management practices.
 - The SES describes the minimal acceptable standard for environmental management for a range of environmental aspects commonly encountered on construction projects and sets environmental objectives and targets, which the *Contractor* observes and complies with.
 - The overarching obligations of the *Contractor* under the CEMP before construction activities commence on the Site and/or Working Areas is to provide an environmental method statement for a particular construction operation at the Site and/or Working Area by the *Contractor* and where requested by the CM and to comply with the following:
 - i. Where relevant, method statements, as detailed in the Standard Environment Specification shall be provided by the *Contractor*. These include, but are not limited to, the following where applicable:
 1. Establishment of construction lay down area
 2. Hazardous and non-hazardous solid waste management
 3. Stormwater management
 4. Contaminated water management
 5. Prevention of marine pollution
 6. Hydrocarbon spills
 7. Diesel tanks and refuelling procedures
 8. Dust control
 9. Noise and vibration control
 10. Rodent and pest control
 11. Environmental awareness training
 12. Site division
 13. Emergency procedures for environmental incidents
 14. *Contractor's* SHE Officer
 15. Closure of construction laydown area
 - ii. The *Contractor* shall ensure that his management, foremen, and the general workforce, as well as all suppliers and visitors to the Site, have attended the

TRANSNET NATIONAL PORTS AUTHORITY - PORT OF EAST LONDON

TENDER NUMBER: TNPA/2025/06/0016/97939/RFP

DESCRIPTION OF GOODS AND SERVICES: SUPPLY, DELIVERY, INSTALLATION, INTEGRATION, TESTING AND COMMISSIONING OF THREE (3) FIRE SUPPRESSION MONITORS AT TANKER BERTH IN THE PORT OF EAST LONDON FOR A PERIOD OF SIX (6) MONTHS

Induction Programme before commencing any work on Site. If new personnel commence work on the Site during construction, the *Contractor* shall ensure that these personnel undergo the Induction Programme and are made aware of the environmental specifications on Site.

5.2.7 Quality Assurance Requirements

5.2.7.1 General

- a) The *Contractor* complies with the *Employer's* quality and technical requirements.
- b) The *Contractor* submits a QMS as a returnable schedule and uses it for all phases of the Project. The QMS complies with the requirements of ISO 9001 standards.
- c) The *Contractor* provides evidence of a fully implemented QMS as and when requested by the *Employer*.
- d) The *Project Manager* may at his sole discretion carry out an audit on the *Contractor*, the *Contractor's* suppliers, and *Subcontractors*.

5.2.7.2 Quality Management Documents Requirements

- a) The *Contractor* submits the following documents, within the specified timeframe of the Contract Date, to the *Employer* for review and acceptance and before the commencement of work.
- b) The *Contractor* will supply the *Project Manager* with a Quality Control Procedure (QCP) which will detail the *Contractor's* organization, quality assurance, and quality control procedures within that organization specific to this project. The QCP must be aligned to, and reference ISO QMS guidelines for quality plans.
- c) The QCP will make reference to the *Contractor's* QMS Procedures to be used in this Contract:
 - The *Contractor's* QMS compliance with the requirements of ISO 9001
 - *Contractor's* quality manual
 - *Contractor's* quality procedures
 - *Contractor's* quality forms and work instructions
 - *Contractor's* quality system documents referenced in this *Works Information*
- d) The *Contractor* supplies the *Project Manager* with a detailed project organogram showing the quality personnel to be used in the Contract. The *Contractor* provides CVs of the quality management employees who will be responsible for quality on site.
- e) The *Contractor's* Quality Manager's responsibilities include but are not limited to the following:
 - Implementation of the QMS
 - Administration of QA/QC systems
 - Verification of approval status of Sub*Contractor's* QCP and procedures
 - On-and-offsite inspections
 - Co-ordination, inspection, and verification of the *Employer's* intervention points
 - Review of *Contractor* testing and inspection documents (procedures, test results)
 - Reporting on quality performance

TRANSNET NATIONAL PORTS AUTHORITY - PORT OF EAST LONDON

TENDER NUMBER: TNPA/2025/06/0016/97939/RFP

DESCRIPTION OF GOODS AND SERVICES: SUPPLY, DELIVERY, INSTALLATION, INTEGRATION, TESTING AND COMMISSIONING OF THREE (3) FIRE SUPPRESSION MONITORS AT TANKER BERTH IN THE PORT OF EAST LONDON FOR A PERIOD OF SIX (6) MONTHS

5.2.7.3 Quality Responsibility

- a) The *Contractor* is accountable for the quality of the output and liable for any failures.
- b) The *Contractor* is responsible for defining the level of intervention of Quality Assurance (QA), Quality Control (QC), or inspections. These are in line with the *Employer's* requirements.
- c) The *Contractor* is responsible for defining the level of intervention of QA/QC or inspections to be imposed on his sub-*Contractor*, suppliers, and sub-suppliers and must ensure that these are in line with the *Employer's* requirements.
- d) The intervention requirements take into consideration the criticality of the Plant and Material.
- e) The intervention points include all witness, hold, verification, and review points required by the *Employer*. The *Contractor's* failure to allow the intervention points will constitute a non-conformance.

5.2.7.4 Inspections

- a) The *Contractor* is responsible for the inspection of all the work that is performed, and the *Employer* only verifies that the *Works* is conducted as per the Contract.
- b) The *Contractor* conducts all inspections in accordance with the accepted QCP.
- c) The *Contractor* ensures that all *Works* are inspected and approved before the *Project Manager* is invited for verification.
- d) Damages as a result of the *Contractor's* failure to comply with the inspection notice periods will be borne by the *Contractor* and no compensation event will arise out of this.

5.2.7.5 Non-Conformances and Defects

- a) Where NCRs and Defect notifications are issued, the *Contractor* acknowledges receipt within the specified timelines and proposes corrective and preventive actions to the *Employer* as per the contract response period.
- b) The corrective and preventive actions will include the implementation and completion dates. Progress on all NCRs and Defect notifications issued to the *Contractor* must be reported to the *Employer* on a weekly basis.
 - The *Contractor's* quality manager keeps a register of all NCRs and Defect notifications issued
 - Deviations from the Contract are treated as a non-conformance.
 - Records of NCRs and Defect notifications are kept, and form part of the data book records.
- c) During the contract execution phase, the *Contractor* will be monitored by the *Employer* for performance on quality-related aspects. The monitoring will be in the form of audits and assessments.

5.2.7.6 Preservation, Shipping, and Transportation to be Addressed

- a) The *Contractor* is responsible for ensuring that all products are preserved in their appropriate manner.

TRANSNET NATIONAL PORTS AUTHORITY - PORT OF EAST LONDON

TENDER NUMBER: TNPA/2025/06/0016/97939/RFP

DESCRIPTION OF GOODS AND SERVICES: SUPPLY, DELIVERY, INSTALLATION, INTEGRATION, TESTING AND COMMISSIONING OF THREE (3) FIRE SUPPRESSION MONITORS AT TANKER BERTH IN THE PORT OF EAST LONDON FOR A PERIOD OF SIX (6) MONTHS

- b) The *Project Manager* may choose to witness the packaging, loading, and offloading of the products.
- c) The *Contractor* also ensures that all storage requirements for products are properly implemented to preserve the products against adverse conditions, deterioration, damages, etc. Storage and preservation procedures for the different products must be submitted to the *Project Manager* for review and acceptance.
- d) The *Employer* may request to inspect the stored products at any given point during the storage period of the product.

5.3 Programming Constraints

The *Contractor* complies with the following requirements of the *Employer*:

- a) The *Contractor* submits an updated programme in Microsoft Project or Primavera version P6, and a PDF file weekly or at any other time as required by the *Contractor*, or as instructed by the *Project Manager*.
- b) The *Contractor* submits a single integrated programme that incorporates all the work to be performed including that of his *subcontractors*.
- c) The interfaces between *subcontractors* as well as the interfaces between *Subcontractors* and the *Contractor* must be clearly identified.
- d) Project key dates as defined in the NEC *Contractor* Data by *Employer*, are incorporated into the programme.
- e) The *Project Manager* does not intend to duplicate the *Contractor's* planning and scheduling; however, portions or high-level extractions of the Accepted Programme will be used in the *Employer's* internal master project programme for project control purposes.

5.3.1 Planning and Scheduling Levels

- a) The schedule layout takes into account the approved WBS, reflecting the manner the *Works* are to be performed as per the *Contractor's* Method Statement and how activities are to be summarised, reported, and monitored.
- b) The *Contractor's* programme shows the following levels:
 - I. Level 1 Master Schedule – defines the major operations and interfaces between engineering design, procurement, fabrication and assembly of Plant and Materials, transportation, construction, testing, pre-commissioning, commissioning, and Completion.
 - II. Level 2 Project Schedule – summary schedules 'rolled up' from Level 3 Project Schedule described below
 - III. Level 3 Project Schedule – detailed schedules generated to demonstrate all operations identified on the programme from the starting date to Completion. The *Project Manager* notifies any subsequent layouts and corresponding filters on revised programmes.
 - IV. Level 4 Project Schedule – detailed discipline specialty level developed and maintained by the *Contractor* relating to all operations identified on the programme representing the daily activities of each discipline.

TRANSNET NATIONAL PORTS AUTHORITY - PORT OF EAST LONDON

TENDER NUMBER: TNPA/2025/06/0016/97939/RFP

DESCRIPTION OF GOODS AND SERVICES: SUPPLY, DELIVERY, INSTALLATION, INTEGRATION, TESTING AND COMMISSIONING OF THREE (3) FIRE SUPPRESSION MONITORS AT TANKER BERTH IN THE PORT OF EAST LONDON FOR A PERIOD OF SIX (6) MONTHS

5.3.2 Planning Programme

- a) The *Contractor* develops a contract programme which will include a bar chart conforming with the project master programme dates included and sufficient detail to indicate the *Contractor's* intention for executing the *Works*. This programme covers major items relating to design, procurement, manufacture, delivery, installation, start-up, and commissioning. The critical path is clearly shown.
- b) Key milestones, access dates, interface dates, and commissioning key dates are clearly identified in the contract programme, including access dates and release of terminal points that involve the *Employer* or *Others*.
- c) The programme makes provision for site related preparation such as site establishment, safety induction, and medical clearance of all the *Contractor's* staff that will be working on site.

5.3.3 Procurement and Manufacturing Programme

- a) The *Contractor* is required to submit a procurement and manufacturing programme for review by the *Project Manager* which identifies as a minimum:
 - I. Details of orders and target dates for placing subcontracts.
 - II. Any detailed design required within the manufacturing period
 - III. Long-lead delivery items
 - IV. Inspection and tests for acceptance and release.

5.3.4 Construction and Installation Programme

- a) The *Contractor* is required to submit a construction and Installation programme that is resource loaded for review by the *Project Manager*. This programme includes the following criteria:
 - I. Full details of all civil/mechanical/electrical requirements.
 - II. Identify any installation or commissioning activities that may affect other construction activities.
 - III. Identify when services are required for commissioning purposes.
- b) This programme meets the requirements of the *Contractor* and *Others* engaged in the project.
- c) The programme is to be based on the following working hours:
 - I. Maximum Twelve (12) working hours per day
 - II. Seven (7) days per week
 - III. Holidays included as working days

5.3.5 Commissioning Programme

- a) During the progress of the *Works*, the *Contractor* develops a detailed commissioning programme with sufficient detail to enable the work to be adequately progressed and tracked to meet the commissioning key dates.
- b) The commissioning programme is detailed to the sub-system level and is fully integrated with the Construction Programme.

5.4 **Contractor's Management, Supervision, and Key People**

a) The *Contractor* provides the following key people as a minimum:

- I. *Project Manager* / Supervisor
- II. Site Safety Representatives

5.5 **Training Workshops and Technology Transfer**

The *Contractor* complies with the following requirements of the *Employer*:

- a) The *Contractor* provides training on the equipment and systems included as part of the *Works* to the various categories of the *Employer's* technical staff for the duration of the *Works*.
- b) All training provided by the *Contractor* is customized for the Port of East London and is directly applicable to the actual equipment and systems supplied for the *Works*.
- c) The *Contractor* provides training on the equipment and systems included as part of the *Works* to the various categories of the *Employer's* technical staff (operators, maintenance, and engineering personnel) for the duration of the *Works*.
- d) Training provided by the *Contractor* is directly applicable to the actual equipment supplied for the *Works*. Generalized training based on similar equipment is not acceptable.
- e) The local facilities for training provided by the *Employer* are a suitably sized air-conditioned room, as well as trainee and trainer desks, an overhead projector, and a flipchart or whiteboard. The number of personnel to be trained is as per the Table below.

Table 6-1: Technical Staff to be addressed in the Training Proposal

Department	Number of Personnel
SHERQ – Fire	07
Maintenance	02
Engineering	01

- f) The *Contractor* submits to the *Project Manager* for acceptance a detailed training programme as well as training material/manuals. Material is provided for the number of trainees as per the table above.
- g) The training schedule is incorporated into the Accepted Programme.

5.6 **Insurance Provided by The Employer**

- a) Insurance provided by the *Employer* is contained in the Contract Data – Part 1.

5.7 **Contract Change Management**

- a) No additional requirements apply to ECC Clause 60 series.

TRANSNET NATIONAL PORTS AUTHORITY - PORT OF EAST LONDON

TENDER NUMBER: TNPA/2025/06/0016/97939/RFP

DESCRIPTION OF GOODS AND SERVICES: SUPPLY, DELIVERY, INSTALLATION, INTEGRATION, TESTING AND COMMISSIONING OF THREE (3) FIRE SUPPRESSION MONITORS AT TANKER BERTH IN THE PORT OF EAST LONDON FOR A PERIOD OF SIX (6) MONTHS

5.8 Provision of Bonds and Guarantees

- a) The form in which a bond or guarantee required by the conditions of the contract (if any) is to be provided by the *Contractor* is given in Part 1 Agreements and Contract Data, document C1.3, Sureties.
- b) The *Contractor* provides a bond or guarantee as required by the conditions of the contract concurrently with the execution by the Parties of the form of agreement for the ECC contract.

5.9 The *Contractor's* Invoices

- a) Practical hands-on training for each individual trainee forms an integral part of each of the following courses. When the *Project Manager* certifies payment (see ECC Clause 51.1) following an assessment date, the *Contractor* complies with the *Employer's* procedure for invoice submission.
- b) The invoice must correspond to the *Project Manager's* assessment of the amount due to the *Contractor* as stated in the payment certificate.
- c) The invoice states the following:
 - I. Invoice addressed to Transnet SOC Ltd.
 - II. Transnet SOC Limited's VAT No: 4720103177.
 - III. Invoice number.
 - IV. The *Contractor's* VAT Number; and
 - V. The *Employer's* Contract number.
 - VI. The invoice contains the supporting details.
- d) The invoice is presented either by electronic mail (E-mail) or by hand delivery.

5.10 People

5.10.1 Minimum Requirements of People Employed On The Site

N/A

5.10.2 *Contractor* Liability

- a) The *Contractor* warrants that it will be liable to Transnet for any loss or damage caused by strikes, riots, lockouts, or any labour disputes by and/or confined to the *Contractor's* employees, which loss will include any indirect or consequential damages.
- b) The *Contractor* warrants that no negotiations or feedback meetings by the *Contractor's* employees shall take place on Transnet premises, whether owned or rented by Transnet.
- c) The *Contractor* shall give notice to Transnet of any industrial action by the *Contractor's* employees immediately upon becoming aware of any actual or contemplated action that is or may be carried out on Transnet's premises, whether owned or rented, and shall notify Transnet of all matters associated with such action that may potentially affect Transnet.
- d) The *Contractor* is responsible for educating its employees on relevant provisions of the Labour Relations Act which deal with industrial action processes, and the risks of non-compliance.

TRANSNET NATIONAL PORTS AUTHORITY - PORT OF EAST LONDON

TENDER NUMBER: TNPA/2025/06/0016/97939/RFP

DESCRIPTION OF GOODS AND SERVICES: SUPPLY, DELIVERY, INSTALLATION, INTEGRATION, TESTING AND COMMISSIONING OF THREE (3) FIRE SUPPRESSION MONITORS AT TANKER BERTH IN THE PORT OF EAST LONDON FOR A PERIOD OF SIX (6) MONTHS

- e) The *Contractor* is required to develop a Contingency Strike Handling Plan, which plan the *Contractor* is obliged to update on a weekly basis. The *Contractor* must provide Transnet with this plan and all updates to the Plan. The *Contractor* is responsible to communicate with its employees' on-site details of the plan.

5.10.3 Industrial Action by *Contractor* Employees

- a) In the event of any industrial action by the *Contractor's* employees, the *Contractor* is required to provide competent contingency resources permitted in law to carry out any of the duties that are or could potentially be interrupted by industrial action in delivering the Service.
- b) The *Contractor* warrants that it will compensate Transnet for any costs Transnet incurs in providing additional security to deal with any industrial action by the *Contractor's* employees.
- c) In the event of any industrial action by the *Contractor's* employees, the *Contractor* is obliged:
- To prepare and deliver to Transnet, within two (2) hours of the commencement of industrial action an Industrial Action Report. If the industrial action persists the *Contractor* is required to deliver the report at 8h30 each day.
 - The Industrial Action Report must provide at least the following information:
 - i. Industrial incident report,
 - ii. Attendance register,
 - iii. Productivity/progress to schedule reports,
 - iv. Operational contingency plan,
 - v. Site security report,
 - vi. Industrial action intelligence gathered.
 - The final Industrial Action Report is to be delivered 24 hours after finalization of the industrial action.
 - The management of the *Contractor* is required to hold a daily industrial action teleconference with personnel identified by Transnet to discuss the industrial action, settlement of the industrial action, security issues, and the impact on delivery under the contract.
- d) The resolution of any disputes or industrial action by the *Contractor's* employees is the sole responsibility of the *Contractor*.
- e) Access to Transnet premises by the *Contractor* and its employees is only provided for purposes of the *Contractor* delivering its services to Transnet. Should the *Contractor* and its employees not, for any reason, be capable of delivering its services Transnet is entitled to restrict or deny access to its premises and unless otherwise authorized; such person will be deemed to be trespassing.

5.11 Plant and Materials

5.11.1 Quality

- a) The *Contractor* provides Plant and Materials for inclusion in the *Works* in accordance with SANS 1200A sub-paragraph 2.1, unless otherwise stated elsewhere in the *Works Information* provided by the *Employer*. All Plant and Materials are new unless the use of old or refurbished goods and/or Materials is expressly permitted as stated elsewhere in this *Works Information* or as may be subsequently instructed by the *Project Manager*.
- b) Where Plant and Materials for inclusion in the *Works* originate from outside the Republic of South Africa, all such Plant and Materials are new and of merchantable quality, to a recognized national standard, with all proprietary products installed to manufacturers' instructions.

TRANSNET NATIONAL PORTS AUTHORITY - PORT OF EAST LONDON

TENDER NUMBER: TNPA/2025/06/0016/97939/RFP

DESCRIPTION OF GOODS AND SERVICES: SUPPLY, DELIVERY, INSTALLATION, INTEGRATION, TESTING AND COMMISSIONING OF THREE (3) FIRE SUPPRESSION MONITORS AT TANKER BERTH IN THE PORT OF EAST LONDON FOR A PERIOD OF SIX (6) MONTHS

- c) The *Contractor* replaces any Plant and Materials subject to breakages (whether in the Working Areas or not) or any Plant and Materials not conforming to standards or specifications stated and notifies the *Project Manager* and the *Supervisor* on each occasion where replacement is required.

5.11.2 Plant & Materials Provided "free issue" by the *Employer*

- a) None.

5.11.3 *Contractor's* Procurement of Plant and Materials

The *Contractor* performs the following with respect to the Plant and Materials procured for the *Works*:

- a) During transportation packaging is done in such a way that damage is prevented. Components that are transported separately are marked accordingly and are easily identifiable.
- b) The *Contractor* supplies the labelling for the Plant that forms part of the *works*.

5.11.4 Spares and Consumables

- a) The *Contractor* provides recommended Critical and Normal Running spares lists, including costs.
 - The *Employer* is responsible for purchasing of recommended spares.
 - The *Contractor* is responsible for ensuring that consignment spares are available in time of need.
- b) Each recommended spare is uniquely identified with a part number, which can be cross-referenced to a spares list and associated drawing.
- c) The *Employer* prefers that support from the OEM be available locally in South Africa. The *Contractor* is required to keep high-cost items in stock for 24-hour delivery on demand and provide technical and product support for the equipment's design life.
- d) The onus is on the *Contractor* to recommend a full list of spares to be supplied, with unit costs for consideration by the *Employer*. A complete list of all consumable items required during normal maintenance is also provided.
- e) The *Contractor* is required to inform the *Employer* of any alterations to the spare parts price list during the warranty and maintenance period.
- f) The *Contractor* takes cognizance of the fact that all recovered working equipment will be kept by the *Employer* as future spares.

5.12 Tests And Inspections Before Delivery

- a) The *Employer* carries out quality inspections at his discretion.
- b) All inspections and testing are to be performed in accordance with the Quality Control Plan (QCP) developed by the *Contractor*.

5.13 Site Acceptance Test (SAT)

- a) The SAT is carried out before commissioning commences to ensure:
 - Correct performance of the control equipment.
 - Safety of plant and personnel. And Compliance with the *Works Information*.



TRANSNET NATIONAL PORTS AUTHORITY

HEALTH AND SAFETY SPECIFICATION



DESCRIPTION OF GOODS AND SERVICES:SUPPLY,DELIVERY,INSTALLATION,INTEGRATION,TESTING AND COMMISSIONING OF THREE (3) FIRE SUPPRESSION MONITORS AT TANKER BERTH IN THE PORT OF EAST LONDON FOR A PERIOD OF SIX (6) MONTHS

Table of Contents

1. Project Description	1
2. Scope and Purpose	1
3. Definitions	2
4. Abbreviations	5
5. Contractor Health and Safety Management Plan	6
6. Policy	7
7. Hazard Identification and Risk Assessment (OHS Act, Constr. Regulations 9)	8
7.1 Baseline Risk Assessments	9
7.2 Task-Based Risk Assessments	12
7.3 Pre-Task Hazard Assessments	13
8. Legal and Other Requirements	13
9. Health and Safety Objectives	13
10. Resources, Accountabilities and Responsibilities	14
10.1 Contractor Construction Manager	15
10.2 Contractor Health and Safety Officers	17
10.3 Contractor Supervisors	19
10.4 Health and Safety Representatives	20
10.5 First Aiders	20
10.6 Duties of Client	21
10.7 Duties of the Designer	22
10.8 Duties of Principal Contractor	23
10.9 Duties of Contractor	24
10.10 Management and supervision of Construction work	24
11. Competence, Training and Awareness	25
11.1 Health and Safety Induction Training	27
11.2 Specific Training and Competency Requirements	27
12. Communication, Participation and Consultation	28
12.1 Visible Felt Leadership (VFL) and Safety Observations and Conversations (SOC's)	28
12.2 Toolbox Talks	29
12.3 Daily Safe Task Instructions (DSTI's)	29
12.4 Health and Safety Suggestions	29
12.5 Health and Safety Meetings	30
12.5.1 Contractor Health and Safety Meetings (OHS Act Section 19)	30
12.5.2 Site Health and Safety Meetings	30
12.6 Health and Safety Performance Boards	31
12.7 Health and Safety Management Information Notice Boards	31
12.8 Involvement (Other)	31
13. Documentation and Document Control	31
13.1 Contractor Health and Safety File Requirements	32
14. Notification of Construction Work	33
15. Operational Control	33

16. Safe Work Procedures	33
17. Planned Task Observations	34
18. General Rules of Conduct	34
19. Site Access.....	35
19.1 Access Control	35
19.2 Trespassing	35
19.3 Visitors	36
19.4 Alcohol, Drugs and Other Intoxicating Substances.....	36
19.5 Firearms, Ammunition and Offensive Weapons	36
19.6 Vehicles.....	37
20. Mobile Equipment and Light Vehicles	38
20.1 Light Vehicles	41
20.2 Mobile Equipment	43
20.3 Training and Licensing	44
20.4 Tyre and Rim Safety.....	45
21. Access Road to Project Site.....	45
22. Signs and Notices	45
23. Machinery	46
24. Barricading	46
25. Excavations	48
26. Working along/near/adjacent water	49
27. Cranes and Lifting Equipment	50
27.1 Design, Manufacturing and Safety Features	50
27.2 Planning and Risk Assessment	51
27.3 Operation	52
27.4 Inspection, Testing and Maintenance	55
27.5 Training and Competency	57
28. Ladders	58
29. Permit to Work	59
30. Electrical Safety.....	61
30.1 Electrical Installations.....	61
31. Portable Electrical Equipment	63
32. Electrically Powered Tools and Equipment	66
32.1 Angle Grinders	66
33. Pneumatically Powered Tools and Equipment	67
34. Fuel Powered Tools and Equipment	68
35. Hydraulically Powered Tools and Equipment	68
36. Hand Tools.....	69
36.1 Stanley Knives / Utility Knives	69

37. Inspection of Equipment and Tools.....	69
38. Manual Handling and Vibration	70
39. Personal Protective Equipment	71
39.1 Head Protection	72
39.2 Eye Protection	73
39.3 Hearing Protection	74
39.4 Respiratory Protection	74
39.5 Hand and Arm Protection	76
39.6 Foot Protection	76
39.7 Clothing.....	76
39.8 Body Protection	76
39.9 Electrical Protective Equipment	77
39.10 Jewellery	78
39.11 Hair 78	
39.12 Task-Specific PPE.....	78
39.13 Sun Protection	78
40. Fuel / Flammable Liquid Storage and Refuelling	78
41. Fire Protection and Prevention	80
42. Smoking.....	82
43. Housekeeping	83
44. Waste Management.....	83
45. Stacking and Storage	83
46. Facilities	84
47. Occupational Hygiene.....	84
47.1 Lighting	85
47.2 Noise 85	
47.3 Particulate and Gas / Vapour Exposure.....	88
47.4 Respiratory Protection Devices	89
47.5 Hazardous Chemical Substances	90
47.6 Thermal Stress.....	93
47.7 Fitness for Work	94
47.8 Legionnaires Disease.....	96
47.9 HIV / Aids.....	97
47.10 COVID-19 Management.....	97
47.11 Measuring and Monitoring	97
48. Temporary Works	98
49. Emergency Preparedness and Response.....	99
49.1 Fire Fighting	101
49.2 First Aid.....	101
49.3 First Aid Kits	101
50. Management Review	102
51. Management of Change	102
52. Sub-contractor Alignment	103

53. Incident Reporting and Investigation	103
54. Performance Assessment and Auditing	106
54.1 Reporting on Performance	106
55. Audits and Inspections	107
56. Reference Documents	108

List of Tables

Table 7-1: Hazard (Energy) Types.....	10
Table 7-2: Consequence Descriptors	10
Table 7-3: Likelihood Descriptors	11
Table 7-4: Risk Matrix	11
Table 11-1: Specific Training and Competency Requirements	28
Table 27-1 colour coding system for lifting equipment.....	57
Table 49-1 Minimum Requirements to be included when equipping first aid boxes	101

1. Project Description

The Tanker Berth is situated at the West Bank precinct of the Port of East London. The berth forms part of a critical infrastructure asset responsible for handling large quantities of highly flammable petroleum products and gases to the oil industry in the region. The berth has a firefighting system, initially upgraded in the 2015/16 financial to provide readiness and firefighting capabilities, to safeguard personnel, infrastructure, vessels, and the environment in the event of a fire emergency. It comprises diesel and electrical driving pumps, a steel pipe water network, a foam pump and tanks, a booster pump, deluge valves, solenoid valves, three (3) fire monitors that are elevated by concrete towers, and a control panel with electrical connections.

The fire monitors are currently experiencing frequent mechanical failures which compromises the reliability of the firefighting system. Two of the three fire monitors have problems with worn-out brass gears, which have resulted in the failure of the monitors to axially rotate as required for good firefighting capabilities. To replace the brass gears, all monitors have to be taken out of service for custom design, manufacturing, and replacement, with an estimated time of repair of up to 2 months. To restore the reliability and availability of the firefighting system, a complete replacement of all the fire monitors is required, including all necessary cabling and equipment.

2. Scope and Purpose

This health and safety specification outlines the working behaviours and safe work practices that must be implemented and complied with by all Transnet employees, Contractors, Consultants, Visitors and Suppliers, that will be undertaking activities associated with the Supply, Installation, Test and Commission of Fire Monitors at Tanker Berth in the Port of East London. The specification has been developed in accordance with the requirements of the Construction Regulation of 2014, Regulation 5(1)(b) as well as any other applicable legislation.

The scope of the works includes dismantling, procurement, delivery to the Port of East London, installation, site testing, and commissioning of the new Fire Monitors while maintaining quality control over the Works to ensure a fully functional firefighting system.

Appointed contractors must identify all requirements applicable to their scope of works and address these accordingly in their Contractor's Site-Specific Health and Safety Management Plan. It is the contractor's responsibility to ensure that all sub-contractors comply fully with all legal requirements as well as the requirements of this Specification.

This Health and Safety Specification will be reviewed and updated periodically as and when necessary to address and / or include:

- Changes in legislation;
- Client requirements;
- Leading practices; and
- Lessons learnt from incidents.



Figure 1: Existing Fire Monitors with Branch and in Operation

3. Definitions

Acceptable Risk

A risk that has been reduced to a level that can be tolerated having regard for the applicable legal requirements and the Health and Safety Policy adopted for the project.

ALARP (As Low As Reasonably Practicable)

The concept of weighing a risk against the sacrifice needed to implement the measures necessary to avoid the risk. With respect to health and safety, it is assumed that the measures should be implemented unless it can be shown that the sacrifice is grossly disproportionate to the benefit.

Applicant (Permit to Work)

A person requesting permission to perform work for which a Permit to Work is required. Applicants must be authorised (in writing) to receive (or accept) Permits to Work and must be competent to do so by virtue of their training, experience and knowledge of the area or plant in which the work is to be performed.

Authorised Person (Permit to Work)

A person (typically a Project employee or an employee of the client) who has been authorised (in writing) by the nominated project management representative to issue Permits to Work within the scope of his designation. A person may only be appointed to issue Permits to Work if he has undergone training and has been assessed and found competent in systems, plant and equipment operation within the scope of his designation.

Barricade

A temporary structure that is erected as a physical barrier to prevent persons from inadvertently coming into contact with an identified hazard.

Consequence

The outcome of an event expressed qualitatively or quantitatively.

Contractor

An employer performing construction work, or providing related or supporting services, on a project site.

Competent Person

A person who has in respect of the work or task to be performed the required knowledge, training, experience and as per OSHAct, 1993 (Act 85 of 1993) and CR 2014.

Construction Supervisor

A competent person responsible for supervising construction activities on a construction site

Excavation

Any man-made cut, cavity, pit, trench, or depression in the earth's surface formed by removing rock, sand, soil or other material using tools, machinery, and / or explosives. Tunnels, caissons and cofferdams are specifically excluded and are not addressed in this standard.

First-Aid Injury (FA)

A first-aid injury is any one time treatment and any follow up visit for observation of minor scratches, cuts, burns, splinters and the like which do not normally require medical care. Such treatment is considered to be first aid even if administered or supervised by a medical practitioner. First aid includes any hands on treatment given by a first aider. (E.g. Band-Aid, washing, cleansing, pain, relief). The following procedures are generally considered first aid treatment:

- Application of Antiseptics.
- Application of Butterfly adhesive dressing or sterile strips for cuts and lacerations.
- Administration of tetanus shot(s) or booster(s). However, these shots are often given in conjunction with more serious injuries, consequently injuries requiring these shots may be recordable for other reasons.
- Application of bandages during any visit to medical personnel.
- Application of ointments to abrasions to prevent drying or cracking.
- Inhalation of toxic or corrosive gas, limited to the removal of the employee to fresh air or the one time administration of oxygen for several minutes.
- Negative X-Ray diagnosis.
- Removal of foreign bodies not embedded in the eye if only irrigation is required.
- Removal of foreign bodies from a wound if procedure is uncomplicated, for example by tweezers or other simple technique.
- Treatment for first degree burns.
- Use of non-prescription medications and administration of single dose of prescription medication on first visit for any minor injury or discomfort.

Hazard

A source of potential harm in terms of human injury or ill health, or a combination of these.

Hierarchy of Controls

A sequence of control measures, arranged in order of decreasing effectiveness, used to eliminate or minimise exposure to workplace health and safety hazards:

- Elimination – Completely removing a hazard or risk scenario from the workplace.
- Substitution – Replacing an activity, process or substance with a less hazardous alternative.
- Isolation (Engineering) Controls – Isolating a hazard from persons through the provision of mechanical aids, barriers, machine guarding, interlocks, extraction, ventilation or insulation.
- Administrative Controls – Establishing appropriate policies, procedures and work practices to reduce the exposure of persons to a hazard. This may include the provision of specific training and supervision.

- Personal Protective Equipment – Providing suitable and properly maintained PPE to cover and protect persons from a hazard (i.e. Prevent contact with the hazard).

Incident

An event (or a continuous or repetitive series of events) that results or has the potential to result in a negative impact on people (employees, contractors and visitors), the environment, operational integrity, assets, community, process, product, legal liability and / or reputation.

Likelihood

A description of probability or frequency, in relation to the chance that an event will occur.

Lost Time Injury (LTI)

Any occurrence that resulted in a permanent disability or time lost from work of one day/shift or more.

If an employee is injured and cannot return to work in the next shift (will ordinarily miss one whole shift), and the department brings the employee in to only receive treatment by the Supervisor/ Return to Work Coordinator in that shift, this is still considered an LTI.

Lost Time Injury Frequency Rate (LTIFR) - Number of LTI's multiplied by 1 million or 200,000 and divided by labour hours worked.

Light Vehicle

A vehicle that:

- Can be licensed and registered for use on a public road;
- Has four or more wheels, and seats a maximum of 12 adults (including the driver);
- Requires the driver to hold only a standard civil driving licence; and
- Does not exceed 4.5 tonnes gross vehicle mass (GVM), which is the maximum loaded mass of the motor vehicle as specified by:
 - ♦ The vehicle's manufacturer; or
 - ♦ An approved and accredited automotive engineer, if the vehicle has been modified to the extent that the manufacturer's specification is no longer appropriate.

Examples of light vehicles include passenger cars, four-wheel drive vehicles, sports utility vehicles (suvs), pick-ups, minibuses, and light trucks.

Any vehicle falling outside of this definition must be considered mobile equipment.

Medical Treatment Injury (MTI)

A work injury requiring treatment by a Medical Practitioner and which is beyond the scope of normal first aid including initial treatment given for more serious injuries. The procedure is to be of an invasive nature (e.g. Stitches, removal of foreign body).

The following procedures are generally considered medical treatment:

- Application of sutures (stitches).
- Cutting away dead skin (surgical debridement).
- Loss of consciousness due to an injury or exposure in the work environment.

- Positive X-Ray diagnosis (fractures, broken bones etc.).
- Removal of foreign bodies embedded in the eye.
- Removal of foreign bodies from the wound by a physician due to the depth of embedment, size or shape of object or the location wound.
- Reaction to a preventative shot administered because of an occupational injury.
- Sprains and strains - series (more than one) of hot and cold soaks, use of whirlpools, diathermy treatment or other professional treatment.
- Treatment of infection.
- Treatment for second or third degree burns
- Use of prescription medications (except a single dose administered on first visit for minor injury or discomfort.)

Mobile Equipment

A vehicle (wheeled or tracked) that generally requires:

- The driver to hold a specific state or civil license; or
- The operator to hold a nationally recognized certificate of competency.

Examples of mobile equipment include, but are not limited to, dump trucks, water trucks, graders, dozers, loaders, excavators, forklifts, tractors, back-actors, bobcats, mobile cranes, tele-handlers, drill rigs, buses and road-going trucks.

Near-Miss

An incident that has occurred that did not result in any injuries, illnesses, environmental or property damage but had the potential to cause an injury, illness, environmental or property damage.

Regulation

In the context of this guideline, 'Regulation(s)' refers to the Construction Regulations, 2014 required by Section 43 of the Occupational Health and Safety Act 85 of 1993, published under Government Notice R 84 in Government Gazette 37305 of February 2014.

Risk

A combination of the likelihood of an occurrence of a hazardous event or exposure and the severity of injury or ill health that can be caused by the event or exposure.

Risk Assessment

A process of evaluating the risk arising from a hazard, taking into account the adequacy of any existing control measures, and deciding on whether or not the risk is acceptable.

Risk Management

The systematic application of management policies, processes and procedures to identifying hazards, analysing and evaluating the associated risks, determining whether the risks are acceptable, and controlling and monitoring the risks on an ongoing basis.

4. Abbreviations

DSTI - Daily Safety Task Instruction

CR – Construction Regulations

CHSO – Construction Health and Safety Officer

CSSH&SMP – Contractor’s Site Specific Health and Safety Management Plan

HIRA - Hazard Identification and Risk Assessment

IMS - Integrated Management System

MS - Management System

OH&S Act - Occupational Health and Safety Act

SACPCMP - The South African Council for Project and Construction Management Professions,
here in refer to as the registrar of Health and Safety Professionals

SOC - Safety Observation and Conversation

5. Contractor Health and Safety Management Plan

The contractor must prepare, implement and maintain a project-specific Health and Safety Management Plan. The plan must be aligned with the requirements set out in this specification as well as all relevant/applicable legislation. It must cover all activities that will be undertaken as part of the Project from mobilisation and set-up to rehabilitation and decommissioning.

The plan must demonstrate the contractor’s commitment to health and safety and must, as a minimum, include the following:

- A copy of the contractor’s **Health and Safety Policy**; in terms of the OHS Act section 7
- Procedures concerning **Hazard Identification and Risk Assessment**, including both Baseline and Task-Based Risk Assessments;
- Arrangements concerning the identification of applicable **Legal and Other Requirements**, measures to ensure compliance with these requirements, and measures to ensure that this information is accessible to relevant personnel;
- Details concerning **Health and Safety Objectives** – a process must be in place for setting objectives (and developing associated action plans) to drive continual improvement;
- Details concerning **Resources, Accountabilities and Responsibilities** – this includes the assignment of specific health and safety responsibilities to individuals in accordance with legal or project requirements, including the appointment of a Project Manager, Health and Safety Officers, Supervisors, Health and Safety Representatives, and First Aiders;
- Details concerning **Competence, Training and Awareness** – a system must be in place to ensure that each employee is suitably trained and competent, and procedures must be in place for identifying training needs and providing the necessary training;
- **Communication, Participation and Consultation** arrangements concerning health and safety, including Safety Observations and Conversations, Toolbox Talks, Daily Safe Task Instructions, project health and safety meetings, and notice boards;
- **Documentation and Document Control** – project-specific documentation required for the effective management of health and safety on the project must be developed and maintained, and processes must be in place for the control of these documents;
- Processes and procedures for maintaining **Operational Control**, including rules and requirements (typically contained in Safe Work Procedures) for effectively managing health

and safety risks, particularly critical risks associated with working at heights, confined spaces, mobile equipment and light vehicles, lifting operations, hazardous chemical substances, etc.;

- **Emergency Preparedness and Response** procedures;
- **Management of Change** – a process must be in place to ensure that health and safety risks are considered before changes are implemented;
- **Sub-contractor Alignment** procedures – a process must be in place for the assessment of sub-contractors and suppliers with regard to health and safety requirements and performance (before any contract or purchase order is awarded);
- **Measuring and Monitoring** plans, including a plan for the measuring and monitoring of employee exposure to hazardous substances or agents (e.g. Noise, dust, etc.) In order to determine the effectiveness of control measures;
- **Incident Reporting and Investigation** procedures describing the protocols to be followed with regard to incident reporting, recording, investigation and analysis;
- **Non-conformance and Action Management** procedures concerning the management of corrective actions;
- **Performance Assessment and Auditing** procedures concerning health and safety performance reporting, monthly internal audits to assess compliance with the project health and safety requirements, and daily site health and safety inspections; and
- Details concerning the **Management Review** process followed to assess the effectiveness of health and safety management efforts.

Prior to mobilisation, the Health and Safety Management Plan must be forwarded electronically, and as a hard copy, to the nominated Transnet project management representative for review. The plan will be audited for completeness and, if found to be adequate, will be accepted (typically “with comments”). Work may not commence until the plan has been accepted.

Once the plan has been accepted, the contractor must action and resolve any issues within 30 days from the start of work.

If the issues requiring corrective action are not resolved within this 30 day period, the contractor will be required to stop any work related to the outstanding actions until they have been resolved.

Any proposed amendments or revisions to the contractor’s Health and Safety Management Plan must be submitted to the nominated project management representative for acceptance.

Should it be identified that the contractor has overlooked a high risk activity, and as a result has omitted the activity and associated control measures from the Health and Safety Management Plan, the plan will not be approved.

6. Policy

The contractor must develop, display and communicate a Health and Safety Policy that clearly states the contractor’s values and objectives for the effective management of health and safety as required by OHS Act of 1993, 7(3). These values and objectives must be endorsed by the contractor’s management representatives and must be consistent with those adopted for the project.

The policy must be signed and dated, and must be reviewed annually.

The policy must commit to:

- Compliance with all applicable legal requirements in the Transnet regulatory universe;
- The effective management of health and safety risks;
- The establishment of measurable objectives for improving performance, and the provision of the necessary resources to meet these objectives;
- The prevention of incidents; and
- Achieving continual improvement with regard to health and safety performance.

All employees of the contractor as well as the employees of any sub-contractors that may be appointed by the contractor must be made aware of the policy. This must be done through Health and Safety Induction Training and Toolbox Talks.

A copy of the policy must be displayed in each meeting room and on each notice board.

7. Hazard Identification and Risk Assessment (OHS Act, Constr. Regulations 9)

Detailed hazard identification and risk assessment processes must be followed for all work to be performed as well as for all associated equipment and facilities as required by the Construction Regulation of 2014, Regulation 9(1) – (7).

The Client will provide a baseline risk assessment informing the contractor on the hazards and risks on site. The Contractor must ensure that effective procedures and risk assessment systems are in place to control hazards and to mitigate risks to levels that are as low as is reasonably practicable.

The risk assessment processes must be applied to:

- The full life cycle of the project;
- Routine and non-routine activities;
- Planned or unplanned changes;
- All employees, sub-contractors, suppliers and visitors; and
- All infrastructure, equipment and materials.

The risk assessment processes and methodologies must be appropriate for the nature and scale of the risks, and must be implemented by competent persons.

The process of analysing and managing risk must include the following:

- Establishing the context of the risk assessment;
- Identifying hazards and determining possible risk scenarios (unwanted events);
- Evaluating risks and assigning ratings (classification);
- Recording the risk analysis in a risk register;
- Managing risks according to their classification (prioritising for action);
- Identifying and implementing control measures (through the application of the Hierarchy of Controls) to ensure that risks are managed to levels that are as low as is reasonably practicable (ALARP);

- Developing action plans for reducing risk levels (where possible);
- Verifying the completion of actions;
- Re-evaluating the risks and classifications as appropriate; and
- Reviewing and updating the risk register.

7.1 Baseline Risk Assessments

Prior to site establishment, Transnet (the Client) will conduct a detailed Baseline Risk Assessment identifying foreseeable hazards and risk scenarios associated with the contractor's scope of work on the project site(s) as required by Construction Regulations of 2014, regulation 5(1)(a). Details concerning proposed control measures must be included. The risk assessment process must be facilitated by a competent person who has been appointed in writing and must involve the participation of the contractor's site management representatives, supervisory personnel and technical experts. An attendance register must be completed and retained for reference purpose. The Baseline Risk Assessment must be reviewed and approved by the Project Health and Safety Manager and Project Construction Manager.

When carrying out a Baseline Risk Assessment or a Task-Based Risk Assessment (refer to Section 7.2), Hazard (Energy) Types must be specified in accordance with the categorisation detailed in Table 7-1. Risk scenarios must be described indicating the manner in which a person may come into contact with, or be exposed to, a specific hazard.

An initial risk rating must be assigned to each risk scenario without taking any control measures into consideration. Control measures for managing the risks to levels that are as low as is reasonably practicable must then be identified for implementation on the project, and a residual risk rating must be assigned to each risk scenario taking the identified control measures into consideration.

Ratings must be assigned qualitatively using Transnet consequence and likelihood scales and descriptors (i.e. Transnet 5x5 qualitative risk matrix). Refer to Tables 7-2, 7-3 and 7-4.

Table 7-1: Hazard (Energy) Types

Gravitational									
Falling or Rolling Object		Person Falling from Height		Slip, Trip or Fall (Same Level)		Collapsing Structure		Collapsing, Flowing Substance	Slumping Material or
Mechanical									
Moving Component of Fixed Machinery		Moving Component of Powered Tool	Projectile	Moving Hand Tool	Sharp Object		Moving Mobile Equipment or Light Vehicle	Moving Person	Moving Object (Mechanically or Manually)
Elastic									
Object under Tension or Compression					Compressed Fluid (Gas or Liquid)				
Acoustic									
Noise									
Vibrational									
Hand / Arm Vibration					Whole Body Vibration				
Electrical									
Electricity					Electro-Magnetic Field				
Radiation									
Ionising Radiation					Non-Ionising Radiation				
Illumination									
Lighting									
Thermal									
Heat					Cold				
Fire									
Fire									
Explosion									
Explosion									
Particulates and Aerosols									
Dust		Fibres		Fume		Spray		Mist	Smoke
Chemical									
Corrosive Substance	Irritant	Asphyxiate	Narcotic Anaesthetic /	Poison	Allergen Sensitizer /	Carcinogen	Teratogen Mutagen /	Venom	
Microbiological									
Virus		Bacterium			Parasite			Fungus	
Weather									
Lightning		High Wind			Flooding			Hail	
Physiological									
Stress					Fatigue				
Ergonomic									
Exertion		Repetitive Movement			Awkward Posture			Awkward Movement	

Table 7-2: Consequence Descriptors

Consequence	Insignificant	Minor	Moderate	Major	Catastrophic
Health	Reversible health effects of little concern, requiring first aid treatment at most.	Reversible health effects of concern that would typically result in medical treatment.	Reversible health effects of concern that would typically result in a lost time illness.	Single fatality, or irreversible health effects or disabling illness.	Multiple fatalities or permanent disabling illness to multiple people.
Safety	Low-level, short-term subjective	Reversible injury requiring	Reversible injury or moderate	Single fatality, or considerable	Multiple fatalities or permanent

Consequence	Insignificant	Minor	Moderate	Major	Catastrophic
	inconvenience or symptoms. Typically a first aid case requiring no medical treatment.	treatment, but not leading to restricted duties. Typically a medical treatment case.	irreversible damage or impairment. Typically a lost time injury.	irreversible damage or impairment.	disabling injury to multiple people.

Table 7-3: Likelihood Descriptors

Likelihood	Likelihood Description	Frequency	Substance Exposure
Almost Certain	Recurring event during the life-time the project.	Typically occurs more than twice per year.	Frequent (daily) exposure at > 10 x OEL.
Likely	Event that may occur frequently during the life-time of the project.	Typically occurs once or twice per year.	Frequent (daily) exposure at > OEL.
Possible	Event that may occur during the life-time of the project.	Typically occurs once in 5 years.	Frequent (daily) exposure at > 50% of OEL. Infrequent exposure at > OEL.
Unlikely	Event that is unlikely to occur during the life-time of the project.	Typically occurs once in 10 years.	Frequent (daily) exposure at > 10% of OEL. Infrequent exposure at > 50% of OEL.
Conceivable but improbable	Event that is very unlikely to occur during the life-time of the project.	Typically occurs once in 100 years.	Frequent (daily) exposure at < 10% of OEL. Infrequent exposure at > 10% of OEL.

Table 7-4: Risk Matrix

Risk Calculator		Consequence				
		Insignificant	Minor	Moderate	Major	Catastrophic
Likelihood		1	2	3	4	5
Almost Certain	5	Moderate (5)	High (10)	High (15)	Extreme (20)	Extreme (25)
Likely	4	Low (4)	Moderate (8)	High (12)	Extreme (16)	Extreme (20)
Possible	3	Low (3)	Moderate (6)	Moderate (9)	High (12)	High (15)
Unlikely	2	Low (2)	Low (4)	Moderate (6)	Moderate (8)	High (10)
Conceivable but improbable	1	Low (1)	Low (2)	Low (3)	Low (4)	Moderate (5)

A Risk Register comprised of all significant risks (i.e. Risks rated as major or catastrophic) identified for the project will be compiled using the information contained in the project Baseline Risk Assessment as well as the contractor's Baseline Risk Assessment. Key control measures for managing each of these risks will be specified in the register.

For the significant risks in particular, action plans will be developed for reducing the risk levels (where possible).

The project Risk Register will be reviewed and, if necessary, updated:

- On a quarterly basis during construction;
- When changes are made to a design and / or the construction scope, schedule, methods, etc. That result in a change to the risk profile; and
- Following an incident.

The contractor must ensure that the hazards, risk scenarios and control measures identified in the contractor's Baseline and Task-Based Risk Assessments are taken into consideration when developing, implementing and maintaining the various elements of the contractor's health and safety management system for the project (e.g. Competence, training and awareness requirements). All persons potentially affected must be made aware of the hazards, risk scenarios and control measures identified in the contractor's risk assessments. This must be done through training, Toolbox Talks, and Daily Safe Task Instructions.

7.2 Task-Based Risk Assessments

The contractor must carry out detailed project-specific Task-Based Risk Assessments which must be reviewed and approved by the Client's Project Health and Safety Practitioner and Project Construction Manager prior to the commencement of any work.

The risk assessment process must be facilitated by a competent person who has been appointed in writing in terms CR 9 sub regulation (1). The contractor's site management representatives, supervisory personnel, technical experts (as required) and workforce personnel directly involved with the task being examined must participate in the risk assessment process. An attendance register must be completed and retained.

Please Note: Under no circumstances may a Contractor Health and Safety Officer perform a risk assessment in isolation. The active participation of all persons referred to above is mandatory.

A Task-Based Risk Assessment must at least:

- Be accompanied by a Work Method Statement (describing in sufficient detail how the specific job or task is to be performed in a logical and sequential manner);
- Provide a breakdown of the job or task into specific steps;
- Identify the hazards and potential risk scenarios associated with each step;
- Include consideration of possible exposure to noise, heat, dust, fumes, vapours, gases, chemicals, radiation, vibration, ergonomic stressors, or any other occupational health hazard or stressor;
- Describe the control measures that will be implemented to ensure that the risks are managed to levels that are as low as is reasonably practicable; and
- Assign an initial risk rating (without taking any control measures into consideration) and a residual risk rating (taking the identified control measures into consideration) to each risk scenario.

A Task-Based Risk Assessment must be reviewed and, if necessary, updated:

- On an annual basis (as a minimum);
- When changes are made to the associated Work Method Statement; and
- Following an incident.

7.3 Pre-Task Hazard Assessments

A pre-task hazard assessment must be completed whenever a change is identified while carrying out an activity. Any deviation from what was discussed during the Daily Safe Task Instruction (prior to the activity commencing), or anything that was not discussed, constitutes a change.

Before carrying out the particular task that involves the identified change, a few minutes must be spent identifying the hazards and risks associated with that task as well as suitable control measures.

8. Legal and Other Requirements

The Contractor must comply with the requirements of all applicable health and safety legislation as well as Transnet project-specific standards and procedures as amended from time to time.

The Contractor must compile and maintain a register of all legal and other requirements applicable to the work that will be carried out and / or services that will be provided. This register must be updated regularly to ensure that it remains relevant.

Applicable laws and standards must be appropriately communicated to all employees of the contractor (as well as the employees of any sub-contractors that may be appointed by the contractor) through training, Toolbox Talks, and Daily Safe Task Instructions.

9. Health and Safety Objectives

In order to drive continual improvement, the contractor must set project-specific health and safety objectives and must develop improvement action plans to achieve these objectives. The contractor's objectives must be aligned with the objectives set for the project as a whole as required by the Construction Regulations of 2014.

Eliminating health and safety hazards, minimising health and safety risks, preventing incidents, injuries and illnesses, and ensuring legal compliance must be the primary considerations for setting objectives.

When setting objectives, consideration must be given to the following:

- Leading indicators such as inspection findings, audit findings, hazard reporting, and observations;
- Lagging indicators (i.e. Incidents including Near Hits);
- Leading practices and lessons learnt; and
- Injury frequency rates with due understanding that the goal is "no harm".

The objectives must be specific and measurable. The improvement action plans must specify the resources (both human and financial) required to achieve the objectives, the person's responsible, and realistic timeframes for completion. The contractor must ensure that adequate resources are allocated and that progress towards meeting the objectives is monitored regularly.

The objectives and associated improvement action plans must be documented and must be communicated to all contractor employees. Furthermore, to ensure that the objectives remain relevant, they must be reviewed on a quarterly basis and whenever significant change has taken place on the project (i.e. Changes to activities, scope of work, operating conditions, etc.).

10. Resources, Accountabilities and Responsibilities

The Contractor must adequately allocate resources, responsibility and accountability to ensure the effective implementation, maintenance and continual improvement of the contractor's health and safety management system on the projects required by Construction Regulation Of 2014, regulation 7(2)(c).

For each role that carries health and safety accountability and / or responsibilities (including legislative requirements), a role description detailing the accountability and / or responsibilities must be documented.

All health and safety appointments (i.e. the assignment of specific health and safety responsibilities to individuals in accordance with legal or project requirements) must be done in writing. Documented proof of each appointment (i.e. a signed appointment letter) must be retained.

Contractor should not discharge any legal responsibilities to employees who are not legally appointed.

The contractor must comply with the requirements of all applicable legislation concerning health and safety related appointments and delegations for the project.

A health and safety organisational chart specific to the project must be documented and maintained. All roles that carry health and safety accountability and / or responsibilities must be included, and all individuals that carry health and safety appointments must be clearly identified.

The provision of dedicated health and safety professionals on the project must be appropriate for the nature and scale of the work to be carried out.

The contractor is solely responsible for carrying out the work under the contract whilst having the highest regard for the health and safety of all persons on the project site(s).

Health and safety is the responsibility of each and every individual on the project site(s), but in particular, it is the responsibility of the contractor's management team who must set the tone.

Visible commitment is essential to providing and maintaining a safe workplace. The contractor's managers and supervisors at all levels must demonstrate their commitment and support by adopting a risk management approach to all health and safety issues. These individuals must consistently take immediate and firm action to address violations of health and safety rules, and must actively participate in day to day activities with the objective of preventing harm.

The contractor's management representatives are responsible and accountable for health and safety performance on the project. Key responsibilities include the following:

- Preparing, implementing and maintaining a risk-based Health and Safety Management Plan specific to the work that will be carried out;
- Establishing, implementing and maintaining health and safety programmes and procedures to ensure that all work is carried out in compliance with the requirements of this specification, the contract, and all applicable legislation;

- Establishing, implementing and maintaining effective hazard identification and risk management processes and procedures to ensure that all reasonably foreseeable hazards are controlled in order to minimise risk;
- Providing the resources necessary to meet the requirements of this specification;
- Ensuring that all contractor employees have clearly defined responsibilities with regard to health and safety, and that these responsibilities are clearly communicated and understood;
- Establishing, implementing and maintaining a system for on-going training and assessment of skills and competence;
- Establishing, implementing and maintaining procedures to ensure that only qualified and competent personnel are permitted to work on the project site(s);
- Establishing, implementing and maintaining effective communication and consultative processes concerning health and safety for the duration of the contract;
- Maintaining operational control for the protection of all persons on the project site(s) as well as the public;
- Establishing, implementing and maintaining effective emergency preparedness and response procedures;
- Establishing, implementing and maintaining effective management of change processes and procedures;
- Establishing, implementing and maintaining effective incident reporting and investigation processes and procedures;
- Establishing, implementing and maintaining effective auditing and inspection processes and procedures; and
- Formally reviewing the contractor's Health and Safety Management System annually to ensure that the system continues to be effective in managing health and safety performance and meeting project requirements.

All costs associated with meeting these responsibilities shall be borne by the contractor.

Any cost associated with any work stoppage due to non-compliance with a health and safety requirement shall be for the contractor's account.

10.1 Contractor Construction Manager

The Contractor must appoint a competent Construction Manager who shall be responsible for the successful and safe completion of all work to be carried out by the contractor as required by the Construction regulations of 2014, regulation 8(1).

The contractor's Construction Manager shall be responsible for:

- Ensuring that a Health and Safety Policy that clearly states the contractor's values and objectives for the effective management of health and safety on the project is in place and is communicated to all contractor and sub-contractor employees;
- Ensuring that all applicable legal and project health and safety requirements are identified and complied with at all times;



- Ensuring that effective hazard identification and risk management processes are established and implemented for all work to be carried out by the contractor;
- Participating in the Baseline Risk Assessment for the contractor's scope of work (prior to site establishment);
- Participating in (and approving) all Task-Based Risk Assessments conducted for the work to be carried out by the contractor;
- Driving the achievement of agreed health and safety objectives;
- Ensuring that the necessary resources are made available for the effective implementation of the contractor's Health and Safety Management Plan;
- Ensuring that all work is adequately and competently supervised;
- Ensuring that all contractor employees have clearly defined responsibilities with regard to health and safety (assigned in writing), and that these responsibilities are clearly communicated and understood;
- Ensuring as far as is reasonably practicable that each contractor and sub-contractor employee is competent to perform his role, and has received appropriate workplace health and safety training and instruction;
- Managing all appointed sub-contractors with regard to health and safety performance;
- Establishing and maintaining effective communication and consultative processes to ensure that all contractor and sub-contractor employees are kept up to date with regard to health and safety information (e.g. Incidents and lessons learnt, leading practices, hazards, risks and control measures, etc.) And that feedback is provided promptly regarding issues and / or concerns raised;
- Participating in the project's Visible Felt Leadership (VFL) programme;
- Chairing monthly Contractor Health and Safety Meetings and attending monthly Site Health and Safety Meetings;
- Implementing programmes that encourage continual improvement and providing recognition for suggestions made by contractor and sub-contractor employees;
- Implementing the contractor's Health and Safety Management Plan and associated Safe Work Procedures;
- Acting consistently and strictly against any contractor or sub-contractor employee who transgresses a health and safety rule or requirement;
- Ensuring that an effective management of change process is in place;
- Implementing, testing and maintaining an effective Emergency Response Plan for all contractor and sub-contractor activities, and ensuring that the plan is adequately resourced;
- Ensuring that workplace exposure of contractor and sub-contractor employees to hazardous substances or agents is measured and monitored to determine the effectiveness of controls and compliance with legal (and project) requirements;
- Ensuring that all incidents are reported without delay and are investigated thoroughly;
- Participating in investigations into significant incidents;

- Ensuring that accurate health and safety statistics are maintained, and that health and safety performance reports are compiled as required;
- Providing the necessary resources for regular health and safety audits and inspections to be conducted, and supporting the auditing process;
- Participating in health and safety audits, and carrying out workplace inspections;
- Ensuring that corrective actions (arising from incident investigations, audits, inspections, etc.) are implemented, and that adequate resources are provided for this purpose; and
- Participating in an annual review of the contractor's Health and Safety Management System.

10.2 Contractor Health and Safety Officers

The contractor must appoint a full-time Health and Safety Officer for the duration of the contract who is registered with the SACPCMP (The South African Council for Project Construction Management Professions). The project site(s) (directly or through sub-contractors), must appoint full-time Health and Safety Officers, the number of which depending on the scope, complexity, budget and high risk activities involved, as required by the Construction regulations of 2014, regulation 8(5).

The Health and Safety Officer(s) must be on site when work commences at the start of the day and must remain on site until all activities for that day (including the activities of sub-contractors) have been completed. A Health and Safety Officer must be present during all shifts, so if work is carried out over more than one shift per day, the contractor must make provision for additional Health and Safety Officers.

Each Contractor Health and Safety Officer shall be responsible for:

- Reviewing all applicable legal and project health and safety requirements and providing guidance to contractor and sub-contractor personnel (particularly the contractor's Project Manager) to help ensure compliance at all times;
- Assisting with the implementation of effective hazard identification and risk management processes for all work to be carried out by the contractor;
- Participating in the Baseline Risk Assessment for the contractor's scope of work (prior to site establishment) and ensuring that identified control measures are implemented;
- Participating in all Task-Based Risk Assessments conducted for the work to be carried out by the contractor and ensuring that identified control measures are implemented;
- Conducting contractor health and safety induction training for all contractor and sub-contractor personnel;
- Compiling and maintaining all health and safety related documents and records required of the contractor;
- Communicating relevant health and safety information to contractor and sub-contractor personnel (e.g. Incidents and lessons learnt, leading practices, hazards, risks and control measures, etc.);
- Carrying out Safety Observations and Conversations (one per day);
- Evaluating (on a daily basis) the content of the Daily Safe Task Instructions (DSTI's) conducted by the contractor's appointed supervisors, and attending at least one DSTI each day;



- Attending monthly Contractor and Site Health and Safety Meetings;
- Assisting with the implementation of the contractor's Health and Safety Management Plan and associated Safe Work Procedures;
- Carrying out Planned Task Observations on an ad hoc basis;
- Assisting with the implementation, testing and maintenance of an effective Emergency Response Plan for all contractor and sub-contractor activities;
- Responding to workplace incidents (as appropriate);
- Participating in incident investigations;
- Maintaining accurate health and safety statistics (for the contractor and all sub-contractors), and compiling health and safety performance reports as required;
- Auditing the health and safety management system and workplace activities of the contractor and each sub-contractor on a monthly basis to assess compliance with the project health and safety requirements; and
- Tracking and reporting on the implementation of corrective actions (arising from incident investigations, audits, inspections, etc.).

The contractor must ensure that each Health and Safety Officer is adequately equipped to enable him to perform his duties effectively. Each Health and Safety Officer must be provided with the following:

- A computer with access to all necessary systems, including access to e-mail and the internet;
- A mobile telephone on contract or with adequate pre-paid airtime; and
- A vehicle where required or instructed by a nominated project management representative (depending on the size and location of the project site(s)).

A Health and Safety Officer must over and above the SACPCMP registration as an Officer; be computer literate, fluent in English, and must have the following minimum qualifications, training and experience:

- At least 5 years' experience as a Health and Safety Officer on construction projects;
- SAMTRAC, NEBOSH or an equivalent training course with accredited health and safety service provider as a minimum qualification;
- Experience and appropriate training with regard to implementing and maintaining a health and safety management system compliant with national legislation or an international standard;
- Experience and appropriate training with regard to construction related hazard identification and risk management processes;
- Competence, experience and relevant training with regard to incident investigation procedures and causation analysis;
- Health and safety auditing experience and training;
- A valid First Aid certificate of competency;
- Fire prevention and protection training; and
- A valid Driving Licence (light motor vehicle).

- Registered as a Health and Safety Officer or Health and Safety Manager with SACPCMP.

The Client will stipulate whether a CHSO or CHSM is required depending on the size of the project and on the risks. Before placing a Health and Safety Officer on the project site(s), the contractor must forward a copy of the person's CV to the nominated Transnet Project Management Representative or to the Lead Health and Safety Manager for review and acceptance. A proposed candidate may be rejected should he/she not meet the experience and/or qualification requirements, or due to poor work performance on previous projects.

10.3 Contractor Supervisors

The contractor must ensure that all project and/or construction works are supervised at all times by an adequate number of qualified, competent and appointed supervisors who have experience in the type of work being carried out as required by Construction regulations of 2014, regulation 8(7) and 8(8).

No work may be carried out without an appointed supervisor being physically present in the work area(s) and without a daily safety task instruction having been completed.

Each Contractor Supervisor shall be responsible for:

- Ensuring that all work carried out under his supervision is done so in accordance with the requirements of all applicable legislation, rules, standards, specifications, plans and procedures;
- Participating in Baseline and Task-Based Risk Assessments;
- Ensuring that all employees under his supervision are made aware of the hazards, risk scenarios and control measures identified in relevant risk assessments;
- Ensuring that the control measures stipulated in all relevant risk assessments are in place and are implemented fully for all work carried out under his supervision;
- Ensuring that all employees under his supervision conduct pre-task hazard assessments when necessary;
- Driving the achievement of health and safety objectives set for his team;
- Ensuring that the necessary written appointments are in place for each employee under his supervision (e.g. First aider, mobile crane operator, etc.);
- Ensuring that all employees under his supervision attend all required training;
- Ensuring that no employee carries out any work that he is not competent to perform or has not been appointed to perform;
- Identifying training needs within his team;
- Carrying out Safety Observations and Conversations (one per day);
- Conducting a weekly Toolbox Talk with his team;
- Leading a Daily Safe Task Instruction discussion with his team;
- Attending Health and Safety Meetings as required;
- Maintaining a Health and Safety Management Information Notice Board in the work area for which he is responsible;

- Recording, on a daily basis, a description of the day's activities as well as a breakdown (by occupation) of the personnel on site under his supervision (e.g. 5 bricklayers, 2 carpenters, 3 welders, 22 general workers, and 1 supervisor);
- Ensuring that all Safe Work Procedures applicable to the work carried out under his supervision are adhered to and are fully implemented;
- Maintaining discipline and taking the necessary action whenever an employee under his supervision does not adhere to a rule or requirement;
- Carrying out Planned Task Observations (one per day);
- Ensuring that emergency response procedures are understood by all employees under his supervision and that these procedures are followed in the event of an emergency;
- Reporting all incidents immediately, participating in incident investigations, communicating the lessons learnt to all employees under his supervision, and implementing corrective actions where required; and
- Carrying out workplace health and safety inspections.

Each supervisor must accept these responsibilities in writing as part of his appointment.

Each supervisor must be equipped with a mobile telephone to ensure that effective communication can be maintained for the duration of the contract.

10.4 Health and Safety Representatives

The team of employees on site must have a health and safety representative deployed on the project site(s). A Health and Safety Representative must be elected and appointed. Taking into consideration the number of employees deployed, the geographical area in which the work is taking place, the different work disciplines, and the shift pattern (if applicable), the contractor must ensure that an adequate number of Health and Safety Representatives (at a minimum ratio of one Health and Safety Representative per 50 employees) are elected and appointed to effectively represent all site personnel as required by the OHS Act 85 of 1993, section 17 - 18.

Each Health and Safety Representative must attend an accredited training course for health and safety representatives. The cost of this training shall be for the contractor's account.

The contractor must make the necessary allowances for the Health and Safety Representatives to carry out their duties as specified in the applicable legislation.

The contractor must ensure that an appropriate sticker is affixed to the safety helmet of each Health and Safety Representative for identification purposes.

10.5 First Aiders

At least one trained and competent First Aider must be in place and must be appointed for the project site(s). Taking into consideration the number of employees deployed, the geographical area in which the work is taking place, the different work disciplines, and the shift pattern (if applicable), the contractor must ensure that an adequate number of First Aiders (at a minimum ratio of one First Aider per 50 employees) are in place and have been appointed to administer first aid treatment should this be required.

First Aid training must be done through an accredited training institution. The cost of this training shall be for the contractor's account.

The contractor must ensure that an appropriate sticker is affixed to the safety helmet of each First Aider for identification purposes.

10.6 Duties of Client

As per the Construction regulations of 2014, regulation 5(1) – (8) a client will—

- Prepare a baseline risk assessment for an intended construction work project;
- Prepare a suitable, sufficiently documented and coherent site specific health and safety specification for the intended construction work based on the baseline risk assessment contemplated in paragraph
- Provide the designer with the health and safety specification contemplated in paragraph (b);
- Ensure that the designer takes the prepared health and safety specification into consideration during the design stage;
- Ensure that the designer carries out all responsibilities contemplated in CR regulation 6;
- Include the health and safety specification in the tender documents;
- Ensure that potential principal contractors submitting tenders have made adequate provision for the cost of health and safety measures;
- Ensure that the principal contractor to be appointed has the necessary competencies and resources to carry out the construction work safely;
- Take reasonable steps to ensure co-operation between all contractors appointed by the client to enable each of those contractors to comply with these Regulations;
- Ensure before any work commences on a site that every principal 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 (Act No. 130 of 1993);
- Appoint every principal contractor in writing for the project or part thereof on the construction site;
- Discuss and negotiate with the principal contractor the contents of the principal contractor's health and safety plan contemplated in CR regulation 7(1), and must thereafter finally approve that plan for implementation;
- Ensure that a copy of the principal contractor's health and safety plan is available on request to an employee, inspector or contractor;
- Take reasonable steps to ensure that each contractor's health and safety plan contemplated in
- CR Regulation 7(1)(a) is implemented and maintained;
- Ensure that periodic health and safety 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;
- Ensure that a copy of the health and safety audit report contemplated in paragraph (o) is provided to the principal contractor within seven days after the audit;
- Stop any contractor from executing a construction activity which poses a threat to the ensure that a copy of the health and safety audit report contemplated in paragraph (o) is provided to the principal contractor within seven days after the audit;
- Stop any contractor from executing a construction activity which poses a threat to the health and safety of persons which is not in accordance with the client's health and safety specifications and the principal contractor's health and safety plan for the site;
- Where changes are brought about to the design or construction work, make sufficient health and safety information and appropriate resources available to the principal contractor to execute the work safely; and
- Ensure that the health and safety file contemplated in CR regulation 7(1) (b) is kept and maintained by the Principal contractor.

Where a client requires additional work to be performed as a result of a design change or an error in Construction due to the actions of the client, the client must ensure that sufficient safety information and appropriate additional resources are available to execute the required work safely.

Where a fatality or permanent disabling injury occurs on a construction site, the client must ensure that the contractor provides the provincial director with a report contemplated in section 24 of the Act, in accordance with regulations 8 and 9 of the General Administrative Regulations, 2013, and that the report includes the measures that the contractor intends to implement to ensure a safe construction site as far as is reasonably practicable.

Where more than one principal contractor is appointed as contemplated in sub-regulation CR 5(1) (k), the client must take reasonable steps to ensure co-operation between all principal contractors and Contractors in order to ensure compliance with these Regulations.

10.7 Duties of the Designer

As per the Construction regulations of 2014, regulation 6(1) – (2) a designer must –

- Ensure that the applicable safety standards incorporated into these Regulations under section 44 of the Act are compiled within the design;
- Take into consideration the health and safety specification;
- Before the contract is put out to tender, make available in a report to the client—
- All relevant health and safety information about the design of the relevant structure that may affect the pricing of the construction work;
- The geotechnical-science aspects, where appropriate; and
- The loading that the structure is designed to withstand;
- Inform the client in writing of any known or anticipated dangers or hazards relating to the construction work, and make available all relevant information required for the safe execution of the work upon being designed or when the design is subsequently altered;
- When modifying the design or substituting materials; take into account the hazards relating to any subsequent maintenance of the relevant structure and must make provision in the design for that work to be performed to minimize the risk;
- When mandated by the client to do so, carry out the necessary inspections at appropriate stages to verify that the construction of the relevant structure is carried out in accordance with his design: Provided that if the designer is not so mandated, the client's appointed agent in this regard is responsible to carry out such inspections;
- When mandated stop any contractor from executing any construction work which is not in accordance with the relevant design's health and safety aspects: Provided that if the designer is not so mandated, the client's appointed agent in that regard must stop that contractor from executing that construction work;
- When mandated in his or her final inspection of the completed structure in accordance with the National Building Regulations, include the health and safety aspects of the structure as far as reasonably practicable, declare the structure safe for use, and issue a completion certificate to the client and a copy thereof to the contractor; and
- During the design stage, take cognizance of ergonomic design principles in order to minimize ergonomic related hazards in all phases of the life cycle of a structure.

The designer of temporary works must ensure that -

- All temporary works are adequately designed so that it will be capable of supporting all anticipated vertical and lateral loads that may be applied;
- The designs of temporary works are done with close reference to the structural;

- The designs of temporary works are done with close reference to the structural design drawings issued by the contractor, and in the event of any uncertainty consult the contractor;
- All drawings and calculations pertaining to the design of temporary works are kept at the office of the temporary works designer and are made available on request by an inspector; and
- The loads caused by the temporary works and any imposed loads are clearly indicated in the design.

10.8 Duties of Principal Contractor

As per the Construction regulations of 2014, regulation 7(1) – (8) a Principal Contractor and Contractor must

- Provide and demonstrate to the client a suitable, sufficiently documented and coherent site specific health and safety plan, based on the client's documented health and safety specifications contemplated in CR 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;
- 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, the client, the client's agent or a contractor; and
- On appointing any other contractor, in order to ensure compliance with the provisions of the Act:

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 CR regulation 5(1)(b) pertaining to the construction work which has to be performed;

- Ensure that potential contractors submitting tenders have made sufficient provision for health and safety measures during the construction process;
- 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;
- 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;
- Appoint each contractor in writing for the part of the project on the construction site;
- 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 CR 7 sub-regulation (2)(a), is available on request to an employee, an inspector, a contractor, the client or the client's agent;
- Hand over a consolidated health and safety file to the client upon completion of the construction work and must, in addition to the documentation referred to in CR 7 sub-regulation (2)(b), include a record of all drawings, designs, materials used and other similar information concerning the completed structure;
- In addition to the documentation required in the health and safety file in terms of paragraph (c)(v) and CR 7 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 principal contractor, the agreements between the parties and the type of work being done; and
- Ensure that all his or her employees have a valid medical certificate of fitness, inclusive of a drug test and specific to the Construction work to be performed and issued by an occupational health practitioner in the form of Annexure 3.

10.9 Duties of Contractor

A contractor must -

- Prior to performing any construction work, provide and demonstrate to the principal contractor a suitable and sufficiently documented health and safety plan, based on the relevant sections of the client's health and safety specification and provided by the principal contractor, 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;
- Open and keep on site a health and safety file, which must include all documentation required and must be made available on request to an inspector, the client, the client's agent or the principal contractor;
- 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;
- 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
- 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 that apply to the principal contractor apply to the contractor as if he or she were the principal contractor. A 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.

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 and such records must be made available on request to an inspector, the client, the client's agent or the principal contractor.

A contractor must ensure that all his or her employees have a valid medical certificate of fitness, inclusive of a drug test specific to the construction work to be performed and issued by a registered occupational health practitioner, in the form of Annexure 3.

10.10 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, 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 in the opinion of an inspector, a sufficient number of such assistant construction managers, that inspector must direct the construction manager in writing to appoint the number of assistant construction managers indicated by the inspector.

No construction manager appointed 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.

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 or part-time construction health and safety officer in writing to assist in the control of all health and safety 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 the Transnet Project Manager is decisive.

No contractor may appoint a construction health and safety officer to assist in the control of health and safety related aspects on the site unless he or she is reasonably satisfied that the construction health and safety 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 and safety 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 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.

No construction supervisor appointed under 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 assistant construction supervisors have been appropriately designated on all the relevant construction sites, the appointed construction supervisor may supervise more than one site.

11. Competence, Training and Awareness

Each employee (including sub-contractor employees) must be suitably trained and competent, and must understand the health and safety hazards, risks and control measures associated with his work as required by the OHS Act 85 of 1993.

The contractor must implement systems and procedures to ensure that:

- The necessary competencies required by employees are identified (by occupation), along with selection, placement and any training requirements;

Please Note: Specific competency profiles and selection criteria (fitness for work) must be developed for all roles where significant health or safety risk exists.

Please Note: A formal training needs analysis must be carried out based on the competency profiles and a training matrix must be developed for the project.

Roles requiring technical certification, registration or licensing are identified and documented, and these roles are filled only by suitably qualified personnel;

- Minimum core health and safety skills required by employees in leadership and supervisory roles are identified and suitable training is provided including hazard identification and risk assessment, incident investigation, and health and safety interactions (i.e. Observation and Conversations techniques);
- Competency-based training is provided and it includes operational controls (procedures and work instructions), management of change, and emergency response;
- All employees hold and maintain the required competencies (including appropriate qualifications, certificates and licences) and are under competent supervision;
- A site-specific induction and orientation programme that highlights health and safety requirements, procedures, and significant hazards, risks and associated control measures is in place for all new employees and visitors (understanding must be assessed);
- Personnel are trained and / or briefed on new or amended standards, rules, safe work procedures, risk assessments, etc.;
- Refresher training is carried out as required (e.g. Re-induction following an absence from site);
- Records of education, qualifications, training, experience and competency assessments are maintained on site for all employees; and
- The effectiveness of training is reviewed and evaluated.

Prior to the commencement of any work, including mobilisation and site set-up activities, the contractor must provide, to the satisfaction of the nominated project management representative, current documentation verifying that the contractor's employees, as well as the employees of any appointed sub-contractors, are competent and have the necessary qualifications, certificates, licences, job skills, training and experience (as required by this specification and applicable legislation) to safely carry out the work that is to be performed.

The Contractor and sub-contractor must ensure that the following training takes place:

- health and safety induction training pertaining to the hazards prevalent on the site at the time of entry
- training for all persons required to erect, move or dismantle temporary works structures and instruction to perform those operations safely
- training of employees working from a fall risk position
- training to work or to be suspended on a platform which includes at least:
 - how to access and egress the suspended platform safely;
 - how to correctly operate the controls and safety devices of the equipment;
 - information on the dangers related to the misuse of safety devices; and
 - information on the procedures to be followed in the case of-
 - o an emergency;
 - o the malfunctioning of equipment; and
 - o the discovery of a suspected defect in the equipment;
 - o an instructions on the proper use of body harnesses.
- Training for all operators of construction vehicles and mobile plant.

A contractor must at all times keep on his or her construction site records of the health and safety induction training and such records must be made available on request to an inspector, the client, the client's agent or the principal contractor.

Please Note: Only certified copies of certificates, licences, etc. will be accepted.

An Employee Profile (dossier) must be completed for each employee who will be performing work on site. All documentation pertaining to an employee's competence (i.e. certified copies of qualifications, certificates and licences as well as proof of job skills, training and experience) must be maintained in this dossier.

If it is determined through observation that an employee is not yet competent to carry out a particular task in a safe and capable manner, the employee will be required to cease work immediately and must either be reassigned or be retrained at the contractor's expense.

The contractor must provide proof that the training institutions and trainers that are used are appropriately registered with a governing authority (a trainer's registration certificate or registration number alone will not be adequate). The following must be made available for verification purposes:

- Proof of registration of the training institution including the training programmes that the institution is accredited to provide; and
- For each trainer, proof of competency and registration for the specific training programmes presented.

Foreign qualifications held by employees in health and safety critical roles must be verified against the requirements of local legislation.

11.1 Health and Safety Induction Training

Each employee must attend all mandatory Health and Safety Induction Training applicable to the project. No employee will be permitted to enter any project work site until he has attended this training. Each employee must carry proof that he has completed the induction training and may be removed from a site if such proof cannot be produced on request, this as required by the Construction regulations of 2014, Regulation 7(5).

All visitors must receive a visitor induction briefing before entering any project work site. However, this induction does not permit a visitor to enter a site unescorted. Visitors must be accompanied at all times by an appropriately senior employee who has been fully inducted.

11.2 Specific Training and Competency Requirements

The following specific training and competency requirements must be complied with, where applicable to the project.

Please Note: An employee must be trained, assessed and found competent before he will be given authorisation to perform certain tasks or fill certain roles.

Table 11-2: Specific Training and Competency Requirements

Training	Applicable To
Health and Safety Induction	All employees
Safety Observations and Conversations (Safety Interactions)	All employees
Risk Assessment*	All managers and supervisors
Incident Investigation*	All managers and supervisors
Safety Leadership	All managers and supervisors
Legal Liability*	All managers and supervisors
Health and Safety Rep*	All elected Health and Safety Representatives
First Aid Levels 1, 2 and 3*	All nominated First Aiders
Fire Fighting (Fire Extinguisher Use)*	All employees
Permit to Work	All Authorised Persons (i.e. Permit issuers) and all Applicants (i.e. Employees who will be applying for permits)
Mobile Equipment Site Licence*	All mobile equipment operators

Training requirements marked with an * must be arranged by the contractor through accredited external training institutions.

12. Communication, Participation and Consultation

The contractor must establish and maintain effective communication and consultative processes (allowing for a two-way dialogue) for the duration of the project to ensure that:

- All personnel are kept up to date with regard to health and safety matters (e.g. Hazards and risks, incidents and lessons learnt, leading practices, performance against objectives, etc.);
- General health and safety awareness levels are kept high;
- Prompt feedback is given to personnel with regard to health and safety issues or concerns that they raise; and
- Relevant, and often critical, health and safety related information (e.g. Design changes, instructions, reporting of hazardous conditions or situations, etc.) is effectively disseminated.

This must be achieved as follows:

12.1 Visible Felt Leadership (VFL) and Safety Observations and Conversations (SOC's)

The contractor's supervisory personnel (i.e. Managers and supervisors) must participate in the project's Visible Felt Leadership (VFL) programme. Each manager and each supervisor must, as part of his normal duties, perform Safety Observations and Conversations (SOC's). The intention of this programme is to encourage interaction between supervisors and workers concerning health and safety matters in order to:

- Reinforce behaviours consistent with standards, procedures and management system requirements;
- Correct behaviours inconsistent with standards, procedures and management system requirements; and

- Verify whether employees have the necessary training, certification, equipment, etc. To perform the work that they are carrying out.

Each manager, supervisor, safety personnel has a required number of SOCS to be completed per week. All SOC's that are recorded must be submitted to the nominated project management representative on a weekly basis.

The information that is gathered must be analysed and any trends that are identified must be acted on to correct unsafe behaviour or conditions.

12.2 Toolbox Talks

The contractor must prepare a Toolbox Talk on a weekly basis and must share it with all personnel for which the contractor is responsible (including all sub-contractors). Toolbox Talks must address health and safety issues that are relevant to the work performed on the project site(s) and must include information and / or knowledge sharing, lessons learnt from incidents that have occurred, information concerning specific hazards and / or risks and control measures to prevent injury, etc.

Attendance records must be kept and maintained in the contractor's health and safety file.

12.3 Daily Safe Task Instructions (DSTI's)

A Daily Safe Task Instruction (DSTI) is a pre-start discussion amongst the members of a work team, led by the appointed supervisor, aimed at anticipating hazards and potential risks associated with the activities planned for the day or shift, and ensuring that the necessary control measures are in place to prevent incidents.

At the start of each day or shift, prior to the start of any work, each appointed supervisor must inspect the work area for which he is responsible and ensure that it is safe. He must then conduct a DSTI with his work team specifically concerning the tasks that they will be performing during the course of the day or shift. The relevant Task-Based Risk Assessment for the activity must be used as the basis for the discussion. The correct work method must be reiterated and the identified hazards, risks and control measures must be discussed with the team (each team member must be given the opportunity to contribute and participate in the discussion).

Any team member arriving late must first be taken through the information that was discussed (work method, hazards, risks and control measures) before being permitted to start working. If the work method changes after activities have already begun, the DSTI must be revisited, updated and re-communicated with the team, and the changes must be signed off by the relevant Contractor Health and Safety Officer.

Every member of the work team must sign the DSTI attendance register. The attendance records must be kept and maintained in the contractor's health and safety file.

The contractor's Health and Safety Officer must evaluate the content of the DSTI's daily to ensure that they are task-specific. Furthermore, the Health and Safety Officer must attend the DSTI discussion but must not lead the DSTI discussions, as this is the responsibility of the appointed supervisor.

12.4 Health and Safety Suggestions

All employees must be encouraged to submit suggestions to enhance health and safety management on the project site(s). A process must be in place for documenting, evaluating, implementing (as appropriate), archiving and recognising the improvement ideas.

12.5 Health and Safety Meetings

12.5.1 Contractor Health and Safety Meetings (OHS Act Section 19)

The contractor must schedule and consistently hold monthly health and safety meetings. These meetings must be chaired by the contractor's Project Manager and the following persons must be in attendance:

- Contractor and sub-contractor management representatives;
- Contractor and sub-contractor supervisors;
- Contractor and sub-contractor appointed Health and Safety (Employee) Representatives;
- Contractor and sub-contractor Health and Safety Officers; and

The meeting must address the following as a minimum:

- New incidents for the period and corrective actions taken or to be taken;
- Implementation status of outstanding actions associated with previous incidents;
- SOC's, PTO's and DSTI's carried out for the period and action required to correct trends identified;
- Results of any audits, inspections (including H&S Rep inspections) or site visits carried out;
- A look ahead to ensure that appropriate health and safety planning and preparation is done for upcoming work;
- Risk Assessments, Safe Work Procedures, etc. That are outstanding or due for review (as well as the quality of these documents); and
- Any other health and safety related matter.

The contractor must compile minutes of each meeting and such minutes must be signed off by the Chairperson as a true reflection and attendance records must be kept. These records must be maintained in the contractor's health and safety file.

12.5.2 Site Health and Safety Meetings

In addition to the Contractor Health and Safety Meetings, the Project will schedule monthly Site Health and Safety Meetings that the contractor must attend. These meetings will be chaired by the Project Construction Manager and the following persons must be in attendance:

- Contractor management representatives;
- Contractor Health and Safety Officers;
- The Project Health and Safety Manager;
- Project Health and Safety Advisors; and
- Client representatives (ad hoc).

The meeting will address the following as a minimum:

- Feedback from the contractor concerning health and safety performance for the period.
- New incidents for the period and corrective actions taken or to be taken;
- Implementation status of outstanding actions associated with previous incidents;
- SOC's, PTO's and DSTI's carried out for the period and action required to correct trends identified;
- Results of any audits, inspections or site visits carried out;
- A look ahead to ensure that appropriate health and safety planning and preparation is done for upcoming work;
- Risk Assessments, Safe Work Procedures, etc. That are outstanding or due for review (as well as the quality of these documents); and
- Any other health and safety related matter.

12.6 Health and Safety Performance Boards

The contractor must provide and maintain a Health and Safety Performance Board to be approved by the nominated project management representative and to be positioned at the entrance to the contractor's site office area. This board must display the following information as a minimum:

- The contractor's logo;
- Current manpower (heads) on site;
- Man-hours worked for the current month and project to date;
- Lost Time Injury Frequency Rate (LTIFR);
- Dates of last injuries (FAI, MTI and LTI);
- Number of hours worked since the last recorded LTI; and
- Names and contact telephone numbers for the appointed Project Manager and the Health and Safety Officers.

12.7 Health and Safety Management Information Notice Boards

The contractor must provide, for each construction site, a portable Health and Safety Management Information Notice Board to be placed in the work area. The following information and documentation, as a minimum, must be posted on these boards:

- The relevant Method Statements, Risk Assessments and Safe Work Procedures for the work that is being performed that day;
- The DSTI for the day;
- The most recent Toolbox Talk;
- Where applicable, all required permits and permissions for the work that is being performed;
- Safety Data Sheets (SDS's) for any chemical substances being used;
- The health and safety objectives for the work team;
- Details of the last incident involving the work team;
- The most recent weekly health and safety report;
- Emergency procedures;
- A site plan indicating evacuation routes and emergency assembly point locations;
- First Aider and Health and Safety Representatives names, contact telephone numbers as well as recent photo; and
- The appointed supervisor's contact details.

12.8 Involvement (Other)

The participation of all contractor (and sub-contractor) employees in activities that promote improvements in health and safety performance must be encouraged. In particular, this must include their appropriate involvement in:

- Hazard identification, risk analysis and determining control measures;
- Incident investigation; and
- Reviewing policy and objectives.

All regulations, instructions, signage, etc. Must be communicated in a language understood by all employees.

Health and safety personnel must be actively involved in planning activities so that they have the opportunity to highlight hazards and risks associated with upcoming work well in advance to ensure sufficient time to arrange and / or implement the necessary control measures.

13. Documentation and Document Control

The contractor must develop and maintain project-specific documentation required for the effective management of health and safety on the project.

All documents related to the contractor's health and safety management system must be effectively controlled.

The document control process must:

- Provide for the review, revision and version control of documents;
- Uniquely identify documents (as appropriate) to control their use and function;
- Require approval of the documents for adequacy prior to issue;
- Clearly identify changes and record the status of any revisions to documents; and
- Provide for the effective distribution of documents to, and where necessary the timely removal of obsolete documents from, all points of issue and use.

The contractor must establish a process for the systematic control of health and safety records and related data. Controls must be in place for the creation, receipt, secure storage, maintenance, accessing, use and disposal of such records and data.

Each record must be legible, identifiable and traceable, and must contain adequate information and data for its purpose.

The confidentiality and security of records and data must be maintained in a manner that is appropriate for the nature of the records and data, and in accordance with any applicable data or privacy protection legislation.

Personal information originating from medical surveillance and occupational hygiene monitoring must be reported in a form that respects the privacy of the individual, but enables management to fulfil their duty of care obligations to employees. The names of individuals must not be disclosed without their written authorisation.

Retention periods for all records (based on legal requirements and / or knowledge preservation considerations) must be established and documented in accordance with applicable legislation.

13.1 Contractor Health and Safety File Requirements

The contractor must compile and maintain a file containing all necessary health and safety related documentation. The contents of the file will be audited by a Project Health and Safety Practitioner on a monthly basis.

Required documentation includes, but is not limited to, the following:

- Valid Letter of Good Standing from the Workman's Compensation Commissioner;
- Proof of Public Liability Insurance;
- Scope of Work under the contract;
- List of Contacts and their Telephone Numbers;
- Health and Safety Policy;
- Health and Safety Management Plan;
- Legal Register;
- Organisational Chart for the project;
- Appointment Letters (appointment of the contracting company, and appointments for all persons with health and safety related responsibilities);
- 37.2 Agreements
- Notifications to the relevant authorities that construction work is in progress;
- Baseline and Task-Based Risk Assessments;
- Safe Work Procedures, Work Instructions and Work Method Statements;
- Planned Task Observations;
- Fall Protection Plan (where applicable);
- A dossier (Equipment Profile) for each fuel-driven vehicle or machine;

- Inspection Registers, Forms and Checklists (e.g. For portable electrical tools, ladders, safety harnesses, light vehicles, mobile equipment, lifting equipment and lifting tackle, first aid boxes, fire extinguishers, etc.);
- PPE Issue Registers;
- Material Safety Data Sheets;
- Emergency Response Procedures;
- Incident Procedures and Records;
- A dossier (Employee Profile) for each employee containing:
 - A copy of the employee's Identity Document or Passport;
 - Certificate of Fitness (Pre-Employment Medical Examination);
 - Proof of Induction Training;
 - Other Training Records;
 - Copies of Qualification Certificates and / or Certificates of Competency; and
 - Copies of Licences;
- Health and Safety Meeting Minutes;
- Health and Safety Performance Reports;
- Copies of Inspection and Audit Reports; and
- Daily Safe Task Instructions (DSTI's) and Toolbox Talks.

The contractor must ensure that an equivalent file is compiled and maintained by each appointed sub-contractor.

14. Notification of Construction Work

A contractor who intends to carry out any construction work other than work contemplated in CR regulation 3(1), must at least 7 days before that work is to be carried out notify the provincial director in writing in a form similar to Annexure 2 if the intended construction work will—

- include excavation work;
- include working at a height where there is risk of falling;
- include the demolition of a structure; or
- include the use of explosives to perform construction work.

15. Operational Control

For project operations and activities, the contractor shall implement and maintain:

- Operational controls, as applicable to the organization and its activities;
- The organization shall integrate those operational controls into its overall OH&S Management System;
- Controls related to purchased goods, equipment and services;
- Controls related to contractors and other visitors to the workplace;
- Documented procedures, to cover situations where their absence could lead to deviations from the OH&S policy and the objectives;
- Stipulated operating criteria where their absence could lead to deviations from the OH&S policy and objectives.

16. Safe Work Procedures

The contractor must develop, document and implement Safe Work Procedures for all activities involving significant health or safety risk. These procedures must detail the control measures required to effectively manage the health and safety risks associated with the work activities.

Each Safe Work Procedure must be consistent with the Task-Based Risk Assessment completed for the activity.

Every person engaged in an activity for which a Safe Work Procedure has been developed must receive suitable training on the procedure.

Furthermore, the contractor must develop, document, communicate and implement formal procedures, work instructions and / or programmes for the operation, maintenance, inspection and testing of all plant and equipment (including protective systems and devices) brought onto the project site(s).

17. Planned Task Observations

All contractor, management supervisors must perform Planned Task Observations (PTO's) to verify that the control measures that have been identified in Safe Work Procedures (and associated Risk Assessments) are being adhered to and are being properly implemented, and to provide guidance where deviations are noted.

Each supervisor must complete at least two PTO per week involving one or more employees in his work team. This number of PTO's is at the discretion of Transnet's Project Manager or appointed representative. When an unsafe act or condition is identified, the supervisor must coach the work team to correct the act or condition in line with the Safe Work Procedure.

Where valid changes to the work method are identified, the supervisor must ensure that the Safe Work Procedure and Risk Assessment are updated to reflect the current practice. Project representatives will carry out PTO's on contractor employees on an ad hoc basis. Should deviations from the contractor's Safe Work Procedures be observed, the work may be stopped until these deviations are rectified.

18. General Rules of Conduct

All persons are required to conform to the following rules of conduct while on the site.

The following acts are prohibited:

- Engaging in practical jokes, horseplay, scuffling, wrestling, fighting, or gambling;
- Assault, intimidation, or abuse of any person;
- Insubordination towards any supervisor or manager;
- Refusing to carry out a reasonable and lawful instruction concerning health and safety;
- Entry into any restricted area (including barricaded areas), unless authorised to do so by the responsible person;
- Unauthorised use / operation of any equipment or machinery;
- Negligently, carelessly or wilfully causing damage to any property;
- Destroying or tampering with safety devices, signs, or signals;
- The use of water from fire hydrants or hose reels for any purpose other than extinguishing a fire;
- The wilful and unnecessary discharging of fire extinguishers;
- Refusing to give evidence or deliberately making false statements during incident investigations;
- Bringing alcohol, drugs, or any other intoxicating substance onto site;
- Bringing a firearm, ammunition, or any other offensive weapon onto site;
- Bringing animals onto site;
- Running, except in an emergency;
- The use of cell-phones (or similar devices) whilst working on site;
- Sleeping on the job;

- Building fires on site, unless in a suitably constructed barbequing facility; and
- Pouring / pumping / flushing any substance (chemical / hydrocarbon / waste water) into a storm water drain, onto bare soil, or into any area where the substance is not effectively contained.

Any of the above actions will result in the permanent removal of the offending person(s) from site, as well as possible prosecution. The decision of the nominated project management representative shall be final and binding in respect of any dispute that may arise from the interpretation of these requirements.

Transnet will not get involved in contractor disciplinary rules and procedures. The contractor will simply be informed (with reasons) that the offending employee(s) will be denied access to the project site. Once the contractor has been informed, the employee(s) must be removed from the site immediately.

19. Site Access

The contractor may not hire any security services for the project site unless authorisation has been obtained in writing from a nominated project management representative.

19.1 Access Control

The contractor must comply with all access control, procedures and systems applicable to the project site.

Failure to comply with these requirements will be viewed as a serious safety breach and may result in the permanent removal of the individual(s) / contracting company from site or suspension without payment.

Access will be controlled as follows:

Contract period access – an access permit valid for the full contract period will be issued to an individual once the following requirements have been met:

- Completion of a pre-employment medical examination which states that the employee is fit for duty;
- Completion of all required project induction training;
- Completion of special training / licensing if applicable (e.g. Driving/operating Licence).

Note: No access permit will be issued unless proof of identification is provided (i.e. an identity document or a valid passport). For foreign labour, an access permit will only be issued if a valid work visa is produced.

Note: A driving licence will not be accepted as proof of identification.

19.2 Trespassing

The contractor must ensure that no employee (including sub-contractor employees) trespasses on any land lying beyond the boundaries of the project site.

If instructed by a nominated project management representative to do so, the contractor must remove any employee who fails to comply with this requirement from the project.

The contractor's activities must be confined to the specified construction areas, and access to these areas may only be by means of specified routes.

All required barricading (fencing) must be erected and maintained by the contractor.

19.3 Visitors

Visitors (including reps and suppliers) must be advised in advance of the mandatory Personal Protective Equipment (PPE) requirements for the site, and must arrive with all of this PPE.

Upon arrival, all visitors must report to the Contractors designated Site Office where they must sign in.

All visitors must undergo a visitor induction briefing before entering the site.

Whilst on site, visitors must be accompanied at all times by an appropriately senior employee who has been inducted fully. The visitor(s) must be met at the designated Site Office, and when the visit is over, must be escorted back to the Site Office.

Note: Visitors are not permitted to perform any work on site.

Note: Any request (typically made by a government official) to carry out a site inspection must be referred to the nominated project management representative. The contractor must not arrange any such inspection without prior approval from the nominated project management representative.

19.4 Alcohol, Drugs and Other Intoxicating Substances

The contractor must ensure that all personnel under his authority do not at any time enter the site or perform any work whilst under the influence of alcohol, a drug, or any other intoxicating substance.

Selling or possessing drugs, alcoholic beverages or any other intoxicating substance on the site is strictly prohibited.

A drugs and alcohol testing program will be implemented. Persons entering the site will be daily/ randomly tested. Any person who tests positive for alcohol or drug consumption will be subject to disciplinary action and shall be permanently removed from the site.

Any person have the opportunity to rather report that he/she is under the influence before accessing the project site – in these case the employee may only be send home for the day by the responsible project manager representative but will then be tested for the following five days (each day) on his return to the project site. If it is found that the same person is frequently reporting that he/she is under the influence before even accessing the project site, It shall be the responsibility of the nominated project management representative to take disciplinary action and remove such a person's form the project site.

Any person on prescription drugs must inform the 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 the Supervisor and/or Construction Manager.

Should the actions and / or demeanour of an employee suggest possible narcosis or drunkenness, the employee must be removed from the site. This may be done without testing.

Note: All personnel involved in an incident / accident must immediately be subjected to an alcohol test and a drug test as part of the investigation.

19.5 Firearms, Ammunition and Offensive Weapons

Firearms, ammunition, and offensive weapons of any kind are strictly prohibited. No person may enter /shall not be permitted to enter the site carrying any such item.

19.6 Vehicles

All vehicles brought onto site must meet safety requirements. Each vehicle to be used on site must be inspected and approved by the nominated project management representative before a site access permit will be issued for the vehicle / equipment. No vehicle shall be permitted to enter the site unless it is duly authorised. Access permits are vehicle-specific and may not be transferred between vehicles.

The contractor must allow any vehicle that is brought onto site (including privately owned vehicles) to be searched at any time while on the premises, or when entering or leaving the premises.

The contractor is solely responsible for the safety and security of all vehicles (including private vehicles) that is brought onto the site. All road-going vehicles used by the contractor on the site must be roadworthy and registered with the relevant traffic authority.

A vehicle will not be permitted to enter the site in an un-roadworthy condition. Access will be denied if, for example, but not limited to:

- The vehicle has a defective exhaust system;
- A serious oil or fuel leak is evident;
- The vehicle has unsafe bodywork or is carrying an unsafe load;
- The vehicle is fitted with extraneous or non-standard equipment;
- Passengers are not seated properly;
- The vehicle is not fitted with a seat belt for each occupant; or
- The vehicle has any obvious mechanical defect;
- Pre-inspection requirements are not met.

Overloaded vehicles will not be permitted to enter the site. The driver / operator of any vehicle / mobile equipment must carry a copy of his appointment with him at all times. Each driver / operator must:

- Comply with all site / project rules and regulations pertaining to traffic and the safe operation of vehicles / mobile equipment;
- Obey all road signs;
- Obey all instructions given by security or emergency services personnel;
- Remain within the boundaries of the site; and
- Ensure that the vehicle that he is operating is never overloaded, and that loads are always properly secured.

In the interest of safety, only the minimum number of vehicles required by the contractor to complete the work under the contract will be permitted to enter the site. When not in operation, the contractor's vehicles / mobile equipment must be parked within the boundaries of his lay-down area or yard. Parking is only permitted in designated parking areas. All cars are parked on site at the owner's risk.

In the event of a vehicle accident on site, the driver(s) must report the incident immediately and must remain at the scene until a nominated project management representative arrives, or until a nominated project management representative authorises him to leave (unless, of course, the driver requires medical attention).

20. Mobile Equipment and Light Vehicles

All Contractors must ensure that mobile equipment and light vehicles comply with relevant/applicable legislation.

Each contractor must provide evidence to the nominated project management representative that all light vehicles and mobile equipment to be used on the project (including, but not limited to, lift and carry cranes (or mobi-lifts), mobile cranes, forklifts, mobile elevating work platforms (e.g. Cherry pickers), tractors, dozers, dump trucks, haul trucks, graders, excavators, loaders, back-actors, drill rigs, and road-going cars, light delivery vehicles, and trucks) comply with the requirements of relevant/applicable legislation. This evidence must be provided prior to the equipment being brought onto the project site. The contractor remains responsible for meeting this requirement even if the equipment to be used is leased or provided by a sub-contractor (i.e. not owned directly by the contractor).

An Equipment Profile (dossier) must be compiled for each light vehicle and each item of mobile equipment to be used on the project site. All mobile equipment and light vehicles (used for work purposes) must be subject to a risk assessment. The assessment must:

- Involve operators and maintenance personnel who will use and work on the equipment; and
- Address all aspects of safe operation including but not limited to handling, driver vision, brake failure, tyre blow out, and access and egress for operators and maintenance personnel.

Each light vehicle and each item of mobile equipment must be serviced and maintained as prescribed by the manufacturer of the vehicle or equipment. No major repairs or services may be carried out on site. No repairs may be carried out by a driver or operator. Only suitably qualified and competent persons may carry out repair work.

An appropriate pre-operation safety check based on a risk assessment must be carried out for each light vehicle or item of mobile equipment driven or operated for work purposes. For each vehicle or equipment type, an approved checklist must be in place (and must be used). The pre-operation check must include, but not be limited to, inspection and / or testing of the following safety critical features:

- Brakes (testing method must be provided);
- Wheels and tyres (including the spare);
- Lights and indicators;
- Steering;
- Seats and seat belts; and
- Windscreen and windows, including windscreen wipers and washers.

Should any critical feature be defective or damaged, the vehicle or equipment may not be operated until it has been fully repaired.

Supervisors must review the completed checklists on a daily basis to satisfy themselves that there are no major deficiencies that could place a driver or operator at risk. No person may drive or operate any light vehicle or item of mobile equipment without authorisation. All drivers and operators must be appointed in writing by the contractor's Project Manager.

No driver or operator may be appointed without proof that the individual has been trained, tested and found competent, or is currently licensed. The appointment letter must specify the type of vehicle or equipment for which authorisation is being given and must clearly confirm that the driver or operator:

- Is 18 (eighteen) years of age or older;

- Has undergone a medical examination and has been declared fit for work by an occupational medical practitioner; and
- Has received suitable training and has been found competent, or is in possession of a valid driving licence issued by a state, provincial or civil authority that is applicable to the class of vehicle or equipment that is to be driven or operated.

The principal accountability for preventing accidents and incidents lies with the driver or operator of a light vehicle or item of mobile equipment, as he is in full control of any given situation at any given time. It must be stressed to each driver and each operator that safety is his prime responsibility – this must be clearly instructed and understood.

Drivers and operators must be empowered to stop driving or operating immediately should an unsafe condition arise, and refuse to drive or operate any light vehicle or item of mobile equipment that is defective and / or has any inoperative safety features. Similarly, a supervisor must never force a driver or operator to drive or operate a defective vehicle or item of equipment.

If a driver or operator does not adhere to the site rules and regulations, his appointment must be withdrawn and he must not be permitted to continue with his duties. If necessary, site access will be denied (either temporarily or permanently) to any driver or operator who is deemed to not be adhering to site requirements.

No person may drive or operate a light vehicle or item of mobile equipment if he suffers from a medical condition that places both him and those around him at risk of injury. A fit-for-work policy must be in place. Daily alcohol testing and random drug testing must be carried out.

Supervisors must regularly check on the physical condition of drivers and operators during the course of a shift. A system must be in place to manage driver fatigue. No eating or drinking is permitted while driving or operating a light vehicle or item of mobile equipment.

A mobile phone, whether hands-free or not, may not be used by the driver or operator of a light vehicle or item of mobile equipment unless the vehicle/equipment is parked in a safe location and not operational. Behaviour-based observations and Conversations must include the operation of light vehicles and mobile equipment.

A site-specific traffic management plan must be compiled and submitted to the nominated project management representative for approval. The plan must include, but not be limited to, (where relevant to the scope of work) the following:

- Segregation of pedestrians, light vehicles, and mobile equipment where possible (using barriers where feasible);
- Systems to control the movement of mobile equipment in areas accessible to pedestrians, the movement of mobile equipment into and out of workshops, and pedestrian and light vehicle movement around mobile equipment;
- Setting of appropriate speed limits for vehicle types, road surfaces and environmental conditions;
- Installation and maintenance of road traffic control signs;
- Right-of-way rules (including overtaking restrictions);
- Overtaking protocols;
- Clear communication protocols for interactions between all vehicles and equipment;
- Procedures for light vehicles and / or mobile equipment entering hazardous or restricted areas;

- Standards for safe following distances based on operational circumstances, environmental conditions and near sight (blind spot) limitations of mobile equipment;
- The minimum safe distance to be maintained between light vehicles and mobile equipment (i.e. 50 metres unless positive contact is made);
- Designated parking areas for mobile equipment and light vehicles, including parking associated with maintenance areas;
- Parking procedures (e.g. Safe parking distances, safe parking locations, requirements for reverse parking, etc.);
- Systems to control approaching, refuelling, parking, boarding and disembarking mobile equipment (a driver or operator must exit the cabin and must disembark the vehicle or equipment entirely when his direct involvement with maintenance or servicing is not required);
- Guidelines for abnormal road conditions (e.g. Heavy rain, fog, or high winds) providing "go / no go" criteria and contact details for the person(s) responsible for making the "go / no go" decisions;
- Truck loading and unloading procedures to avoid material or objects falling from the vehicle;
- Guidelines for wide or abnormal loads including offsite transport; and
- Systems to control mobile equipment use in the vicinity of overhead power lines.

The Traffic management Plan must be reviewed/revised where changes to the works areas require. A risk assessment must be carried out prior to any changes being made to traffic movements or road systems.

Designated walkways must be provided for pedestrians, and pedestrians must make use of these walkways. Good lighting must be provided along all walkways, particularly at road junctions. Wherever possible, rigid barricading must be used to separate pedestrians from moving light vehicles and / or mobile equipment.

All personnel must be transported to site and must be dropped off at a designated area. Controls must be in place to ensure the safety of people working on roads, including those working on broken-down vehicles.

High visibility clothing must be worn at all times whilst on the project site. Speed limits and traffic rules must be reviewed regularly and must be rigorously enforced. Local traffic rules must be complied with at all times.

Pedestrians must give way to light vehicles and / or mobile equipment except at pedestrian crossings. All light vehicles and mobile equipment must give way to emergency vehicles. Pedestrians and light vehicle drivers must be made aware of the blind spots associated with mobile equipment.

The driver or operator of a light vehicle or item of mobile equipment must stop the vehicle or equipment and sound the horn before proceeding at blind corners, where his view of the path or intended path is obstructed, and when entering or leaving a building. Whenever a light vehicle or item of mobile equipment is stopped or parked, the handbrake (if applicable) must be applied.

No light vehicle or item of mobile equipment may be left unattended with the engine running or with a key in the ignition. No light vehicle or item of mobile equipment may be parked so as to cause an obstruction to any roadway, passage or access way. No light vehicle or item of mobile equipment may be parked within 50 metres of a loading or off-loading point.

All loads must be secure and must be within the load limit of the vehicle or equipment. A load must be properly secured before the vehicle or equipment is set in motion. Adequate precautions must be taken for any overhanging load. No unauthorised light vehicle or item of mobile equipment may enter a restricted area or building.

20.1 Light Vehicles

All Contractors must ensure that Light vehicles have the following minimum safety features:

- Fixed seats and suitable seat (safety) belts for all occupants (i.e. Driver and all passengers);
- Roll-over protection for all vehicles intended to be driven on dirt or steep roads;
- Cargo barriers and load restraints for all vehicles designed for carrying loads (other than passengers), or that are unable to have cargo separated from the occupant-carrying space of the vehicle; and
- An air bag on the driver's side, and where available as a manufacturer fitted item, a passenger's air bag;
- A Reverse Alarm.

All Contractors must ensure that Light vehicles that interact with mobile equipment are equipped or fitted with:

- Systems that enable positive communication with the equipment operators (e.g. A two-way radio);
- A high visibility flag (e.g. A whip flag or buggy whip);
- An amber flashing light (revolving or strobe);
- Reflective taping; and
- High visibility signage (i.e. Vehicle call numbers) facilitating easy and positive identification from a reasonable distance.

All Contractors must ensure that Light vehicles carry:

- Emergency roadside triangles or beacons (three of either);
- Chock blocks for preventing uncontrolled movement of the vehicle when parked;
- A flashlight;
- A fire extinguisher (2.5kg DCP);
- A first aid kit; and
- Survival or emergency equipment (e.g. a vehicle recovery kit) suitable for the operating environment.

A change management process must accompany all vehicle modifications, including the attachment of any equipment. Examples of changes or modifications include, but are not limited to, any change or modification:

- Made to the overall structure or design of the vehicle body;
- Made to the original manufacturer-fitted type of tyres or wheels;
- Made to the suspension system of the vehicle;
- Made to the mechanical system of the vehicle;
- That may adversely alter the centre of gravity of the vehicle;
- That alters the load carrying capacity of the vehicle; and
- That may affect the ability of the vehicle to withstand a crash (e.g. the fitment of a "bull bar").

Vehicle selection must be based on a risk assessment where consideration is given to the tasks, the application, the environment, roll-over protection and the rating of sturdiness in the event of a crash.

All Contractors must have a formal inspection and preventative maintenance system in place to ensure that vehicles are maintained in a safe and roadworthy condition at all times and, as a minimum, are serviced in line with the vehicle manufacturer's service schedule.

Should any safety critical feature be defective or damaged, the vehicle must be withdrawn from service until it has been fully repaired. Inspection and maintenance must be undertaken on critical features such as:

- Wheels and tyres (including the spare);
- Steering, suspension and braking systems;
- Seats and seat belts;
- Lights, indicators and reflectors;
- Windscreen and windows, including windscreen wipers and washers;
- The vehicle structure itself; and
- Other safety-related items on the vehicle body, chassis or engine, including instrumentation.

Persons may only be transported in vehicles equipped with manufacturer fitted or approved seats and seat belts. Seat belts must be worn by all occupants of a light vehicle (i.e. the driver and all passengers) at all times.

Only the driver and one passenger are permitted in the cab (front) of a light delivery vehicle. No personnel may be transported in the load-bin of a light delivery vehicle, even if the vehicle is fitted with a canopy. Only tools and equipment may be transported in the load-bin. Furthermore, no persons may be transported in a trailer behind a vehicle.

A pre-operation vehicle safety check and familiarisation system must be in place and must be used by the driver. An approved checklist must be used. All vehicle faults that are recorded must be attended to immediately.

Light vehicle running lights (low-beam headlights) must be switched on at all times when the vehicle is in operation.

All Contractors must have a system in place to ensure that drivers receive adequate training to ensure that the vehicle intended to be operated or driven can be operated or driven safely. As a minimum, training must include:

- Behaviour-based defensive driving principles;
- Vehicle familiarisation, taking into account the handling dynamics of the vehicle, maximum number of passengers, load limits and various features;
- Loading and restraining principles where the vehicle to be operated is designed for carrying cargo loads;
- Education and awareness concerning driving and travel risks that may be encountered within the environment where the vehicle may be operated or driven, and the requirements pertaining to traffic rules and speed limits;
- Securing (locking) equipment to prevent unauthorised use;
- Emergency crash and breakdown procedures; and
- Basic mechanical principles, including how to change a tyre and perform an adequate pre-operation check.

20.2 Mobile Equipment

All Contractors must ensure that Mobile equipment have the following minimum safety specifications:

- Fixed seats and seat belts for all occupants;
- Adequate lighting, including headlights, tail, turn and brake lights, and an amber flashing light (revolving or strobe);
- An identified isolation and lockout point;
- Adequate walkways, railings, steps and grab handle combinations, and boarding facilities including an alternative path of disembarking in the event of an emergency;
- Collision-avoidance technology and / or procedures;
- A reversing alarm or warning device;
- Chock blocks for preventing uncontrolled movement of rubber-tired equipment when parked;
- A horn;
- Effective windscreen wipers;
- Effective guarding on accessible moving parts;
- A speedometer (if the mobile equipment is capable of exceeding the lowest applicable speed limit);
- High visibility signage (i.e. Mobile equipment call numbers) facilitating easy and positive identification from a reasonable distance; and
- A security system to prevent unauthorised operation.

Mobile equipment must have the following minimum safety specifications, unless a risk assessment stipulates otherwise:

- Approved or certified roll-over protection;
- Fail-to-safe brakes;
- A fire detection and suppression system capable of being activated from both ground level and cabin level (for certain types of mobile equipment, a suitably sized fire extinguisher may be adequate);
- A non-handheld two-way radio or another form of communication;
- Falling object protection (a protective structure over the operator cabin);
- An enclosed and tight-sealing air-conditioned cabin with suitable protective glass; and
- A means of moving supplies and personal items into and out of the operator cabin that enables an operator to continuously maintain three points of contact while boarding and disembarking the equipment (e.g. A backpack or shoulder strap bag).

When purchasing or hiring equipment, the ergonomics of the cabin must be considered, specifically with regard to the seating, operator controls and retrofitted devices.

Fleet and control consistency must be considered in order to minimise the possibility of operator error when changing machines.

For all new (to site) and modified mobile equipment, a formal risk-based selection and acceptance process must be followed prior to the equipment being used on site. Selection of equipment, and any modification, must be subject to a rigorous change management process.

An inspection and maintenance programme must be in place for all mobile equipment. The pre-operation inspection must include a brake functionality test. Registers must be maintained and audited, and must be kept on the machine.

Procedures must be in place to ensure that mobile equipment is only operated on sufficiently stable surfaces and on gradients that are within the limits of safe operation.

Seat belts must be used in all cases, by all occupants. Apart from the driver or operator, only an appointed flagman may be transported in mobile equipment (with the exception of buses) and **only if** the equipment is fitted with a passenger seat. No passengers are permitted on a lift and carry crane (or mobi-lift), mobile crane, forklift, mobile elevating work platform (e.g. A cherry picker), tractor, dozer, dump truck, grader, excavator, loader, back-actor, drill rig, or similar.

Risk assessments must be carried out as part of the planning process for mobile equipment operations and associated activities, and must consider the following:

- Maintenance activities;
- Risks associated with loading, unloading, towing and recovering mobile equipment; and
- The risk of fire.

Procedures must be in place for the safe isolation and lockout of mobile equipment.

Where two or more items of mobile equipment must be operated in proximity to each other, or where an item of mobile equipment must be operated in proximity to persons on foot, a risk assessment involving all persons who will be working in the area must be conducted prior to the work commencing. The risk assessment must be approved by the nominated project management representative. In such a work area:

- No item of mobile equipment may be driven to within 5 metres of another item of mobile equipment without the operator first making eye contact with, and signalling his intentions to, the other operator who must acknowledge that he understands and that it is safe to proceed.
- No person on foot may work or be positioned within 5 metres of an item of mobile equipment that is in operation. Before approaching mobile equipment on foot, a person must make eye contact with, and clearly signal his intentions to, the operator of the equipment. The operator must cease to operate the equipment, and must indicate that he understands and that it is safe to approach.

In certain circumstances (determined through risk assessment), mobile equipment may only move and operate with dedicated flagmen in place:

- Where flagmen are used, it must be ensured that the flagmen, mobile equipment operators, and all other personnel working in the vicinity of the mobile equipment, receive suitable training with regard to signals and signalling to ensure effective communication. The training must be formal and recorded, and competency must be tested.
- A flagman and the mobile equipment operator that he is directing must maintain eye contact. The flagman must never position himself where the equipment operator cannot see him.
- Should a mobile equipment operator lose sight of his flagman, he must stop his activities immediately until contact has been re-established.

A tyre management system must be in place to address issues including fire, heating, explosion, electrical contact, separations, maintenance, tyre changes, etc.

Operators must report conditions and practices that do not conform to procedure.

20.3 Training and Licensing

No person may drive a light vehicle or operate an item of mobile equipment unless he has been trained, tested and found competent, or is currently licensed to drive or operate that specific vehicle

or item of equipment. The training must address hazards and risks assessed for that specific vehicle; and the tasks for which it is to be used.

No person may be appointed to drive a light vehicle or operate an item of mobile equipment unless he is in possession of a valid medical certificate of fitness (issued by an occupational medical practitioner).

Each person required to drive a light vehicle or operate an item of mobile equipment on the project site must have a project-specific site licence or appointment to drive or operate that vehicle or item of equipment.

The Contractor must ensure that Licenses and Operators' competency certificates are valid for the duration of their activities on site. No training of drivers or operators may be carried out on site unless authorised by a nominated project management representative.

20.4 Tyre and Rim Safety

These requirements apply to tyres and rims with a rim diameter of 60cm (24 inches) or greater. Safe Work Procedures must be in place for all tyre maintenance and servicing activities and for tyre fire emergency response.

In the event of a tyre fire, an exclusion zone of 300 metres must be established and may only be accessed by emergency services personnel who are shielded while fighting the fire.

Restricted Work Zones must be established for tyre installation, removal and handling processes. All tyre and rim handling equipment must have fall back prevention in place prior to anyone entering the Restricted Work Zone.

No hot work (e.g. Welding or cutting) may be carried out on a rim (wheel) while the rim is fitted with a tyre – whether inflated or deflated. A periodic testing and / or inspection regime must be in place for tyres, rims (wheels), and assemblies.

All tyres and rims (wheels) must be made unserviceable when deemed unfit for service or before being sent off site for disposal. A tracking system must be in place to track the lifecycle of tyres and rims (wheels).

21. Access Road to Project Site

The contractor shall ensure that trained flagman are placed at strategic positions that may be identified along the access roads where high risk activities are being undertaken and/or at points of traffic interface.

The project access roads may not be closed without permission from a nominated project management representative.

22. Signs and Notices

The contractor must ensure that all required safety signs and notices are prominently displayed in accordance with the applicable legislation and good safety practice. Signs and notices must be in English as well as any other language(s) commonly spoken on the project site.

All symbolic signs must comply with the applicable national standards. No person may deface or damage any safety sign or notice. No person may remove or alter any safety sign or notice unless authorised to do so.

23. Machinery

The contractor must ensure that all plant and equipment brought onto the site is:

- Appropriate for the type of work to be performed.
- Approved, inspected, tested, numbered and tagged (if appropriate) before being brought onto site.
- Properly maintained in accordance with the manufacturer's recommendations; and
- Placed on a register and checked at least once per month or as required by the applicable legislation.

Items of plant or equipment brought onto site by the contractor or his sub-contractors may be inspected by a nominated project management representative. Should the nominated project management representative determine that any item is inadequate, faulty, unsafe or in any other way unsuitable for the safe and satisfactory execution of the work for which it is intended, the contractor must, on instruction from the nominated project management representative, immediately remove the item from the site and replace it with a safe and adequate substitute.

24. Barricading

All applicable legislation concerning barricading must be complied with at all times.

Each contractor required to erect barricading on the project site(s) must develop, document and implement Safe Work Procedures that are aligned with the requirements of this standard.

Barricading must be erected to:

- Prevent persons from making contact with an identified hazard;
- Provide warning of the existence of a hazard;
- Prevent unauthorised access (by people, vehicles and mobile equipment) into an area where a hazard exists or where a hazardous activity is being carried out;
- Define the boundaries of a hazardous location and / or restricted area; and
- Allow a work team to perform hazardous tasks without persons unfamiliar with the hazard(s) accessing the area.

Although not limited to these situations, barricading must be erected or installed:

- Around excavations (trenches, pits, etc.);
- To protect openings and edges (to prevent persons from falling, all openings and edges associated with floors, stairs, and the open sides of buildings and structures during the course of construction must be protected by sturdy, rigid barriers capable of withstanding a force of at least 110 kilograms applied in any direction at any point);
- To prevent access into areas where overhead work is in progress;
- To route vehicles safely through (or around) construction areas; and
- To protect members of the public who may be in the vicinity of a work or construction site (by preventing access).

In all cases, the erection of barricading must be a temporary measure. It must only remain in place until the hazard is eliminated or the potentially dangerous situation is rectified.

A barricade must present a sturdy physical barrier to entering an area. Therefore, plastic cones, post and chain systems, "danger tape" and "snow netting" will not be accepted as barricading and may only be used for the purposes of low risk demarcation. For example, snow netting may be used for the demarcation of lay down areas.

Acceptable forms of barricading include:

- Hoarding panels (no less than one metre in height) that can be securely fastened together to form a fence line may be used. Hoarding panels may be constructed from a variety of materials (e.g. wooden board, steel sheeting, wire mesh on a steel frame, etc.)
- Wire mesh fencing (no less than one metre in height with sturdy posts spaced at intervals of no more than 3 metres) may be used in certain circumstances, e.g. Around excavations.
- Sturdy, rigid, and securely fixed (i.e. bolted, welded, clamped, etc.) metal guard rails may be used, particularly for protecting openings, holes and edges associated with floors, platforms, walkways, etc. The top rail must be positioned at a height of one metre above the working surface, and a mid-rail must be provided.
- Concrete Jersey barriers must be used for the routing of traffic and when work is being conducted in or alongside a roadway.

Regardless of the type of barricade used, the following requirements must be met:

- The installation, alteration and removal of barricades must be supervised by a competent person;
- The barricading must be uniformly and intelligently configured;
- The barricading must be stable, conspicuous and effective;
- The barricading must completely surround the work or hazardous area;
- General access requirements around the work or hazardous area (such as pedestrian walkways, operational access, or general thoroughfares) must be taken into consideration when erecting a barricade;
- The extent of the area that is barricaded must be kept to a minimum so as not to unnecessarily restrict access to other areas. If access routes to other areas are blocked by the barricade, alternative routes must be identified and signposted.
- All barricaded areas must have properly designated points of entry and exit for persons and / or vehicles. Each pedestrian access point must be fitted with a self-closing gate. A sign indicating, "DESIGNATED ACCESS POINT – AUTHORISED PERSONNEL ONLY", must be fitted to each gate;
- Additional signage providing warning of specific hazards (e.g. falling objects, electricity, etc.) Including, "NO UNAUTHORISED ENTRY", must be attached to all gates and, where required, to the barricading itself. The signage must be visible from all angles and must be large enough to be read from a distance of 10 metres;
- Barricading must be clearly visible at all times (day and night). If necessary, flashing warning lights must be used;
- Tags must be attached to the barricading displaying the name and cell phone number of the person responsible for the barricade, and specifying the reason for the barricading and the date on which it is scheduled to be removed;
- Should a person require access to a barricaded area, authorisation must be obtained from the person responsible for the erection of the barricade. The hazards that are present and the Personal Protective Equipment that must be worn within the barricaded area must be communicated to the person seeking access;
- Each barricade must be listed in a register, and each must be inspected daily to ensure that it is still intact and that its positioning is still effective;
- All barricades must be properly maintained and repaired as required;
- When the work has been completed and the hazard has been eliminated, all barricading must be removed without delay. A barricade may not be left in place if no hazard exists;
- Before a barricade is removed (allowing general access), the area must be inspected by the person responsible for the work that was carried out, to ensure that the area is once again

safe. If applicable, the person accepting the area back for general use shall do so on completion of his own safety inspection;

- Authorisation to remove (or modify) a barricade may only be granted by the person responsible for the erection of the barricade.

25. Excavations

Excavation work or activities which are required as part of the scope shall be undertaken in accordance with the requirements of this Specification as well as all applicable legislation concerning excavation work.

The contractor will be required to develop, document and implement Safe Work Procedures that are aligned with the requirements of this standard. All excavation work must be properly planned. Site-specific conditions and hazards must be considered, including traffic, overhead and buried utilities, proximity to nearby structures, soil properties, presence of surface and / or ground water, position of the water table, and weather conditions.

Excavation work may only be carried out under the personal supervision of a competent Excavation Supervisor who has been appointed in writing.

Before any excavation work is carried out, a Permit to Work authorising the activities will be issued. Similarly, no person may enter an excavation unless a Permit to Work has been issued providing authorisation for specific tasks to be carried out within the excavation.

Before issuing a Permit to Work for excavation works, the Authorised Person (i.e. Permit issuer) must verify that:

- A detailed Risk Assessment has been conducted for the work to be performed;
- A Safe Work Procedure is in place; and
- No buried services are present in the area where the excavation works are to be carried out.

As a minimum, the Risk Assessment must consider hazards and risks associated with:

- A person being trapped or buried as a result of an excavation collapsing;
- A person being struck by an object falling into an excavation;
- A person falling into an excavation;
- A person being exposed to a hazardous atmosphere within an excavation (i.e. An oxygen deficiency, explosive or flammable gases, and / or harmful concentrations of a contaminant);
- Contact with belowground services; and
- Mobile equipment and / or light vehicle movement in proximity to an excavation.

If buried services are identified (or are suspected to be present) then the safe work procedure must be altered if necessary to avoid these services. Machinery may not be used to excavate material lying within one metre of any belowground service (i.e. Cable or pipe).

Excavation work that is carried out must be limited to what is described in the Permit to Work. All controls, precautions and restrictions identified in the Permit to Work (and Risk Assessment) must be strictly observed and fully implemented. The Excavation Supervisor must discuss these controls, precautions and restrictions with all persons who will be carrying out the work. All excavation work must be carried out by persons who have been trained and are competent to perform the work.

All material removed from an excavation (spoil) must be placed no closer than three times the depth of the excavation away from the edges of the excavation. The profile of this spoil must be flattened out to prevent the material from being washed back into the excavation by rain water. Scaling must be carried out on the sides of all excavations to remove loose material.

Tools, equipment and materials may not be placed within two metres of the edges of an excavation. Alternatively, a suitable retaining device may be used to prevent tools, equipment and materials from falling, rolling or sliding into an excavation.

To prevent persons and / or mobile equipment from accidentally falling into an excavation and to prevent unauthorised entry into an excavation, rigid barricading must be erected around every excavation that is deeper than 500mm. Warning signage must be prominently displayed and, if necessary, flashing warning lights must be used at night.

The barricading must remain in place for as long as the hazard (i.e. the excavation) exists. Sections of barricading around an excavation may only be removed (and then only temporarily) to enable excavation work to continue.

If equipment is used to prevent water from entering an excavation or to prevent water accumulation within an excavation, then the equipment must be monitored by a competent person to ensure that it remains operational and effective.

A high standard of housekeeping must be maintained in and around all excavations. Tools that are not in use, and materials that are no longer required, must be removed from an excavation to prevent these items from causing injury or being lost (buried). A register of all excavations must be compiled and maintained.

An excavation must be inspected for collapses, signs of instability, failures or signs of overloading of protective systems and equipment, hazardous atmospheres, water accumulation, and any other hazardous condition that may arise.

If a hazardous condition is identified, no person may enter the excavation until suitable corrective actions have been taken and / or suitable controls have been put in place to either eliminate the hazard or reduce the risks to acceptable levels. If a hazardous condition is identified while work is being carried out in an excavation, then all persons in the excavation must be evacuated to safety without delay.

A record of each inspection (including date, time, findings, and signature of the Excavation Supervisor who carried out the inspection) must be captured in the excavations register. Each inspection record must include a declaration as to whether the excavation is safe to work in or not. All excavations must be monitored closely throughout each work day (or shift) by the Excavation Supervisor.

Excavations must be backfilled as soon as possible, and the material used (usually the original material) must be properly compacted.

26. Working along/near/adjacent water

All applicable legislation concerning working along, near, adjacent water must be complied with at all times. Each contractor carrying out work along, near, adjacent water must develop, document and implement Safe Work Procedures that are aligned with the requirements of this specification as well as any applicable legislation, standards and codes. A task specific risk

assessment for the relevant work to be carried out along, near, adjacent water should be conducted before any such work commences and submitted to the Transnet Project Manager or Representative for approval before any work can commence. The Risk assessment should be reviewed periodically. All potential hazards involved in the work to be carried out along, near, adjacent water e.g. drowning, plant/equipment falling into water should be identified and mitigated.

Contractors Health and Safety Plan for such work should include, but not be limited to:

- Methodology for carrying out such work;
- Formulation of method statements/risk assessments/safe work procedures;
- Emergency preparedness e.g. contingency plans, rescue plans, evacuation plans.

Lifting equipment/mobile plant should be kept a safe distance from dangerous locations e.g. openings, edges close to the water. Lifting equipment/mobile plant carrying out work along, near, adjacent water should be fixed and securely anchored. The operating zone should be clearly demarcated. No lifting equipment/mobile plant should be allowed to operate beyond its safe working load. The suitability of the ground on which the lifting equipment/mobile plant will be stationed should be identified before work commences with these activities.

27. Cranes and Lifting Equipment

All applicable legislation concerning cranes and lifting equipment must be complied with at all times. Each contractor carrying out lifting operations on the project site(s) must develop, document and implement Safe Work Procedures that are aligned with the requirements of this Specification.

27.1 Design, Manufacturing and Safety Features

Before any crane or hoist is operated on the project premises (i.e. New to site), it must be formally accepted (authorised) by the nominated project management representative. The acceptance process must be based on an inspection and risk assessment, and must take the crane's or hoist's safety features and cabin ergonomics (if applicable) into account. The same process must be followed before any crane or hoist is returned to service following any modification or repair.

Note: An Equipment Profile (dossier) must be compiled for each crane.

As a minimum, the design and manufacturing of each crane or hoist used on the project premises must comply with the requirements of the relevant ISO standard. The Safe Working Load (SWL) must be clearly indicated on each crane, hoist, and item of lifting equipment.

If the safe working load (rated capacity) of a crane varies with the conditions of use (i.e. varies with the angle of the boom and the boom length) then the manufacturer's load chart(s) indicating the crane's rated capacity at various boom lengths and angles must be available in the crane cabin. If the crane has a single load chart, it must be displayed in a position visible to the crane operator. If the crane has numerous load charts, they must be easily accessible to the operator.

For each crane or hoist, the manufacturer's operating manual must be available to the operator. The load chart(s) and operating manual for a crane or hoist must be in a language understood by the operator.

All lifting hooks must be fitted with a safety latch to prevent the load from accidentally detaching.

Each crane or hoist must be fitted with a load cell (with the mass of the load displayed in the visual range of the operator) and a load limiting device to prevent the crane or hoist from being operated outside of its safe working limits.

Where practicable, each crane must be equipped with an upper hoist limit switch (or anti two-block device) to prevent the hook block from colliding with the drum, and a lower hoist limit switch to prevent the rope on the drum from unwinding completely. These systems must provide both a visual and an audible alarm to the operator.

Under no circumstances may any limit switch or warning device be bypassed, disconnected, or adjusted in order to lift a load higher (or to lower a load lower) than the respective switches allow. Limit switches MAY NOT be adjusted to stop the hoist at a particular height under normal operating conditions – these are safety devices, and as such, should not be used as operating tools.

Under no circumstances may a load limiting device be bypassed or disconnected in order to lift a load that exceeds the rated capacity of the crane. Load limiting devices MAY NOT be used to “measure” or “test” the mass of a load.

For a vehicle-mounted crane, the operator control station must be located in a position protected from swinging loads and from the crane jib.

A fall protection system must be provided for the assembly, dismantling, operation, maintenance and inspection of any crane where falling from height is identified as a hazard.

Each crane should be fitted with a stability monitoring device to prevent it from toppling over.

Only items of lifting equipment (tackle) that have been designed and manufactured with adequate factors of safety may be used on site. The following minimum factors of safety (with respect to the Safe Working Load) must be met:

- Ten (10) for natural-fibre ropes;
- Six (6) for synthetic-fibre ropes or woven webbing;
- Six (6) for steel-wire ropes;
- Five (5) for steel chains; and
- Four (4) for high-tensile or alloy steel chains.

27.2 Planning and Risk Assessment

For each critical lift that must be carried out on site, a documented and detailed lift plan and risk assessment must be prepared to address all associated hazards.

Only suitably qualified, competent and experienced persons (lift planners) may evaluate critical lifts and prepare lift plans.

The lifting supervisor, crane operators, riggers and spotters responsible for carrying out a critical lift must have input into the lift plan and risk assessment and must be consulted before these documents are finalised.

All lift planners, lifting supervisors, crane operators, riggers and spotters (safety observers) must be appointed in writing. No critical lift may commence until the lift plan and risk assessment have been authorised by the nominated project management representative and a Permit to Work has been issued.

Critical lifts include, but not limited to:

- All multiple (including dual) crane lifts;

- Lifts where the operational arcs of two or more cranes can overlap;
- Lifts over operating facilities where this may endanger personnel;
- Lifts over or adjacent to power lines;
- Any lift carried out in close proximity to equipment or a vessel containing a flammable or toxic substance;
- Lifts where the centre of gravity of the load could change;
- Any lift where the total weight on the hook exceeds 20 tonnes;
- Lifts near the rated capacity of the crane (i.e. Exceeding 85% of the rated capacity at the working radius);
- Any lift when the wind speed (including gusting) exceeds 30 kilometres per hour;
- Lifts involving a man basket (safety cage);
- Lifts to and from water;
- Lifts requiring specialised equipment or involving complicated lifting or rigging configurations;
- Lifts requiring non-standard rigging or slinging techniques;
- Lifts involving the simultaneous use of more than one hoist on the same crane; and
- Any other lift deemed to be critical by the nominated project management representative, or assessed as critical during a risk assessment.

The lift plan for a critical lift must include as a minimum:

- General Information – crane manufacturer, crane model, items to be lifted, and reason for lift;
- Lift Data – load weight, lifting block and hook weight, hoist rope weight, rigging weight, total weight, height of lift, radius of lift, surface area of load, and centre of gravity of load;
- Rigging Data – sling material (chain, wire rope, or synthetic), sling diameter, sling length, sling configuration, sling capacity, hook type, shackle size and capacity;
- Lift Computation – boom length, jib length, radius of lift, crane capacity as configured, size of outrigger footplates, and wind speed;
- Proximity to Power Lines and Process Areas – mobile cranes working in proximity to energised power lines must operate under a Permit to Work, which must define exclusion zones and spotter duties;
- Local Hazards and Controls – including the route for the crane, ground stability, proximity of people or equipment, and agreed communication method; and
- Diagrams (sketches) – a rigging diagram, and a crane set-up diagram illustrating the positioning of the crane(s) in relation to surrounding structures and the initial and final positions of the load (including crane boom movement).

Lifts that are not subject to detailed lift plans (i.e. Lifts that are not considered critical) must nevertheless be subject to a risk assessment, and be properly planned and executed.

The use of a crane-suspended man basket (safety cage) may only be considered when all other avenues to safely perform the work (e.g. Scaffolding, mobile elevating work platform, etc.) have been exhausted.

Cranes used to lift or suspend personnel must be approved as suitable for this purpose. If a crane must be operated in proximity to energised overhead power lines (or any other exposed electrical conductors) then minimum clearance distances (specified by the electrical power utility or the nominated project management representative) must be observed. Whenever possible, power lines must be de-energised and isolated while lifting operations are carried out.

27.3 Operation

At the start of every day or shift, the operator of a crane or hoist must carry out a pre-operation safety check using a prescribed checklist.

As a minimum, the pre-operation safety check must include:

- A thorough visual inspection of all wire ropes, chains, hooks and safety latches, hook blocks, sheaves, hydraulic hoses, electrical cables, and the general condition of the crane or hoist;
- Checks to confirm the serviceability of the operating controls;
- Tests to confirm the correct operation of all limit switches, emergency shutdowns, load indicators, alarms and other safety devices; and
- A thorough visual inspection of all lifting equipment (tackle) to be used.

The operator must:

- Check for any loose or missing parts;
- Make sure that the wire rope (or chain) of the hoist is properly seated in its drum and sheave grooves without any slack or overlapping;
- Operate each control to make sure it functions properly, releases immediately, and does not stick. Each control must be labelled to indicate its function;
- Listen for any unusual mechanical noises and look for any jerky movements while operating the crane and / or hoist several feet in each direction that it travels;
- Check the functionality of the upper and lower hoist limit switches (if applicable) by slowly raising and then lowering the block to trip the respective switches;
- Check all hooks. Hooks must not be cracked, stretched, bent or twisted. Each hook must have a safety latch that automatically closes the throat of the hook. If the latch is bent, has a broken spring, or is otherwise damaged, it must be repaired before use. Hooks must rotate freely in the block assembly without any "grinding" felt or heard;
- Check the wire rope by lowering the block to its lowest level and looking for the following signs of damage:
 - Reduced rope diameter. This may indicate that the rope has been stretched, has lost its inner core support, or has worn outside wires;
 - Broken wire strands (any number);
 - Kinked, crushed, cut, or "bird caged" wiring, or wiring with heat damage.
- Check all chains for damage including wear at contact points, cracks, or distorted links (bent, twisted or stretched). All mechanical coupling links must be inspected to ensure that the linking pins are secure and in good condition. The capacity rating of each chain must be adequate for the load and the attachment method;
- Check the condition and capacity of wire rope and synthetic web slings. Capacity ratings must be legible on the manufacturer's label. The capacity of the sling being used must be adequate for the load and the attachment method. A sling must be replaced immediately if it is excessively worn.

The operator must report any fault, defect or damage to his supervisor immediately. A crane or hoist must not be operated if any safety device is out of order or defective, or if any rope, chain, hook or other component is worn or damaged.

Completed checklists must be made available (on request) for inspection by the nominated project management representative. Wherever possible, these checklists must be kept with the crane or hoist.

All lifting operations must be supervised by suitably qualified, competent and experienced supervisors.

An effective method of communication between the crane operator and those assisting with the lift must be in place. This must be documented and approved by the nominated project management representative.

Documented Safe Work Procedures must be in place to ensure the following:

- Access into an area where lifting operations are being carried out must be restricted. Such an area (i.e. where there is a risk of a load falling and striking a person) must be barricaded and only authorised persons may enter (i.e. those directly involved with the lifting operations). Warning signage must be conspicuously displayed;
- Where a load is being moved from one location to another (i.e. The lifting operations are not being carried out in a discrete area that can be barricaded), measures must be taken to ensure that all persons in the path of the suspended load are made aware of the approaching hazard and that they move, and remain, well clear of it. All persons potentially affected must be given warning before the load is lifted;
- A lift must be directed and controlled by a single person (a suitably qualified, competent and experienced rigger);
- Dedicated spotters must be in place during lifting operations to observe and provide warning (if necessary) to prevent incidents and ensure that safety protocols are adhered to;
- Before commencing with a lift, it must be verified that the load being lifted is both within the rated capacity of the crane (or hoist) and lifting equipment and within the limits set out in the lift plan and / or risk assessment. The rated load capacities of the crane, hoist, rope, chains, slings or other components may never be exceeded;
- Only certified lifting equipment (tackle) may be used to lift a load;
- No equipment (tackle) that has been used for towing may be used for lifting operations;
- Only an approved material box (skip box) may be used for lifting loose items or materials;
- Before commencing with a lift, it must be verified that no safety devices (including load limiting devices) have been bypassed, overridden or disconnected;
- To prevent the load from swinging as it is lifted, the hoist must be centred over the load (when using slings or chains) or positioned directly above the lifting point of the load;
- Hoisting ropes must be kept vertical. No side loading of a crane boom is permitted (i.e. A crane may not be used to make a side pull);
- Two full wraps of rope must remain on the hoisting drum at all times. If a lower hoist limit switch has been fitted, and it is working correctly, it should not be possible to lower the block below the point where less than two full wraps of rope are on the drum;
- Before commencing with a lift, it must be verified that all rigging connections are correct and secure. Slings, chains, or other lifting devices must be fully and securely seated in the saddle of the hook;
- Slack must be removed from the slings, chains and / or hoisting ropes before lifting the load. It must be ensured that multiple lines are not twisted around each other and that the hoist rope is not wrapped around the load;
- To ensure that the load is properly secured and balanced, it must initially only be lifted a few centimetres. Slings must be repositioned if required;
- Before moving a suspended load, it must be lifted high enough to clear all obstructions. The load must only be lifted to the height necessary to clear obstructions, and no higher;
- Directional movement must be made smoothly and deliberately (there must be no sudden acceleration or deceleration of the moving load). Abrupt, jerky movements of the load in any direction must be avoided;
- Tag lines must be used in situations where a load needs to be steadied or guided while suspended;

- When using tag lines to steady or guide a suspended load that is being moved using a mobile crane, personnel on foot must remain in sight of and in communication with the crane operator at all times, must never walk between the crane and the load, and must remain clear of the load and the crane at all times (at least 5 metres). The load must be moved at a slow walking speed;
- A suspended load must be monitored closely at all times;
- If a crane operator's view of a suspended load is unavoidably obscured (completely or partially), or if a suspended load is unavoidably obscuring (completely or partially) a crane operator's view, then suitably positioned spotters must be in place to provide guidance to the crane operator;
- A load MAY NOT be moved over, or be suspended above, any person or any occupied building. No person may walk beneath, or position himself below, a suspended load;
- No person may pass or work beneath the boom of a crane;
- No person may be positioned between a suspended load and a solid object where there is a risk of being crushed should the load swing;
- No person may be positioned within the radius of the boom of a crane unless directly involved with the lift;
- Under no circumstances may any person ride on a crane's hook or on a load;
- No load may be left suspended unless the operator is at the controls and is monitoring the load. In such a situation, the load must be kept as close as possible to the ground or floor to minimise the possibility of injury should the load drop;
- The controls of a crane or hoist may never be left unattended while a load is suspended. If it becomes necessary to leave the controls, the operator must lower the load to the ground or floor;
- With the exception of pick-up and carry operations, no lifting may be carried out using a mobile crane unless the outriggers have been deployed and are locked in position;
- Load spreaders or packing under the outriggers must be used irrespective of the underfoot conditions;
- Before a mobile crane is moved into position to carry out a lift, the area must be inspected by a suitably qualified person who must verify that the underfoot conditions are satisfactory;
- When using a mobile crane, slewing to test the effectiveness of the outriggers must be carried out prior to commencing with a lift;
- Slew pins must be securely in place while a mobile crane is travelling;
- Unauthorised use of a crane or hoist must be prevented by removing the keys, locking the cabin, isolating the controls, etc. When lifting operations have been completed;
- When not in use, lifting equipment must be stored off the ground and must be protected from the elements (rain, harsh sunlight, etc.) And contamination (dust, solvents and other chemicals) in order to prevent damage and / or deterioration.

A crane or hoist or an item of lifting equipment may only be used for the purposes for which it was designed.

27.4 Inspection, Testing and Maintenance

Any crane or hoist brought onto the project premises must have a current test certificate and record of inspection as well as a suitable checklist (derived from the crane or hoist manufacturer's inspection recommendations) for use by the operator(s) when carrying out pre-operation safety checks.

An Equipment Profile (dossier) must be compiled for each crane. A register of all cranes, hoists and lifting equipment (tackle) brought onto the project premises must be compiled and maintained.



Each crane, hoist and item of lifting equipment must have a unique identification code or number, which must be referenced in the register.

For each crane, hoist and item of lifting equipment, the following documentation must be kept on site and must be made available (on request) to the nominated project management representative for inspection:

- Test records and certificates;
- Inspection records;
- Maintenance records; and
- Details of any modifications or repairs made.

All cranes, hoists and lifting equipment must be inspected, tested and confirmed fit for purpose (i.e. Safe for use):

- Before being operated or put into service;
- Before being returned to service following any repair or modification; and
- Periodically as follows (unless local regulations require examination more frequently):
 - Each crane or hoist (including all ropes, chains, hooks or other attaching devices, sheaves, brakes and safety devices that form an integral part of the crane or hoist) must be thoroughly examined by a competent, experienced and appointed person every 6 months;
 - Each crane or hoist must be subjected to an annual performance test (i.e. A load test) by a competent, experienced and appointed person; and
 - All lifting equipment (tackle) must be thoroughly inspected by a competent, experienced and appointed person every 3 months.
 - The system of inspection and testing must provide verification that each crane or hoist is able to function to its design specifications, and must verify the integrity of:
- Mechanical and electrical components;
- Controls;
- Cables and all lifting attachments;
- Structural components including boom, hoist, brakes, wheels, hooks, baskets, out-riggers, hook-blocks and rails; and
- Load limiting devices, hoist limit switches, alarms or warning devices, and other safety devices and control systems (including independent fail-safe braking systems, devices to stop the crane or hoist such as a dead man's switch, and emergency shut-off switches).

A preventative maintenance system must be in place to ensure that all cranes and hoists are maintained in a safe and serviceable condition.

For any crane or hoist, all inspections, testing, maintenance and repairs must, as a minimum, be carried out in compliance with the requirements and specifications of the manufacturer as well as all applicable regulatory requirements (in terms of both the frequency of inspection, testing and maintenance, and the physical condition of the crane or hoist).

Repairs to a crane or hoist may only be carried out by competent persons. After repairs have been made, the crane or hoist must be tested and recertified fit for purpose (unless the repairs did not affect the integrity of the lifting mechanism).

Any modification to a crane or hoist must be subject to the approval of the original equipment manufacturer and a rigorous change management process. Each item of lifting equipment (tackle) must be tagged following each quarterly (3-monthly) inspection. Details of these inspections must

be recorded in the lifting equipment register which must be made available to the nominated project management representative on request.

The following colour coding system must be used for the tagging of all lifting equipment:

Table 27-1 colour coding system for lifting equipment

Quarter	Tag colour
January – march	Blue
April – June	Red
July – September	Green
October – December	Yellow

The tag placed on an item of lifting equipment must be traceable to an entry in the lifting equipment register where the following information concerning the inspection of that item of equipment must be recorded:

- Item description;
- Unique item identification code or number;
- Item owner;
- Item location;
- Date of inspection;
- Name and signature of competent person who carried out the inspection; and
- Any comments concerning the inspection.

Any item of lifting equipment that is found to be damaged or defective must be removed from service (and tagged, “out of service”) immediately and must then either be repaired and recertified (if possible) or destroyed to prevent further use. Similarly, any lifting equipment that is known (or is suspected) to have been overloaded must be removed from service immediately and destroyed to prevent further use.

If an item of lifting equipment is removed from service or destroyed (scrapped), this must be indicated in the lifting equipment register. Any item of lifting equipment without a tag or with an out-of-date inspection may not be used.

27.5 Training and Competency

Only suitably trained, competent and experienced persons who have been authorised in writing by the contractor’s project manager are permitted to:

- Evaluate and plan critical lifts;
- Supervise lifting operations;
- Operate cranes and hoists;
- Use lifting equipment, and rig (sling) loads;
- Provide signals for controlling lifts; and
- Inspect, maintain or test cranes, hoists and lifting equipment.

Each operator must meet the competency requirements for the particular class or type of crane or hoist to be operated. Depending on the project location and applicable legislation, operators may need to hold a certificate of competency issued by a recognised training institution.

28. Ladders

All ladders used on site must be of sound construction and adequate strength. Only non-conductive ladders made of wood or fibreglass may be used for electrical work or work being performed in proximity to energised electrical equipment. Metal ladders and ladders with metal reinforcing may not be used.

The use of makeshift ladders is forbidden. All ladders must be numbered, listed in a register, and inspected by a competent person on a monthly basis (the results of each inspection must be recorded in the register). Before using a ladder, the user must inspect it for damage.

Ladders with missing, broken, cracked or loose rungs, split stiles, missing or broken spreaders (stepladders) or any other form of damage or defect may not be used. A damaged ladder must be removed from service (and tagged, "Out of Service") without delay and must then either be repaired (if possible) or destroyed to prevent further use. Persons must receive instruction in the correct use and proper care of ladders.

Ladders may only be used as a means of access and egress. The use of ladders as working platforms is prohibited, except for inspection and carrying out minor tasks (i.e. light work and short duration) such as changing a light bulb.

Ladders may not be positioned horizontally and used as walkways or runways or as scaffolding. All portable ladders must be fitted with non-skid safety feet (or some other means to prevent the base of the ladder from slipping) and the feet must always be placed (stand) on a firm level surface. The use of bricks, stones, wood or any other material to level the stiles of a ladder is prohibited. Ladders may not be placed on movable bases such as boxes, tables, trucks, etc.

The base or foot of a ladder must always be secured to prevent it from slipping. The ladder must be held by an assistant if the base cannot be secured in any other way (e.g. tied off). A straight ladder must extend at least one metre above its support (or above the working platform that it is providing access to). The top of the ladder must be tied off (or otherwise secured to its support) to prevent accidental movement.

A straight ladder must be placed at a safe angle, i.e. tilted at a ratio of approximately 4:1, meaning that the base of the ladder must be one metre away from the wall (or other vertical surface) for every four metres of height to the point of support.

A stepladder may never be used as a straight ladder. A stepladder must be opened fully and the spreaders must be locked securely. When using an extension ladder, at least four rungs must always overlap at the centre of the ladder. Ladders may not be joined together unless they have been specifically designed and manufactured for that purpose.

A suspended ladder (i.e. not standing on a base) must be attached in a secure manner to prevent undue swinging or swaying, and to ensure that it cannot be displaced.

A ladder may not be placed against a window, glass or any other material which is unlikely to withstand the force exerted on it by the top of the ladder. A ladder may not be placed in front of a door or window that opens towards the ladder unless the door or window has been locked or barricaded.

When a ladder is used near an entrance or exit, the base of the ladder must be barricaded. Materials and / or equipment may not be placed in close proximity to the base or landing of any ladder.

When ascending or descending a ladder, a person must always face the ladder and use both hands (i.e. maintain three points of contact).

Nothing may be carried up or down a ladder if it prevents the person from holding on to the ladder with both hands. Tools must always be properly secured. This can be achieved by attaching them to the wrist using lanyards or placing them in a tool belt around the waist. Tools and materials may also be carried in a bag over the shoulder or hoisted to the landing using a tool bag and rope. Only one person at a time may use (i.e. be positioned on) a ladder.

No person may stand or step above the third rung from the top of a straight ladder or above the second highest step of a stepladder.

Overreaching from a ladder is prohibited. If the target is not within comfortable reach, the person must climb down and reposition the ladder. No person may run up or down a ladder, or jump from the lower rungs or steps to the ground. All ladders must be properly maintained and cared for. Ladders must be stored under cover and should be hung in a horizontal position from several brackets.

No ladder may be left lying on the ground or be left exposed to the weather. A ladder left lying on the ground presents a tripping hazard and it may be damaged by vehicles running over it. No ladder may be left in such a position where it may fall over, be accidentally knocked over, or be blown over by the wind.

Ladders may not be painted, as the paint may conceal damage, defects, labels or other markings. Instead of paint, clear varnish or wood oil may be used to preserve wooden ladders. Ladders must be kept clean, as dirt may conceal damage or defects. Oil or grease accumulation on the rungs of a ladder may cause a person to slip.

Before making use of a ladder, each person must make an effort to remove mud, oil, grease, etc. from his boots.

29. Permit to Work

All personnel must comply with the Permit to Work system applicable to the project. A Permit to Work must be obtained before carrying out any work that involves:

- A hazardous energy source or system, including electricity, compressed fluids (e.g. hydraulics and pneumatics), chemical substances (e.g. toxic, corrosive, flammable or explosive gases and liquids), heat (e.g. steam), radiation, and machinery or materials with potential energy (gravitational and elastic) – isolation and lockout may be required;
- Confined space entry;
- Working at heights;
- A critical lift;
- Hot work outside of designated workshops;
- Excavation; or
- A service (e.g. water supply, fire suppression systems, etc.).

Note: A Permit to Work may only be issued by an Authorised Person and may only be received (or accepted) by an appointed Applicant.

All costs associated with the Compliance to Permits section is for the Contractors account.

Each Permit to Work that is issued must make reference to an approved Task-Based Risk Assessment for the work that is to be carried out.

The Permit to Work system that is employed must incorporate the following basic procedures:

- Prior to meeting with the Authorised Person, the Applicant must familiarise himself with all of the hazards associated with the system, plant, equipment, structure or area on or in which the work must be performed. He must also consider the risks that may arise as a result of the tasks that will be carried out. A Task-Based Risk Assessment must be in place;
- The Applicant must then request permission to carry out the work and must meet with the Authorised Person to discuss and document the scope of the work as well as the hazards, risks and associated control measures. Isolation and lockout requirements must be identified (if applicable). The isolation and lockout process must be initiated by the Authorised Person who must contact the necessary Isolation Officers.

Note: The Applicant must ensure his own safety and that of his team, and has the right to accompany the Isolation Officers to verify that all of the necessary locks have been fitted to all of the isolation and lockout points in accordance with the applicable plant or equipment-specific Isolation and Lockout Procedure.

- Once all of the necessary isolations have been completed and the necessary Clearance Certificates have been issued by the Isolation Officer(s) (if applicable), and the Authorised Person is satisfied that the system, plant, equipment, structure or area is safe to work on or in provided all identified precautions are observed by the Applicant, then he must issue (sign) the Permit to Work to the Applicant;
- The Applicant must accept (sign) the Permit to Work. If equipment has been isolated, the Applicant must attach his Personal Lock to the relevant Isolation Bar (or Local Isolation Point) and must ensure that every other person working on the isolated equipment also attaches his or her Personal Lock to the Isolation Bar (or Local Isolation Point) before starting any work;
- Before commencing with any work, the Applicant must discuss the hazards, risks, control measures, precautions and limitations as stated in the Permit to Work (and associated Task-Based Risk Assessment) with all personnel who will be carrying out the work. A register must be kept and all persons must sign the register once they have been briefed by the Applicant;
- The work performed must be limited to what is described in the Permit to Work;
- When a particular employee has completed his work, he must sign the personnel register to this effect and (if applicable) must remove his Personal Lock from the Isolation Bar (or Local Isolation Point);
- Once all work is complete, the Applicant must:
 - Ensure that all machine guards have been replaced;
 - Ensure that all tools and materials have been removed from the work area;
 - Ensure that the work area is clean and tidy;
 - Ensure that all Personal Locks (including his) have been removed from the Isolation Bar or Local Isolation Point (if applicable);
 - Inform the Authorised Person that the work has been completed; and
 - Sign off the Permit to Work.
- Once the work is complete and the Applicant has signed off the Permit to Work, the Authorised Person must:

- Ensure that the relevant Isolation Officers perform all of the necessary de-isolations (if applicable);
- On completion of the de-isolations, sign off the Permit to Work accepting the system, plant, equipment, structure or area back for service; and
- Inform all relevant personnel that the system, plant, equipment, structure or area is ready to use.
- Where the work must continue over more than one shift, the Permit to Work must be reviewed at every shift change by an Authorised Person. If the scope of work has changed, the permit must be cancelled and a new permit must be issued.

If any of the original conditions or precautions pertaining to the work is not being complied with, is no longer adequate or is no longer applicable, the Authorised Person must cancel the Permit to Work and must ensure that all work stops until full compliance with either the original or amended (as required) conditions and precautions is achieved and a new permit has been issued.

The Applicant must ensure that the Permit to Work (including the personnel register) is kept where the work is being carried out (i.e. posted on a portable Health and Safety Management Information Notice Board) and that the work is monitored against the permit conditions.

All Permit to Work records must be retained and must be made available for inspection when required.

The implementation of the Permit to Work system applicable to the project must be audited on a regular basis by a nominated project management representative. Furthermore, planned task observations must be carried out periodically.

30. Electrical Safety

All electrical work must be carried out by competent personnel in accordance with all legal requirements, codes, design criteria and safety standards applicable to the project. Each contractor carrying out electrical work on the project site(s) must develop, document and implement Safe Work Procedures that are aligned with the requirements of this standard.

All persons who will be carrying out electrical work must be certified against the requirements of job and equipment-specific electrical competency standards for the project, which must address job and equipment-specific Safe Work Procedures.

30.1 Electrical Installations

Each electrical installation (temporary or permanent) installed or worked on by a contractor must be inspected by a nominated project management representative to ensure that the installation complies with all statutory requirements, codes, design criteria and safety standards applicable to the project.

A nominated project management representative must approve all electrical work before the installation is energised. Any installation deemed unsatisfactory by a nominated project management representative must be removed, repaired or modified by the contractor at his expense.

For every permanent or temporary electrical installation, a certificate of compliance must be issued by a competent and appropriately qualified electrician. These certificates must be available for inspection.

Work on electrical installations (new installations, and modifications or repairs to existing installations) may only be carried out by qualified and authorised personnel (i.e. electricians). Electrical safety devices (specifically, earth leakage protection and overcurrent protection) must be installed on all distribution circuits and the settings must be established by suitably qualified personnel.

To ensure the safety of the user, each distribution panel must be completely enclosed, must be of the dead-front type, and must be properly constructed and earthed.

All electrical cabling must be covered (e.g. in cable trenches) or elevated (in cable trays) to protect it from damage and to eliminate tripping hazards.

All permanent and temporary electrical installations (cabling, sockets, distribution panels, transformers, switchgear, etc.) must be inspected and tested by a competent and suitably qualified electrician on a monthly basis. The testing must include a grounding (earthing) continuity test and testing of the electrical safety devices. Details of these inspections and tests must be recorded in a register which must be made available to the nominated project management representative for inspection.

A rigorous Isolation, Lockout and Permit to Work system must be applied to all electrical work (i.e. work on electrical installations, machinery or equipment). All personnel must comply with the system and procedures applicable to the project.

Before any work on an electrical installation or equipment is carried out, the installation or equipment must be de-energised.

No electrical work may be performed live, regardless of the voltage, unless written approval is obtained from the nominated project management representative (a justification as to why it is necessary for the work to be carried out with the equipment in an energised state must be provided).

For all energised electrical work, a Safe Work Procedure must be in place and, with the exception of voltage testing and where no tools are used, a Permit to Work (specifically authorising energised electrical work) must be issued. When carrying out any energised electrical work, approved electrically insulated gloves, blankets, mats and other protective equipment must be used.

Control centres, switchgear rooms, substations, generators, transformers, capacitor banks, and other similar electrical plant and equipment must be appropriately guarded and labelled and, with the exception of emergency shut-off mechanisms, must be made inaccessible to unauthorised personnel (i.e. plant or equipment of this nature must be positioned within rooms or fenced enclosures which must be kept locked).

Appropriate warning signage must be prominently displayed within, and at all entrances to, these rooms or enclosures. The signage must indicate that unauthorised persons are prohibited from entering, that unauthorised persons are prohibited from handling or interfering with any electrical plant or equipment, the procedure to be followed in the event of a fire, and the first aid procedure to be followed should a person suffer electric shock. Suitable fire-fighting equipment must be provided in all such rooms or enclosures.

All electrical panels must be kept locked (using keyed-alike padlocks). Keys may only be issued to authorised personnel.

All un-insulated (bare) or partially insulated conductors must be enclosed and protected to prevent accidental contact therewith. Measures must be taken to prevent unauthorised access and appropriate warning signage must be conspicuously displayed.

Only authorised persons may enter rooms or enclosures housing electrical plant or equipment, and only authorised persons may access electrical panels or cabinets, and cable ducts or trenches. If any work must be carried out in such an area or on such equipment, a Permit to Work must first be obtained from the nominated project management representative.

No connection to any electrical system may be made without prior approval and a valid Permit to Work from the nominated project management representative.

No electrical equipment or apparatus may be modified without written authorisation from the nominated project management representative.

Conductive ladders may not be used in proximity to non-insulated electrically energised lines or equipment.

All permanent and temporary electrical cables, whether energised or not, must at all times be handled as if they are energised.

Only appropriately certified intrinsically safe electrical equipment may be used in flammable or potentially explosive atmospheres such as in confined spaces. Any equipment or structure on which electric charges may accumulate (such as storage tanks) must be grounded (earthed).

Grounding (earthing) and lightning protection systems and devices must be designed, engineered, selected and installed based on site-specific requirements where required.

31. Portable Electrical Equipment

Prior to site establishment, each contractor must provide a complete inventory of all portable electrical equipment that he and his sub-contractors intend to use on the site (including plant, machines, appliances, generators, hand tools, lighting, extension cords, etc.). The nameplate data for each item of equipment must be included.

All portable electrical equipment to be used on the site must be supplied and maintained in a serviceable condition. Any electrical equipment that is in poor condition or is not in proper operating order may not be used. Any electrical equipment that a nominated project management representative deems to be unsafe or unsuitable must be removed from site.

Electrical repair work or diagnostic work on electrical equipment may only be performed by personnel who are competent and authorised to perform this work (i.e. qualified electricians). With the exception of double-insulated equipment, all electrical equipment must have an equipment grounding (earthing) conductor that connects the frame of the equipment being utilised to the grounding (earthing) conductor of the electricity supply system.

All electrical equipment and all electricity supply systems used (including generators) must be inspected and tested by a registered and competent electrician to ensure that all equipment is properly grounded (earthed).



All electrical equipment used on site must be supplied electricity through (i.e. must be protected by) an approved and tested residual current device (or earth leakage device or unit). If a socket outlet does not have a residual current device in the circuit, a portable residual current device must be used. Outlets without residual current device protection must be labelled as such.

Any electrical equipment that causes an earth leakage device to trip or deactivate the circuit may not be used again until an electrician has inspected and tested the equipment and has recorded in a register that the equipment is safe to use.

All generators must be fitted with suitable overcurrent protective devices (i.e. circuit breakers or fuses). All generators must be used in compliance with the manufacturer's requirements. Any proposed modification to a generator must be authorised in writing by the manufacturer prior to the modification being made.

Each welding machine used on site must be fitted with a Voltage Reduction Device (VRD). If this is not practical (i.e. for arc welding processes other than stick welding), a dead man's (isolation) switch in the electrode circuit (operated by a trained observer) may be used as an alternative. All welding machines must be properly grounded (earthed).

All portable electrical hand tools used on the site must be double-insulated. Electrical equipment must be disconnected or unplugged when not in use. Portable lights must be stable and each light bulb must be protected by a substantial guard.

No person may wear a watch or any jewellery, or carry any metal objects such as a lighter or keys, while working on any electrical system or equipment. No person may work on or use electrical equipment if his clothing is wet or any part of his body is in contact with water.

No person may handle electrical equipment, equipment cords or extension cords with wet hands or if the floor or ground surface is wet.

Fire extinguishers filled with carbon dioxide must be used to fight electrical equipment fires (water may never be used). If possible, the electrical equipment should be de-energised before fire-fighting activities commence (refer to the Fire Protection and Prevention Standard).

When cleaning or performing maintenance work on an item of electrical equipment, the equipment must be unplugged.

Equipment may not be unplugged while that equipment is switched on. Nor may equipment be plugged into a receptacle (socket) with the equipment's switch turned on. Electrical equipment that has a defective plug or wiring may not be used. Repair work to defective or damaged electrical equipment may only be carried out by a qualified electrician. Extension cords may be used for temporary applications only. Permanent cabling must be installed for long-term needs.

Extension cords may not be run through doors, windows, ceilings or holes in walls. An extension cord must be uncoiled completely before it is used. An extension cord must be of sufficient current-carrying capacity to power the equipment that it is supplying electricity to. Cords must not be overloaded. Extension cords must be unbroken and continuous (i.e. no joins or splices in the cord are permitted). Extension cords may not be daisy-chained (i.e. one extension cord plugged into another extension cord).

Extension cords and equipment cords may not be modified to fit a receptacle (socket). Two-conductor extension cords may not be used. A three-conductor extension cord (i.e. a grounded or

earthed cord) must be used even if the equipment that it is supplying electricity to uses a two-prong plug.

Extension cords that are frayed, have insulation tears, cracks or abrasions, have exposed conductors, or have bent, broken or "spread" plug prongs may not be used. Extension cords that will be used outdoors must have heavy duty insulation and must be weather and UV resistant.

All electrical equipment cords and extension cords must be covered or elevated to protect them from damage and to eliminate tripping hazards. Each contractor is responsible for protecting his electrical equipment from the weather and from possible mechanical damage.

All portable electrical equipment (including generators) must be inspected, tested and tagged by a competent and appropriately qualified electrician on a monthly basis. Details of these inspections and tests must be recorded in a register which must be made available to the nominated project management representative for inspection.

The inspection and testing must include a continuity test of the grounding (earthing) conductor (as applicable) and a complete examination of the equipment or system to assure safe use. The following colour coding system must be used for the tagging of all electrical equipment:

Table 30-1 Colour Coding System for Electrical Equipment

Month		Tag Colour	Month	Tag Colour
January		Red	July	Red
February		Blue	August	Blue
March		Orange	September	Orange
April		Green	October	Green
May		White	November	White
June		Yellow	December	Yellow

The tag placed on a piece of equipment must be traceable to an entry in a register where the following information concerning the inspection and testing of that piece of equipment must be recorded:

- Date of inspection and testing;
- Equipment description;
- Equipment owner;
- Equipment location;
- Name, signature and licence number of the electrician who carried out the inspection and testing; and
- Comments concerning the inspection and testing, and details of any repair work carried out or required.

Any item of electrical equipment that does not pass an inspection or test must be removed from service (and tagged, "Out of Service") immediately and must then either be repaired (if possible) or removed from site. Any item of electrical equipment without a tag or with an out-of-date inspection or test may not be used.

Any item of electrical equipment found without a tag or with an out-of-date inspection or test must be removed from service until it has been inspected and tested. If it is found that more than one item of equipment being used by a contractor has not been inspected and tested as required, all work with electrical equipment must be stopped until it can be demonstrated to the satisfaction of the nominated project management representative that the contractor's systems and controls are adequate and fully implemented.

In addition to the formal monthly inspections and testing carried out by an electrician, electrical equipment (particularly extension cords, portable hand tools, welding machines, compressors and pumps) must be visually inspected by the user on a daily basis prior to use. Users must be trained to look for cracks in casings, loose casings, outer cord sheathing that is not being held firmly in position at the equipment, cuts or cracks in cord or cable insulation, exposed conductors, damaged plugs or sockets, and missing covers. Damage and / or defects must be reported immediately.

Personnel must immediately stop using and report any electrical equipment or machinery that is shocking, sparking, overheating or smoking. Corroded outlets, switches and junction boxes must also be reported.

32. Electrically Powered Tools and Equipment

All powered hand tools, such as circular saws, drills, chainsaws, percussion tools, jigsaws etc., must be equipped with a constant pressure switch that will shut off the power when the pressure is released. (Exception: this requirement does not apply to concrete vibrators, concrete breakers, powered tampers, jack hammers, rock drills, and similar hand operated power tools).

Electrical power tools must be of the approved double-insulated type. The electric cord, pneumatic or hydraulic supply line of powered tools must not be used for hoisting or lowering of the tool. Loose clothing, jewellery or gloves that could get caught in the tool must not be worn when operating powered tools. Operators of powered tools who have long hair must keep their hair tied up.

The power source must be disconnected from the tool before making any repairs, servicing, adjustments, or replacing attachments such as drill bits.

32.1 Angle Grinders

The following personal protective equipment must be worn when using angle grinders:

- Safety helmet;
- Gloves;
- Safety glasses (or safety goggles) and a full face shield (i.e. double eye protection);
- Overalls with long sleeves and long pants, avoid any form of loose clothing;
- Safety boots with steel toe protection;
- Hearing protection;
- Breathing apparatus where dust or fumes may be generated;
- Where grinding machines are used, a face shield is to be worn as extra protection to the safety glasses; and
- Certain tasks may require the use of a leather apron as determined by a risk assessment.

A 230mm angle grinder may not be used for free cutting purposes. Exceptions may be approved only if alternative methods evaluated proved more hazardous or no alternative exists. The risk assessment for the task must then specifically include mitigating measures to ensure the safest possible way of performing the task.

The use of 230mm angle grinders for grinding purposes is acceptable, however should this form of grinding be required, the 115mm or 125mm grinders would be preferable. All angle grinders must have a dead man switch incorporated, with a pressure switch in the handle. A 230mm electrical angle grinder unit must incorporate a soft start to reduce the starting strain and a braking system to reduce run on after the unit has been switched off.

All angle grinders must have a spindle lock to assist with changing the disc or grinding wheel. Anti-vibration handles are recommended to further reduce the stress if used for extended periods. Angle grinders must be equipped and operated with disc guarding at all times. Angle grinder must not be stored with fitted discs, as this will lead to damaging of the discs.

Before use and mounting of discs it is essential to check the safety codes and specifications printed on the upper side of the disc. Such specifications include the following:

- Revolutions per minute (RPM). The allowable speed of the disc must be equal to or greater than the maximum achievable speed of the grinder;
- Physical dimensions of the disc must meet grinder specification; and
- The disc must be suitable for the material type to be cut / ground as indicated on the disk. Cutting discs must never be used for grinding and vice versa.

It is critical that the correct disc mounting procedure is followed:

- Check that the machine is plugged out;
- Check the machine spindle, backup washer and thread;
- Check the condition of spindle nut - ensure spanner drive holes are not elongated;
- Ensure spindle nut spanner is the tool recommended by machine manufacturers;
- Do not use a hammer, pipe or chisel to tighten the nut, or apply additional mechanical advantage to nut torque. A firm "nip" is sufficient to retain the disc;
- Ensure the spindle diameter is suited to disc bore. Excessive clearance will cause the machine to vibrate due to eccentricity;
- Check to see that the nut and backup washer do not "bottom out". This will result in the disc not being correctly clamped on the spindle;
- Ensure the spindle speed is marked on the grinder and that it is less than the allowable disc speed; and
- Fit the disc, with the metal ring or writing to the nut side.

33. Pneumatically Powered Tools and Equipment

Pneumatic powered tools must only be driven by filtered compressed air with an in-line lubrication system, or be lubricated prior to use if there is no in-line lubrication system. When using pneumatic powered tools the designated tool pressure must be attained by the use of a regulator.

Pneumatic powered tools must be disconnected when not in use. They must not be disconnected from the air supply until all the residual pressure has been released or contained by a shut-off device. Hoses must not be kinked as a means of containment.

Employees operating pneumatic powered tools, and any potentially affected employee in the vicinity of use, must wear suitable personal protective equipment. All rotary compressed air tools (e.g. drills) must have the rated revolution per minute (RPM) permanently marked on the casing. Only attachments of compatible RPM must be used with these machines.



The actual RPM of the tool must be checked every three months to ensure that the speed is as rated to manufacture specifications.

Pneumatic powered tools must be secured to the air supply hose by an approved positive means to prevent the tool from becoming accidentally disconnected. Safety clips or retainers must be securely installed and maintained on pneumatic impact (percussion) tools to prevent attachments from being accidentally expelled.

All pneumatically driven nailers, staplers, and other similar equipment provided with automatic fastener feed, which operate at more than 100 kPa pressure at the tool, must have a safety device on the muzzle to prevent the tool from ejecting fasteners unless the muzzle is in contact with the work surface.

Compressed air must not be used for cleaning purposes except where reduced to less than 30kPa, and then only with effective chip guarding and personal protective equipment in place. The 30kPa requirement does not apply to concrete form, mill scale and similar cleaning purposes.

The use of compressed air for cleaning purposes must be approved by the nominated project management representative. Compressed air must not be pointed at any part of the body or used for cleaning clothing.

Airless spray guns of the type which atomize paints and fluids at high pressures must be equipped with automatic or visible manual safety devices which will prevent pulling of the trigger to prevent release of the paint or fluid until the safety device is manually released. A diffuser nut which will prevent high pressure, high velocity release while the nozzle tip is removed, plus a nozzle tip guard which will prevent the tip from coming into contact with the operator, or other equivalent protection must be provided in lieu of the above.

Abrasive cleaning nozzles must be equipped with an operating valve, which must be held open manually to enable operation. A support must be provided on which the nozzle may be mounted when it is not in use.

34. Fuel Powered Tools and Equipment

Fuel powered tools must be shut down and allowed to cool before being refuelled, serviced, or maintained. Fuel must be transported, handled, and stored in approved fuel containers. Where possible, diesel driven engines must be used in preference to petrol driven engines. All fuel powered tools must be included on the contractor's Equipment Register and the register must be submitted to the nominated project management representative prior to the relevant work commencing.

When fuel powered tools are used in enclosed spaces, the space must be ventilated and the atmosphere monitored to measure toxic gas concentrations. Persons in the space must wear the necessary personal protective equipment. Confined Space Entry clearance may apply. This type of activity must only be undertaken in exceptional circumstances and requires the approval of the nominated project management representative.

35. Hydraulically Powered Tools and Equipment

Hydraulic powered tools must use only approved fluid that retains its operating characteristics at the most extreme temperatures to which it will be exposed. The manufacturer's stated safe

operating pressures for hoses, valves, pipes, filters and fittings must not be exceeded. Only manufacturer approved hoses, valves, pipes, filters and fittings must be used.

36. Hand Tools

Employees required to use hand tools must receive training relevant to the tool and have their competency assessed in the operation, inspection and maintenance of the tool. Where necessary, additional applicable personal protective equipment must be worn when using hand tools.

Wrenches, including adjustable, pipe, end, and socket wrenches, must not be used when the jaws are sprung to a point where slippage occurs. Impact tools such as drift pins, wedges and chisels, must be kept free of mushroomed heads. The wooden handles of tools must be kept free of splinters or cracks.

Adjustable wrenches must not be used in lieu of ring or open-end type spanners, unless a risk assessment has been conducted and the use of the adjustable wrench is approved by the nominated project management representative. Wherever possible, ring spanners must be used in preference to open end spanners.

Correct hand tools for the job must be used, e.g. screwdrivers must not be used as chisels, and pliers must not be used as hammers. All wedges and drifts that may spring, fly or fall to lower levels upon impact must be fitted with an attachment which attaches a safety "lanyard" to a solid structure to restrain the impact tool from becoming a projectile.

All hand tools used in elevated areas, that may be dropped or fall to lower levels must be fitted with safety lanyards and attached to solid structures or in the case of podges, scaffold keys etc., attached by wrist lanyard to the user.

36.1 Stanley Knives / Utility Knives

A utility knife must be used as a last resort, when it is the safest tool to use. Always consider alternatives that pose less of a risk to the operator.

Whenever a utility knife is used, ensure that a complete risk assessment is done and that all possible hazards have been addressed. Only utility knives with retractable blades are to be used. The blade is to be retracted at all times when the knife is not in use or is being stored.

Before using the utility knife, ensure that the tool is in a good condition and the blade is secure in the holder (seated correctly and that there is no play). Ensure that the blade is always sharp and in good condition. This will prevent the use of excessive force.

Always wear cut resistant gloves and safety glasses when using a utility knife. There is always a risk of the blade breaking under tension and becoming a projectile. Always ensure that you cut away from your body, and that no part of your body is in the firing line. Always ensure cleanliness of all equipment in use during the cutting operations.

37. Inspection of Equipment and Tools

All tools must be inspected by the user before, during and after use. If any faults are identified, the tool must be taken out of service and not used until repaired. Faulty tools that are not able to be repaired must be tagged "out of service" and removed from site.

38. Manual Handling and Vibration

Any handling or lifting task that can only be done manually must be planned and rehearsed before the task is done. If more than one person is involved in a task a communication procedure must be agreed in advance. Lowering the load must be done in a controlled manner. Dropping a load is dangerous and must be avoided.

As a guideline 25 kg is considered to be the limit of what a person can safely handle. Where there are loads exceeding 25 kg the risk of handling the load must be mitigated to assure minimal potential for any injury. When mechanical lifting aids are provided, they should be used. Extra care should be taken when lifting awkwardly shaped objects. Correct lifting techniques must be used at all times when lifting a load manually.

The following, but not limited to, should be considered with conducting the Risk Assessment with regards Manual Handling and also take into consideration the task factors, physical demands and tools involved in the task:

- Load weight/frequency;
- Hand distance from lower back;
- Asymmetrical trunk/load;
- Postural constraints;
- Grip on the load;
- Floor surface;
- Environmental factors;
- Carry distance; and
- Obstacles en route.

Team Manual Handling:

- Load weight;
- Hand distance from lower back;
- Vertical lift region;
- Trunk twisting/sideways bending;
- Postural constraints;
- Grip on the load;
- Floor surface;
- Environmental factors; and
- Communication, co-ordination and control.

As far as possible, exposure to vibration must be eliminated. However, if this is not possible, short-term solutions to decrease exposure include:

- Reducing the vibration levels;
- Removing the person from the vibrating equipment / tools;
- Reducing the period of time that the person works with the vibrating equipment / tools (at least 40 minutes break after 20 minutes working with a machine that vibrates excessively).

In order to reduce exposure to vibration:

- Consider buying equipment that operates effectively at lower speeds;
- Buy equipment with built-in damping materials;
- Buy lighter tools if they are available - they require less of a grip;
- Maintain the equipment;
- Make sure equipment is balanced and there are no worn parts;
- Use remote controls when they are available;

- Reduce your grip on the equipment when it is safe. The less time you actually have your hands on the equipment the better. Relax your hands during these brief breaks;
- Take scheduled breaks; and
- Do other tasks that allow you to move away from vibrating tools and equipment.

The workplace must be assessed by a competent person for compliance with good design, layout and practice, to avoid or minimise adverse health consequences due to manual handling and vibration issues.

Quantitative evaluations of vibration produced by specific equipment must include the following measurement parameters: direction of movement, frequency, intensity, and variation with time and duration, as per documented methods.

Employees and contractors must be informed of the results of assessments and instructed in appropriate manual handling techniques, where the risk assessment indicates a need. Workplace vibration sources that could contribute to the exceedance of an Occupational Exposure Limit (hence potential for impact on worker musculo-skeletal fitness) must be identified and adequately characterised.

Manual handling tasks assessed as having the potential to cause a Lost Time Injury (i.e. with potential for impact on worker musculo-skeletal fitness) must be identified and adequately characterised. Workplace manual / materials handling tasks risk rated as "significant" must be assessed and recorded to include biomechanical factors (e.g. posture, bending, twisting, repetitive motions, working overhead, and exerting force away from the body).

39. Personal Protective Equipment

All applicable legislation concerning Personal Protective Equipment (PPE) must be complied with at all times. As a minimum, the following PPE must be worn by all persons (including visitors) at all times whilst on the project site:

- Safety footwear with steel toe protection;
- Safety glasses (individuals who wear prescription spectacles must be provided with either over-spec safety glasses or prescription safety glasses);
- Safety helmet (hard hat); and
- High visibility protective clothing with reflective taping (long trousers and long-sleeved shirts with collars and cuffs).
- Additional PPE requirements must be determined through hazard identification and risk assessment. This hazard-specific PPE (such as hand protection, hearing protection and respiratory protection) must be worn as required (e.g. when in a certain area, when performing a certain task, or when working with a certain substance);
- The correct PPE must always be worn:
- In accordance with site requirements (as indicated at the entrances to a project site and at the entrances to buildings and / or designated areas on the premises);
- In zoned areas (e.g. noise zones and respirator zones); or
- As required by a Safe Work Procedure, a risk assessment, safety information boards or a Material Data Sheet (MDS).

Each contractor must provide each of his employees with all required PPE (at no cost to the employee). The specific PPE that is provided to a particular employee must be based on the nature of that employee's work and the location in which the work is performed (i.e. must be based on

the hazards to which the employee is exposed). PPE requirements for a particular job or for a particular area must be determined through a risk assessment for that job or area.

Any employee who does not have all of the PPE that is required for him to perform his duties safely will not be permitted to work. Each employee must care for his PPE, maintain it in good condition, and inspect it on a daily basis. If an item of PPE has worn out, has become damaged, or is found to be defective in any way, it must be replaced by the contractor.

PPE must be stored in accordance with the manufacturer's requirements and / or recommendations.

Each employee must receive training in the use, maintenance and limitations of the PPE that is provided to him, and must be made aware of why the PPE is necessary as well as the consequences of not wearing it as instructed (i.e. the potential for injury and / or disciplinary action). Training records must be retained.

Any person who refuses to wear PPE as required must be removed from the site. Symbolic signs indicating mandatory PPE requirements must be prominently displayed at the entrances to a project site and at the entrances to buildings and / or designated areas on the premises where additional PPE is required. These signs must comply with the applicable national standard (if one exists).

Contractors must appoint an employee to:

- Control the issuing and replacement of PPE;
- Keep an up-to-date register as proof that items of PPE have been issued to individuals (an employee must sign for the items that he receives);
- Ensure that there is an adequate supply of all required PPE (i.e. maintain PPE stock levels on site); and
- Carry out regular inspections to ensure that PPE is being used correctly, is being maintained in a good, serviceable and hygienic state, and is not being shared between employees.

39.1 Head Protection

A safety helmet (or hard hat) worn correctly will help protect the head in the event of:

- An employee being struck on the head by a falling or flying object;
- An employee striking his head against a fixed or protruding object; or
- Accidental head contact being made with an electrical hazard.

A safety helmet must be worn at all times on a project site, with the following exceptions:

- Vehicle and equipment operators inside enclosed cabs;
- In offices and in office or administration buildings; and
- At designated lunch and break areas (provided that no work is in progress in the immediate break area).

A safety helmet must be worn in accordance with the manufacturer's requirements. A safety helmet must be worn directly on the head. The wearing of a cap or other headgear beneath a safety helmet is prohibited unless the items have been specifically designed to be used in combination (i.e. the arrangement is approved by the safety helmet manufacturer).

The suspension system inside a safety helmet (that acts as a shock absorber) may not be removed. The painting of safety helmets is prohibited. Safety helmets may only be cleaned using a mild detergent and water. No solvents may be used.

39.2 Eye Protection

If an employee is carrying out, assisting with, or working adjacent to any activity where sparks or projectile particles are being generated, where chemical mists or fumes are being generated, where liquids may splash or spray, where harmful electromagnetic radiation (heat or light) is being generated, or where there is a risk of wind-blown particles entering the eyes, then suitable protective eyewear must be worn at all times (i.e. safety glasses, safety goggles, a face shield, a welding helmet, or a combination of these).

Such activities include:

- Working with rotating equipment (e.g. grinders, drills, mills, lathes, and saws);
- Welding and cutting;
- Chipping, chiselling or caulking;
- Using explosive powered tools;
- Abrasive blasting;
- Sanding; and
- Working with chemical substances (e.g. drilling fluids, acids, solvents, paints, pesticides, etc.).

For certain activities, special eye protection is required (e.g. a heat-resistant face shield is required when working near molten metal). Double eye protection is required for activities such as:

- Grinding, cutting, chipping, chasing and reaming (employees must wear both a full face shield and safety glasses or goggles); and
- Arc welding (welders must wear both safety glasses and a welding helmet).

Screens must be erected to protect passers-by, where practical.

Safety glasses must be worn at all times on a project site, with the following exceptions:

- Vehicle and equipment operators inside enclosed cabs with the windows fully closed;
- In offices and in office or administration buildings;
- At designated lunch and break areas (provided that no work is in progress in the immediate break area); and

When another form of eye protection is required (e.g. safety goggles).

All safety glasses used on site must have suitable permanent side protection.

In strong sunlight, dark safety glasses should be worn to reduce eyestrain and fatigue. However, caution must be exercised when employees are required to frequently move between outdoor and indoor environments. Dark safety glasses may not be worn indoors or in poor daylight conditions. Prescription spectacles with tinted lenses are prohibited inside buildings or other structures with limited illumination unless the lenses are light-sensing and adjust to changing illumination levels. Employees who wear prescription spectacles (i.e. require corrective lenses) must make use of either:

- Prescription safety glasses (with permanent fixed side shields) that conform to the requirements of a recognised national or international standard (e.g. CSA, ANSI, or equivalent); or
- Over-spec safety glasses or goggles.

The use of contact lenses in certain areas may not be suitable because of increased risk to the eye due to dust or heat.

39.3 Hearing Protection

Local regulations concerning occupational exposure to noise and the use of hearing protection must be complied with as a minimum. "Low noise" tools and machinery must be used wherever possible to reduce noise levels. Where noise cannot be reduced to an acceptable level through engineering and work practice controls, measures must be put in place to minimise the exposure of employees to the noise (i.e. administrative controls and personal hearing protection).

Areas where it is likely that the 95% upper confidence limit of an eight hour L_{eq} mean exceeds 85dB(A), or areas where impulse noise exceeds 140dB(C), must be designated as noise zones. These noise zones must be clearly demarcated and mapped, signs must be posted, and all employees must be made aware of the requirements for working in such an area.

Suitable hearing protection must be worn in all designated noise zones and when carrying out (or working in the vicinity of) any activity where the noise level exceeds 85dB(A).

Where hearing protection is required, a hearing conservation programme (applicable to all personnel and visitors) must be implemented. The programme must include training in the correct use and proper storage of hearing protection devices as well as replacement requirements. Training must be provided when hearing protection is first issued to an employee and refresher training must be carried out at least annually thereafter. Training records must be retained.

At least two types of personal hearing protection must be made available to employees. The hearing protection devices provided must have adequate noise reduction ratings (i.e. must be able to attenuate the noise level to below 85dB(A)).

Personal hearing protection must be issued on an individual basis and must not be shared. In addition to personally issued hearing protection, suitable disposable hearing protection must be made available at the entrances to all noise zones. All Hearing Protection Devices (except for disposable hearing protection) must be properly inspected and cleaned on a regular basis.

39.4 Respiratory Protection

Designated areas (respirator zones) must be established where:

- It is likely that the 95% upper confidence limit of a Similar Exposure Group's mean exposure concentration exceeds the relevant Occupational Exposure Limit (OEL) for agents resulting in chronic effects, such as total inhalable dust, respirable dust, respirable crystalline silica, PAH, fluorides, lead, mercury, asbestos or non-asbestos fibrous materials; or
- The concentration of an agent (particulate, vapour or gas) with an acute effect exceeds 50% of the relevant OEL.

Note: For a particular hazardous agent, the OEL to be adopted must be either the client's OEL or the OEL specified in local legislation, whichever is the most stringent.

Respirator zones identified must be clearly demarcated and mapped, signs must be posted, and all employees must be made aware of the requirements for working in such an area.

Suitable Respiratory Protection Devices (RPDs) must be worn in all designated respirator zones and when carrying out (or working in the vicinity of) any activity where the risk assessment has identified the need for respiratory protection.

RPD's must be selected based on:

- The type(s) of airborne contaminants that are present (gases, vapours, and particulates and aerosols including dusts, fumes, sprays, mists, and smoke);
- The potential particulate size distribution;
- Substance toxicity; and
- The likely concentrations.

Compatibility with the work tasks and other PPE, comfort (as it affects wear-time), and the ability to communicate adequately, must also be considered.

The risk assessment and method statement for the work to be performed, the information contained in the relevant Material Safety Data Sheets (MSDSs), and the results of any air monitoring associated with the substances to be worked with or activities to be carried out, must be used to ensure that the most suitable RPD is selected.

Only RPDs certified to a recognised standard and approved by the nominated project management representative may be used.

Where respiratory protection is required, a respiratory protection programme (applicable to all personnel and visitors) must be implemented.

The respiratory protection programme must include:

- Periodic inspection of RPDs, including before each use;
- Periodic evaluation (by competent persons) of cleaning, sanitising, maintenance and storage practices;
- Performance of positive pressure and negative pressure fit checks by RPD wearers before each use to ensure that the respirator is functioning properly; and
- Training at first issue of a RPD and regular refresher training thereafter in accordance with regulatory requirements or at least once every two years (the training must cover fit testing, use, cleaning, maintenance, filter cartridge replacement, and storage). Training records must be retained.

RPDs must be used, maintained, and stored in compliance with the manufacturer's requirements as well as the respiratory protection programme. Suitable facilities must be provided for the cleaning and sanitary storage of RPD's.

As a minimum, qualitative and documented fit testing must be carried out (although quantitative fit testing is preferred) to ensure that the use of negative pressure RPDs (including disposable RPDs) is effective. Fit testing must be performed by a competent person when an RPD is first issued and must be repeated periodically in accordance with legal requirements or every two years as a minimum. A policy must be in place requiring a clean shaven face when using a negative or neutral pressure RPD for routine tasks (otherwise a positive pressure RPD must be used). A medical evaluation including a pulmonary function test may be required to determine whether or not an individual is medically fit to wear a respirator.

For air-supplied RPDs, breathing air must be effectively filtered and / or isolated from plant and instrument air, and isolated from sources of potential contaminants. The supplied air must be tested to determine if the air quality complies with the requirements of applicable standards for breathing air.

For nuisance dust, dust masks with a protection level of at least FFP2 must be worn.

39.5 Hand and Arm Protection

Gloves must be worn when handling or working with equipment, materials or substances with the potential to cause injury or illness. Suitable gloves must be selected based on the task to be performed and the specific hazard against which the employee requires protection, such as:

- Sharp edges;
- Sharp points and splinters;
- Abrasive surfaces;
- Hazardous chemical substances (toxic, corrosive, sensitising, etc.);
- Extreme temperatures; and
- Viruses, bacteria and parasites.

39.6 Foot Protection

Safety boots must be worn at all times whilst on a project site, with the exception of offices and office or administration buildings in which closed athletic, business or similar shoes may be worn. Sandals, slippers, slippers, open-toed and high-heeled shoes are not permitted on any project premises.

Safety boots must provide the following protection:

- Steel toe cap to protect against crushing (impact and compression forces);
- Leather uppers that provide resistance against water penetration and water absorption;
- Slip resistant soles;

And where a risk assessment identifies the need:

- Puncture resistant soles (i.e. steel midsoles) for protection against sharp objects;
- Chemical resistant soles for protection against spilt chemical substances (such as solvents, hydrocarbons, acids, and alkalis);
- Heat resistant soles for protection against hot surfaces or molten metal; or
- Electrical shock resistant soles for protection (insulation) against live electrical conductors.
- Gumboots with steel toe caps must be worn when working in water or very wet conditions.

39.7 Clothing

All employees working on a project site must wear high visibility protective clothing with reflective taping. Trousers must be long and shirts must be long-sleeved. Shirts must be buttoned at the neck and wrists.

Protective clothing must preferably be made of natural fibres. Short pants, short-sleeved shirts, sleeveless shirts, and vests are prohibited as outer garments (with the exception of a high visibility vest worn over a long-sleeved shirt).

Loose clothing may not be worn where it may become caught in moving machinery or equipment. For hot work (e.g. welding, cutting, etc.), and any work carried out in the vicinity of an open flame, the protective clothing worn (shirt and trousers) must be made of a suitable fire retardant fabric. Underwear and socks must be made of natural fibres (preferably wool) or fire retardant fabric.

39.8 Body Protection

Suitable body protection must be provided as required to protect employees against specific hazards. A range of work activities require body protection in one form or another, including but not limited to:

- Working in extremes of temperature;
- Hot work (e.g. welding, burning, cutting and grinding);
- Working with hazardous chemical substances (e.g. acids, solvents, pesticides, etc.); and
- Clean up and disposal of hazardous materials and wastes (e.g. hydrocarbons, etc.).

A wide variety of protective garments are available. Suitable items must be selected to provide protection against the specific hazard(s) to which an employee is exposed. Hazards must be carefully identified and characterised to ensure that the correct protection is used.

Body protection must be sized properly to prevent tearing, the parting of seams, tripping, or restriction of movement.

39.9 Electrical Protective Equipment

To reduce the risk of electric shock, electrical insulating equipment appropriate for the voltage that may be encountered must be worn when working on energised electrical installations and when working within two metres of exposed energised conductors.

All rubber electrical insulating equipment (including gloves, sleeves, matting, covers, blankets, and line hoses) must be inspected for damage prior to and after each use, and immediately following any incident that can reasonably be suspected of having caused damage.

Rubber insulating equipment with any of the following defects and / or damage may not be used:

- A cut, rip, tear, hole, or puncture;
- Ozone cutting or ozone checking (i.e. the cutting action of ozone on rubber under mechanical stress causing a series of interlacing cracks);
- An embedded foreign object;
- Chemical deterioration (texture changes) such as swelling, softening, hardening, or becoming sticky or inelastic; or
- Any other defect that damages the insulating properties.

Rubber insulating gloves must be electrically tested before first issue and every 12 months thereafter as a minimum. Insulating gloves must also be given an air test along with the daily inspection. Essentially, this involves filling a glove with air and checking for any holes or leakage.

Insulating equipment that fails an inspection or electrical test may be repaired only as follows:

- Rubber insulating line hose may be used in shorter lengths with the defective portion(s) cut off;
- A rubber insulating blanket may be repaired using a compatible patch that results in the patched area having electrical and physical properties equal to those of the blanket;
- A rubber insulating blanket may be salvaged by cutting the defective area off the undamaged portion of the blanket;
- Rubber insulating gloves and sleeves with minor physical defects, such as small cuts, tears, or punctures, may be repaired by applying compatible patches. The patched areas must have electrical and physical properties equal to those of the surrounding material.

Repairs to gloves are permitted only in the area between the wrist and the reinforced edge of the opening.

Repaired insulating equipment must be retested before it is put back into use. Insulating equipment must be cleaned as required to remove foreign substances (using a mild detergent).

Insulating equipment must be stored in such a location and in such a manner so as to protect it from light, temperature extremes, excessive humidity, ozone, and other damaging substances and conditions.

Leather protective gloves must be worn over rubber insulating gloves to provide mechanical protection against cuts, abrasions, and punctures.

Suitable arc flash PPE (e.g. voltage rated gloves, fire retardant clothing, arc rated face shield, arc flash hood, arc flash suit, etc.) must be worn whenever an employee is potentially exposed to an arc flash hazard. The appropriate level of PPE must be worn depending on the task and the potential energy exposure. These PPE requirements must be clearly specified as part of a project-specific arc flash protection programme.

39.10 Jewellery

Necklaces, dangling earrings, and bracelets may not be worn on a project site. No ring or watch may be worn where there is a risk that it may become caught in machinery or equipment. No jewellery or other conductive apparel (such as a key chain or watch) may be worn when carrying out energised electrical work.

39.11 Hair

Scalp hair that is longer than the top of the shoulders must be tied up and restrained within the person's safety helmet or within the collar of his or her overalls, shirt or jacket.

For negative or neutral pressure Respiratory Protection Devices, facial hair must not cause the seal between the respirator and facial skin to be broken (or prevent a seal from being formed in the first place).

39.12 Task-Specific PPE

In addition to the standard PPE required for a project site (including a safety helmet, safety glasses, safety boots, and high visibility protective clothing), the following task-specific PPE must be used as a minimum by any person carrying out or assisting with such a task:

- Grinding – safety glasses or goggles and full face shield (i.e. double eye protection), hearing protection, respiratory protection where dust or fumes may be generated, leather gloves, leather apron, and leather spats;
- Spray Painting – respiratory protection (air-supplied hood for confined spaces), safety goggles (if the respirator design does not provide this protection), hearing protection where air compressors are used), chemical resistant gloves, and chemical resistant disposable coveralls.

39.13 Sun Protection

The contractor must ensure that all personnel are protected in sunlight through the use of long sleeve shirts, long trousers, brims to safety helmets and UV factored sunscreen. Shade structures must also be made available to all employees.

The contractor must conduct training and awareness sessions with his employees, advising on the risks associated with working in the heat (including dehydration) and the precautions to be taken (e.g. ensuring adequate fluid intake).

40. Fuel / Flammable Liquid Storage and Refuelling

No fuel (diesel, petrol, paraffin, etc.) or any other flammable liquid (paints, solvents, etc.) may be stored on site unless approved in writing by the nominated project management representative.

If the on-site storage of a fuel or a flammable liquid is approved, the contractor must ensure the following:

- The quantity of fuel / flammable liquid to be stored on site must be kept to the minimum that is required;
- The storage area must be located in a well-ventilated area at least 10 metres away from any building, drain, boundary or any combustible material;
- If more than 200 litres of fuel / flammable liquid is to be stored, the tank must be installed / the containers must be positioned within a bund;
- If the fuel / flammable liquid are to be stored in bulk tanks / vessels, then the minimum capacity of the bund must be 110% of the volume of the largest tank / vessel. If many small containers (e.g. 210 litre drums) are to be stored, the bund must be able to contain 25% of the total volume of the stored products;
- The bund must be impermeable. It must have a solid concrete floor and the walls must be constructed out of brick and must be plastered on the inside;
- The bund must be fitted with a lockable drain valve (for draining away rainwater), which must remain locked in the closed position. The valve may only be opened under supervision and in accordance with a written procedure;
- The fuel / flammable liquid storage area may not be used for the storage of any other materials / equipment, and must be kept completely free of all combustible materials (including rubbish, brush and long grass) at all times;
- Access to the storage area must be controlled (wire mesh fencing and gate);
- Appropriate warning signage (i.e. "Flammable Liquid", "No Smoking" and "No Naked Flames") must be prominently displayed at the storage area. The contents and volume of each tank must be indicated;
- In order to contain spillages, the offloading / refuelling bay at the fuel / flammable liquid storage area must have a solid concrete base surrounded by bund walls, ramps or humps and / or spill trenches (covered with steel grating) that lead into a sump;
- Fuel dispensing pumps must be protected against impact damage;
- All fuel / flammable liquid storage tanks and dispensing equipment must be electrically bonded and properly earthed;
- All electrical installations and fittings must be of an approved intrinsically safe type;
- Two 9kg dry chemical powder fire extinguishers must be mounted in an easily accessible position near the entrance gate to the fuel / flammable liquid storage area. Depending on the size of the storage area, additional fire extinguishers may be required to ensure that an extinguisher is no further than 15 metres away from any point on the perimeter of the storage area;
- A fire extinguisher must be at hand wherever refuelling is carried out;
- Smoking or open flames within 10 metres of a fuel / flammable liquid storage / refuelling area is strictly prohibited;
- No petrol or diesel powered vehicle or equipment may be refuelled while the engine / motor is running;
- Cellular phones must be switched off in fuel / flammable liquid storage / refuelling areas;
- Spill clean-up kits (containing a suitable absorbent fibre product) must be provided;
- Any spillages must be cleaned up immediately and all contaminated cleaning materials must be disposed of in accordance with the applicable legislation;
- If a flammable liquid is spilt or is leaking from a container / vessel, the area must be cordoned off and appropriate warning signage must be displayed to keep unauthorised personnel away from the affected area. Every effort must be made to contain the spillage. All hot work in the vicinity must be stopped immediately. If the spilt product is volatile and the possibility exists that a vapour cloud may form, or if the leak or spillage cannot be contained or stopped, then appropriate emergency response procedures must be activated,

including the evacuation of all persons in the vicinity. Suitable fire fighting equipment must be positioned ready for use should the spilt product ignite;

- The manual decanting of fuel or a flammable liquid from a large container should only be done using a stirrup pump (or similar) or a purpose-made frame which allows the container / drum to tilt for decanting and then return to the upright position;
- Drip trays must be used wherever required;
- All tanks, drums, cans, etc. containing flammable liquids must be tightly closed and properly sealed except for when a container is being filled or when a product is being decanted;
- The transport or storage of corrosive or flammable liquids in open containers is strictly prohibited;
- Daily-use quantities of fuel (up to a maximum of 20 litres) must be handled in an approved safety can with a flash arresting screen, spring closing lid and spout cover that will safely relieve internal pressure if the can is exposed to fire;
- Where safety cans may be impracticable, only approved metal containers with screw caps may be used. Each container must be clearly labelled to indicate its contents;
- Only small quantities of flammable liquids (paints, solvents, etc.) may be stored within a building. Each product must be kept either in its original container or in an approved container which must be properly sealed. Each container must be clearly labelled to indicate its contents. When not in use, all such containers must be stored in a well-ventilated steel cabinet which must be kept locked to prevent unauthorised access;
- Not even small quantities of flammable liquids may be stored or dispensed in buildings or places of public assembly, in general warehouses, or in buildings containing sources of ignition such as space heaters, cooking devices, open electric motors, motor vehicles, or where welding, cutting, or grinding activities are being carried out;
- Safe Work Procedures must be compiled for the transportation (including delivery), offloading, storage, handling and use of any fuel / flammable liquid on site;
- All personnel that will be required to work with or may come into contact with a flammable liquid must be made aware of the hazards associated with the product and must be thoroughly trained in the safe transportation, use, handling and storage thereof.

41. Fire Protection and Prevention

The contractor must compile a Fire Protection and Prevention Plan for the work that will be carried out on site.

The contractor must assess / survey his area of responsibility and identify locations where the risk of fire is high. Cognisance must be taken of the fact that certain locations may need to be designated as high risk due to the presence of large quantities of flammable or combustible materials / substances. For all high risk areas, the contractor must ensure that additional precautions are taken to prevent fires and strict control is exercised over any hot work (i.e. welding, cutting, grinding, etc.) that is carried out.

The contractor must supply and maintain all required fire-fighting equipment. The type, capacity, positioning, and number of fire-fighting appliances must be to the satisfaction of the nominated project management representative and must meet the requirements of the applicable legislation. Fire mains, hydrants and hose reels will rarely be available on site, so use must primarily be made of portable fire extinguishers.

Fire-fighting equipment, fixed and portable, must be strategically located with a view to being able to rapidly deploy the equipment in order to bring potentially dangerous and destructive fires under control while still in their infancy.

All fire extinguishers (and any other fire-fighting equipment) placed on site must be:

- Conspicuously numbered;
- Recorded in a register;
- Visually inspected by a competent person on a monthly basis (the results of each inspection must be recorded in the register and the competent person must sign off on the entries made); and
- Inspected and serviced by an accredited service provider every six months (the nominated project management representative may require that this frequency be increased depending on the environmental conditions (e.g. high dust levels, water, heat, etc.) to which the fire extinguishers are exposed).

Any fire extinguisher that has a broken seal, has depressurised, or shows any sign of damage must be sent to an accredited service provider for repair and / or recharging. Details must be recorded in the register.

Fire-fighting equipment may not be used for any purpose other than fighting fires. Disciplinary action must be taken against any person who misuses or wilfully damages any fire-fighting equipment.

Access to fire-fighting equipment, fixed or portable, must be kept unobstructed at all times. Approved signage must be in place to clearly indicate the location of each permanently mounted fire extinguisher, fire hose reel, etc.

The contractor must ensure that all persons working in / entering his area of responsibility are made aware of where all fire-fighting appliances and alarm points are located. The contractor must ensure that his employees (and those of any appointed sub-contractors) are trained in fire-fighting procedures and the use of fire-fighting equipment.

The contractor must compile an emergency response procedure detailing the actions that must be taken in the event of a fire or a fire / evacuation alarm. All personnel working within the contractor's area of responsibility must be trained, and all visitors must be instructed, on this procedure. Copies of the procedure must be prominently displayed in the workplace in all languages commonly used on the site.

Used fire extinguishers must be replaced by the contractor without delay.

No hot work (i.e. welding, cutting, grinding, etc.) or any other activity that could give rise to a fire may be performed outside of a designated workshop without a Permit to Work having been issued.

Wherever hot work is being carried out, a fire extinguisher must be at hand. Where the risk assessment determines that it is necessary, a fire watch must be stationed. Supervisors must carry out workplace inspections regularly to ensure adherence to fire prevention measures and procedures.

At the end of every working period (i.e. before each tea / lunch break and at the end of every shift / day), the workplace must be thoroughly inspected to ensure that no material is left smouldering and no condition / situation exists that could give rise to a fire.

The contractor must ensure that all supervisors and all employees carrying out or assisting with any hot work or any other activity that could give rise to a fire have been trained in fire-fighting procedures and the use of fire-fighting equipment. The training must be conducted by an accredited training provider.

When using electrical equipment, all cables must be in good condition and the nearest convenient socket must be used. No power socket may be loaded beyond its rated capacity through the use of adaptors, etc. Makeshift electrical connections are not permitted under any circumstances. Water-based fire-fighting equipment must not be used on electrical equipment or burning liquids.

Each vehicle used on site for work purposes and each item of mobile equipment with a diesel or petrol engine must be fitted with a permanently mounted fire extinguisher. Smoking is only permitted in designated smoking areas. Cigarette ends / butts must be properly stubbed out in the ashtrays provided and never thrown into waste bins.

The contractor must ensure that good housekeeping practices are enforced, as this is crucial to the prevention of fires.

All combustible waste materials must be removed from the workplace on a daily basis (at the end of each shift) and placed in waste receptacles located at least 5 metres away from any structure. The accumulation of waste materials in out-of-the-way places is prohibited. Offices, desks, cabinets, etc. must always be kept tidy and uncluttered. Waste paper bins must be emptied regularly.

The storage of combustible materials under stairways or in attics is prohibited. The storage of any materials against the exterior of a building or any other structure is prohibited. All walkways, passages and stairways must be kept clear (i.e. must be unobstructed) at all times, as they may need to be used as a means of escape.

The areas around and the routes to all exits, fire escape doors, fire hydrants, fire hose reels and fire extinguishers must be kept clear (i.e. must be unobstructed) at all times. "No Smoking" signs must be conspicuously displayed in and around all storage areas / rooms. Waste may not be burned under any circumstances.

No flammable liquid (such as petrol, acetone, alcohol, benzene, etc.) may be used for starting fires or as a solvent for cleaning clothes, tools, equipment, etc. Only solvents approved by the nominated project management representative may be used for cleaning purposes.

Whenever any work is carried out involving the use of a flammable substance / material, the area must be cordoned off and appropriate warning signage (i.e. "No Unauthorised Entry", "No Smoking" and "No Naked Flames") must be displayed.

42. Smoking

The contractor must not permit smoking on site except within designated smoking areas selected in accordance with the applicable legislation. Such an area must be clearly demarcated and the required signage must be displayed.

Any person found smoking or discarding a cigarette butt outside of a designated smoking area may be removed (temporarily or permanently) from site. In all designated smoking areas, adequate non-combustible commercial ashtrays and / or cigarette butt receptacles (butt cans) must be provided.

Ashtrays and other receptacles provided for the disposal of smoking materials must not be emptied into rubbish bins or any other container holding combustible materials. "No Smoking" signs must be strictly observed.

43. Housekeeping

The contractor must maintain all work areas in a tidy state, free of debris and rubbish. Unless directed otherwise, the contractor must dispose of all debris, rubbish, spoil and hazardous waste off site in a designated and authorised area or facility. The contractor must familiarise himself with the waste management plan for the site including collection and disposal arrangements, and must align his waste management activities accordingly.

In cases where an inadequate standard of housekeeping has developed and compromised safety and cleanliness, a nominated project management representative may instruct the contractor to cease work until the area has been tidied up and made safe. Neither additional costs nor contract deadline extensions will be allowed as a result of such a stoppage. Failure to comply will result in a clean-up being arranged through another service provider at the cost of the non-complying contractor.

The contractor must carry out housekeeping inspections on a weekly basis to ensure maintenance of satisfactory standards. The contractor must document the results of each inspection. These records must be maintained and must be made available to the nominated project management representative on request.

The contractor must implement a housekeeping plan for the duration of the contract ensuring that the site housekeeping is maintained. Furthermore, at the end of every shift, the contractor must ensure that all work areas are cleaned, all tools and equipment are properly stored, and construction rubble is removed.

Where the contractor fails to maintain housekeeping standards, the nominated project management representative may instruct the contractor to appoint a dedicated housekeeping team for the duration of the project at the contractor's expense. Littering is prohibited.

44. Waste Management

Waste may not be disposed of unless the disposal of that waste is authorised by law. The contractor must therefore ensure that all waste that is generated is handled, stored, transported and disposed of in accordance with the requirements of the applicable legislation / local authority.

45. Stacking and Storage

All irregular shaped items will be stacked at floor / ground level in designated stacking areas on a level, firm base capable of withstanding the weight of the commodities being stacked and stacked in such a manner that the items do not topple over or change position due to subsidence or weight transfer when being moved.

Where these commodities are stacked on shelves or racks, the shelves or racks must be designed to carry the weight of the commodity being stacked. All racks or shelves where heavy material or commodities are stacked will have a weight carrying limitation clearly marked on the structure and have a safety factor of at least +10% of maximum total carrying capacity.

All materials, commodities or articles, which could be damaged due to inclement weather, must be stored under cover. Waste material that is combustible must not be allowed to accumulate in sufficient quantities to create a hazard.

No commodities or equipment may be stacked or stored within 500mm of rolling stock tracks or where mobile equipment travels. The storage of material, small equipment, tools, files and general items in cupboards and on shelves must be neat and controlled at all times. Incompatible substances must not be stored in or on the same cupboard or shelf.

No equipment, tools, files or documents may be stored or stacked on top of cupboards which are higher than 1.5 metres in height.

46. Facilities

Sanitary conveniences must be provided and maintained at a rate of at least one shower facility for every 20 workers, at least one toilet facility for every 10 workers, separate male and female changing facilities and sheltered eating areas.

Where chemical toilets are provided, one toilet for every 10 employees must be allocated. All toilets must be cleaned daily, disinfected and provided with toilet paper. All employees making use of these facilities have the responsibility to help keep the facilities neat, clean and hygienic. Washing facilities, including soap and towels, must be made available for use by the contractor's employees.

Drainage from all washing / toilet facilities must be properly designed and constructed to prevent employee exposure to waste water (and the associated biological hazards). Waste water may not accumulate or stand in pools at any location on the project site.

Change rooms must be provided and must be kept clean and free from odours at all times. No chemicals, except those normally used for domestic cleaning of these facilities, may be stored in the facilities.

No equipment or items (other than those normally associated with hygiene facilities) may be stored in the facilities. All entrances must be constructed in a way to afford privacy to users.

Drinking water must be provided from an approved source. A sheltered (covered) area must be set aside on site to be used as a dining facility (eating area). Adequate seating must be provided for the maximum number of employees. The facility must be kept clean and tidy.

A suitably sized, impervious receptacle (bin) must be provided for the disposal of waste food and other refuse generated at the dining facility. This bin must be emptied and cleaned regularly (i.e. promptly after meal times).

Food may only be consumed in authorised sheltered areas. Adequate refrigerated storage must be provided to the contractor's employees for the storage of food and drinks. Fridges must not be overstocked and must maintain sufficiently low temperatures.

47. Occupational Hygiene

The contractor must ensure that the exposure or potential exposure of his employees to any of the following stressors is assessed and measured:

- Noise;

- Thermal stress (heat and cold);
- Particulates (dust);
- Silica (free crystalline silica);
- Asbestos;
- Gases or vapours;
- Lead;
- Chemicals;
- Ionising radiation;
- Non-ionising radiation;
- Vibration (hand / arm vibration and whole body vibration);
- Ergonomics; and
- Illumination.

If it is determined that exposure levels for a particular stressor are unacceptable, then a monitoring and control plan must be implemented to manage any risk of overexposure.

Note: Where chemical substances are to be used as part of the refurbishment process, the contractor must ensure that the chemical composition of each substance is known.

Carcinogenic (cancer-causing) ingredients must be specifically identified with due understanding that no chemical known to cause cancer will be permitted for use on site (an alternative will need to be sourced).

The contractor must conduct an Occupational Health Risk Assessment in respect of their project activities. The contractor will be required to appoint an Approved Inspection Authority (AIA) for Occupational Hygiene to conduct Occupational hygiene Surveys should such a need arise.

47.1 Lighting

For all work areas and access ways, if the natural lighting available is inadequate it must be supplemented by artificial lighting to meet the minimum levels required.

All lighting on site must comply with the requirements of the Environmental Regulations for Work Places GNR2281 of 16 October, 1987.

47.2 Noise

A hearing conservation program must be implemented and protection against the effects of noise exposure must be provided when the noise exposures equal or exceed an 8-hour time-weighted average sound level of 85 decibels measured on the A-weighted scale of a standard sound level meter at slow response.

For the hearing conservation program to be effective it must include as a minimum:

- Monitoring of the workplace to determine the representative exposure of employees to excessive noise levels;
- An audiometric testing program for employees, which must include:
 - A baseline audiogram for all employees exposed to noise levels equal to or in excess of the standard;
 - Audiograms for each overexposed employee at a frequency determined by the OMP;
 - Analysis of audiogram results with retesting and/or referral to an otolaryngologist or qualified physician when a significant threshold shift (STS) occurs; and
 - Written employee notification of the STS.
- A training program for all employees exposed to noise;

- Provision of personal protective equipment to all affected employees when administrative or engineering controls fail to reduce sound levels to within the levels of the standards.

Monitoring of employee exposures to noise shall be conducted by an Approved inspection Authority (AIA).

The monitoring requirement may be met by either area monitoring or personal monitoring that is representative of employee exposures. Personal monitoring is preferred, and may be required based on the type(s) of noise sources.

For purposes of the hearing conservation program, employee noise exposures shall be computed in accordance with local legislation. A person-task specification shall be available for every job category and shall be submitted with an employee for audiometric testing.

Audiometric test results obtained from the pre-employment medical examination for a new employee shall be used as the baseline audiogram. Testing to establish a baseline audiogram shall be preceded by at least 14 hours without exposure to workplace noise.

Hearing protectors shall not be used as a substitute for the requirement that baseline audiograms be preceded by 14 hours without exposure to workplace noise. Employees shall be notified of the need to avoid high levels of non-occupational noise exposure during this 14-hour period.

Record-keeping for the audiogram shall include, as a minimum:

- Name and job classification of the employee;
- Date of the audiogram;
- The examiner's name;
- Date of the last acoustic or exhaustive calibration of the audiometer;
- Employee's most recent noise exposure assessment.

Audiometric test results shall be maintained in the employee's medical file. To control noise exposure, its three basic elements shall be examined, i.e. source of the sound, travel path, and effect on receiver or listener. Solution of a given noise problem might require alteration or modification of any or all of these three basic elements.

Controlling noise at the noise source can be achieved by the following:

- Select quiet equipment initially. In selecting quiet equipment the following features shall be considered:
 - Low-noise certification;
 - Advertisement of "quiet" operation, evidence of noise control design;
 - Evidence of "lower" and "slower" operating characteristics;
 - Side-by-side noise testing of equipment; and
 - "On-site" or "in operation" inspection of mechanical equipment before purchase.
- Reduce operating noise by considering the following control measures:
 - Reduce impact or impulse noise by reducing weight, size, or height of fall of impacting mass;
 - Reduce speed in machines and flow velocities and pressure in fluid systems;
 - Balance rotating parts – to control machinery noise and vibration of fans, fly wheels, pulleys, cams, etc.
- Reduce frictional resistance between rotating, sliding or moving parts in mechanical systems: frequent lubrication, proper alignment of moving parts; static and dynamic balancing of rotating parts; correction of eccentricity or "out-of-roundness" of wheels, gears, rollers, pulley, etc.;

- Reduce resistance in air or fluid systems: use of low flow velocities, smooth boundary surfaces of duct or pipe systems, and long-radius turns and flared actions in pipes, etc., to reduce turbulence noise;
- Isolate vibration elements in machinery; install motors, pumps, etc. on most massive part of machine; use belt or roller drives in place of gear trains; use flexible hoses and wiring instead of rigid piping and stiff wiring, etc.
- Apply vibration damping materials such as liquid mastic; pads of rubber, felt, foam or fibrous blankets; or sheet metal visco-elastic laminates or composites to vibrating machine surfaces; and;
- Reduce noise leakage from the interior of machines such as compressors by sealing or covering all openings or applying acoustical materials to machine interiors.

Controlling noise in the transmission path can be achieved by the following:

- Separate the noise source and receiver as much as possible;
- Use sound-absorbing materials on ceiling, floor or wall surfaces as close to the machine as possible;
- Use sound barriers and deflectors in the noise path;
- Use acoustical lining on inside surfaces of such passageways as ducts, pipe chases, or electrical channels;
- Use mufflers, silencers or snubbers on all gasoline or diesel engines, regardless of size; and particularly on equipment when large quantities of high-pressure, high-velocity gases, liquids, steam or air are discharged into the open air; and
- Use vibration isolators and flexible couplers where the noise transmission path is structure borne in character.

Protection for the receiver – when engineering controls fail to reduce the levels to within the levels specified in local legislation, the following measures shall be implemented:

- Personal protective equipment shall be provided and replaced as necessary at no cost to employees;
- Supervisors shall ensure that hearing protective devices are worn by all employees who are exposed to a time-weighted average of 85 decibels or greater and who have experienced a significant threshold shift;
- Employees shall be given the opportunity to select their hearing protectors from a variety of suitable protectors.

Noise zones shall be indicated by means of signs at every entrance to such zones. When noise levels exceed 100 dB(A), a combination of earplugs and earmuffs may be required to achieve protection of the worker. It is important to note that using double protection will add only 5 to 10 dB of extra attenuation above that of a single Hearing Protection Device. Where an earmuff and earplugs are used together, OSHA recommends using this simple calculation: Take the higher rating of the two devices, and add five. Hearing Protection Devices should be worn for the full noise exposure period.

Where an audiometry programme is required, it must meet the following standards:

- All testing must be by pure tone audiometry in an approved audiometry booth or quiet room, with measured noise levels less than 40 dB(A);
- The initial audiogram must be taken prior (minimum of 24 hours) to exposure to significant noise. Further audiograms must be taken periodically; annually where exposures are over 85 dB(A) Leq or where continued deterioration to hearing is occurring;
- Testing must be performed by trained and competent personnel;

- Audiometers must be calibrated according to the manufacturer's guidelines. As a minimum these will be a weekly biological calibration using an employee unexposed to noise, or a bio-acoustic simulator, and an annual quantitative check. All results must be documented; and
- Audiograms must be read by trained persons who will identify any increasing hearing loss and then determine if this is noise induced. Any employee with a significant downward shift in one or both ears (measured as an average non age-adjusted loss from baseline of 10 dB at 2, 3 or 4 kHz) must be retested following removal from noise for a minimum of 24 hours, usually after a days-off period. If the downward shift persists the employee must be reviewed by a physician and improved hearing protection considered.

47.3 Particulate and Gas / Vapour Exposure

Designated areas must be created where:

- It is likely that the 95 per cent upper confidence limit of a Specific Exposure Group's (SEG) mean exposure concentration for agents resulting in chronic effects (such as total inhalable dust, respirable dust, respirable crystalline silica, PAH, fluorides, lead, mercury, asbestos or non-asbestos fibrous materials) exceeds the relevant OEL; and
- Agents with an acute effect, such as particulate hazards, or gases (e.g. CO, SO₂, NH₃, HF, etc.), or vapours exceed 50 per cent of the relevant OEL.

Designated areas must:

- Be identified and mapped, signposted or otherwise clearly communicated to employees working in the area. Signposting, where necessary, must use appropriate wording or symbols on signs to identify the hazard;
- Have a documented respiratory protection programme based on suitable risk assessment and standards, which is applied to employees, contractors and visitors;
- Have regular monitoring of SEGs working in the area; and
- Have a formal review of the practicality of engineering controls at least every two years, or less where it is a critical control for a significant risk.

Particulate and gas / vapour monitoring must be appropriate to the exposure conditions and toxicants, and based on the use of equipment approved by local regulatory authorities, as per documented methods.

Where risk assessment indicates the possible presence of levels of gas or vapour sufficient to cause health effects in less than one shift (e.g. confined space entry), continuous monitoring is required as long as the potential for harm exists.

Employees and contractors must be covered by a medical surveillance programme when:

- Their Specific Exposure Group TWA mean exposure to respirable crystalline silica, total inhalable dust, respirable dust, lead or asbestos is greater than 50 per cent of the relevant OEL;
- The medical adviser considers that it is advisable; or
- There is a legal requirement for medical monitoring.

Where risk assessment indicates a risk of a respiratory condition, assessment programmes must include chest x-rays and / or lung function tests. The test or tests chosen must enable the earliest detection of adverse effects from the exposure of concern. Where indicated, they must meet the following standards:

- High quality chest x-rays will be taken every five years, unless local legislation requires these to be more frequent;

- All chest x-rays for pneumoconiosis surveillance will be read to International Labour Organisation (ILO) standards by an ILO B reader, wherever possible, and if not, by a competent radiologist using verifiable quality criteria;
- Any progression of more than one step on the ILO extended scheme to a reading above 1/0 will be reviewed by a physician;
- Any reading suggesting active lung disease will be reviewed by a physician; and
- All spirometry will be performed by trained staff following the American Thoracic Society guidelines or equivalent and be offered at a frequency determined by the likely rate of detectable change in lung function.

Controls must be of an adequate standard such that surfaces are adequately cleaned to avoid:

- Dust generation due to material dislodgment (e.g. windblown), where practicable; or
- Fume generation from accumulated dust during welding / heating or cutting operations.

Where risk assessment indicates the need to reduce exposures to toxic substances for employees or their families, good personal hygiene must be enforced. The programme must include:

- No smoking, eating or drinking in designated hazard areas;
- Washing of hands and face prior to drinking, eating or smoking;
- Showering at work post shift or after exposure to 'dirty' conditions; and
- Laundering of contaminated clothing by the contractor.

Abrasive blast cleaning must be conducted so as to protect worker health and minimise dust emissions. Substitutes must be used whenever practicable for abrasives containing crystalline silica. However, if such abrasives are used, workers must be aware of the hazards and exposure monitoring conducted. The hazardous properties of alternative materials must be considered before use.

Where required, training in the recognition of signs and symptoms of hazardous particulate and gas / vapour exposure, emergency procedures and preventative measures must be provided.

47.4 Respiratory Protection Devices

The selection of Respiratory Protection Devices (RPD's) must be based on:

- The potential particulate size distribution, gas / vapour types, substance toxicity and likely concentrations;
- Compatibility with the work tasks and other PPE; and
- Comfort (as it affects wear-time) and allowance for adequate communication.

Only RPD's approved by the nominated project management representative may be used. Suitable facilities must be available for cleaning and sanitary storage of RPD's.

Half-mask and full-face air-purifying respirators must NOT be used where:

- The atmosphere is oxygen deficient (< 19.5 per cent);
- The atmosphere is immediately dangerous to life or health (e.g. in areas where CO concentrations are > 1500 ppm, HF > 30 ppm or NH₄ > 300 ppm);
- Gases and vapours are more than ten times their OEL or greater than 1000 ppm for half-mask respirators, or more than 100 times their OEL for full-face respirators; or
- Particulates are more than five times their OEL for half-mask respirators, or more than 50 times their OEL for full-face respirators.

For atmospheres that are oxygen deficient, or contain unknown hazards, or have concentrations of gases and vapours that are unknown, or could potentially exceed levels that are immediately dangerous to life or health, an air-supplied type respirator must be worn.

For effective use of negative pressure RPD's (including disposable RPD's), fit testing must be qualitative and documented as a minimum, although quantitative fit testing is preferred. Fit testing must be performed by a competent person when RPD's are first issued and must be repeated periodically according to legal requirements or two-yearly as a minimum frequency. There must be a policy requiring a clean shaven face when using a negative or neutral pressure RPD for routine tasks, or the use of a positive pressure RPD will be required. A pulmonary function test and medical evaluation may be required to determine whether or not an individual is medically fit to wear a respirator.

For air-supplied RPD's, breathing air must be effectively filtered and / or isolated from plant and instrument air, and isolated from sources of potential contaminants. The quality of the breathing air must be checked for conformance with applicable standards.

The respiratory protection programme must include:

- Periodic inspection of RPD's, including before each use;
- Periodic evaluation of cleaning, sanitising, maintenance and storage practices by competent persons;
- Performance of positive and negative fit checks before each use by RPD wearers to ensure that the respirator is functioning properly; and
- Training at first issue of a RPD and regular refresher training thereafter in accordance with regulatory requirements or at least once every two years.

47.5 Hazardous Chemical Substances

No chemical substance may be brought onto site unless it has been approved for use by the nominated project management representative. The contractor must develop and maintain a hazardous chemical substance register specifying as a minimum the type and volumes of substances on site.

If the contractor wishes to make use of a chemical substance that does not appear on the register, then the contractor must provide the following minimum information to the nominated project management representative for review PRIOR to bringing the substance onto site:

- A detailed 16-point Safety Data Sheet (SDS) issued by the manufacturer / supplier of the substance;
- The reason for wanting to bring the substance onto site (i.e. the intended use of the substance);
- The proposed method of transportation;
- The proposed arrangements for the safe storage of the substance;
- The quantity to be stored on site;
- The proposed methods for handling / using the substance (including PPE);
- The proposed method of disposal of the waste;
- Proof that the contractor is able to readily provide the necessary first aid measures as specified in the SDS; and
- A risk assessment covering the transportation, use, handling, storage and disposal of the substance with specific reference to the substance's compatibility with other chemicals.

This information must be provided at least five (5) working days prior to the date on which the contractor intends to bring the substance onto site for use. Any chemical substance brought onto

site without adherence to the requirements stipulated above shall be removed from site immediately.

If the nominated project management representative approves the substance for use, the contractor must ensure that all necessary precautions are taken concerning the transportation, use, handling, storage and disposal of the substance, and that all required PPE and first aid materials / equipment (as stipulated in the SDS) are readily available on site.

The contractor must ensure that a Material Data Sheet (SDS) is obtained for each chemical substance brought onto site. A file, or files, containing all of the SDS's must be maintained and must be readily available to all personnel on site (particularly first aiders) as well as other potentially affected parties (e.g. emergency services personnel, persons from the local community, etc.). The SDS's must be in the language(s) commonly used on site.

The contractor must appoint a trained and competent **Hazardous Chemical Substances Coordinator** who understands and is able to evaluate the risks associated with a wide variety of substances. This person shall be responsible for:

- Assessing the hazardous properties and risks associated with all chemical substances brought onto site by the contractor and appointed sub-contractors (using the SDS's);
- Determining precautions and safe practices for transportation, use, handling, storage and disposal (including PPE requirements) (using the SDS's);
- Determining first aid and emergency response requirements / procedures (using the SDS's);
- Maintaining the MDS file;
- Managing and monitoring the consumption of inventory; and
- Providing an "as needed" service to site personnel and suppliers.

The risks associated with the transportation, use, handling, storage and disposal of all hazardous chemical substances brought onto site must be assessed and managed by the contractor through a process that incorporates risk reduction using the hierarchy of controls as described as described by this Specification. Whenever a task-based risk assessment is carried out, consideration must be given to the use of chemical substances (e.g. greases, solvents, etc.).

The contractor must provide Safe Work Procedures for the transportation, use, handling, storage and disposal of all hazardous chemical substances to be used on site.

The contractor must provide his employees with all of the Personal Protective Equipment that is necessary to prevent exposure / injury while handling / using the hazardous chemical substances that they will be required to work with. Appropriate PPE must be selected with consideration given to the potential hazards, permeability, penetration, resistance to damage and compatibility with the work tasks.

The contractor's employees must be trained in the safe transportation, use, handling, storage and disposal of the hazardous chemical substances that they will be required to work with or may come into contact with. The training must specifically address PPE requirements (including the correct selection, fitment and use thereof).

All personnel must be trained to understand the potential health effects associated with exposure to hazardous chemical substances and therefore the importance of Safe Work Procedures and PPE. All personnel must be trained on emergency response procedures and first aid measures.

Behaviour-based observations and Conversations must include the use / handling of hazardous chemical substances.

An appropriate occupational exposure monitoring and medical surveillance programme must be in place for all personnel potentially exposed to hazardous chemical substances which have the potential to cause immediate or long-term harm.

Emergency showers and eyewash stations must be provided where required by law, or where a risk assessment indicates a need. The emergency showers and eyewash stations must be appropriately located, signposted, and regularly tested and maintained. Employees must receive training on the location and use of the showers / eyewash stations.

An emergency response plan for incidents involving hazardous chemical substances must be in place. Regular and appropriately staged emergency drills (possibly involving external spill response and ambulance support services) must be held and lessons learnt must be incorporated into the emergency response plan.

The contractor must provide appropriate storage facilities for all hazardous chemical substances to be used on site. The storage facilities must be secure and protected from damage. They must also be designed for easy access for firefighting purposes. Where applicable, the storage facility must protect chemical containers from physical damage due to temperature extremes, moisture, corrosive mists or vapours, and vehicles.

The inventory of hazardous chemical substances stored on site must be kept to a minimum. The quantity of each chemical stored must be justifiable.

Storage and segregation requirements for all hazardous chemical substances to be used on site must be based on:

- The quantities of the substances stored;
- The physical state of the substances (solid, liquid or gas);
- The degree of incompatibility; and
- The known behaviour of the substances.

Access to areas where hazardous chemical substances are stored and handled must be limited and controlled.

Every chemical substance container must be adequately and clearly labelled to identify its contents, to indicate precautionary requirements for the substance, and to indicate the date of expiry (if applicable). Pipes used to transfer / convey / distribute chemical substances must be clearly identified (e.g. colour coding). Directional flow must be indicated where practical.

Before any item, equipment or empty container containing a chemical residue is disposed of as general waste, it must be properly decontaminated (where applicable). Before being disposed of, empty chemical containers must also be rendered unusable for carrying water (by puncturing, cutting or crushing them).

Hazardous chemical substance waste (i.e. redundant / expired hazardous chemical substances, containers containing residues, contaminated items / materials, etc.) must be disposed of in accordance with the applicable legislation.

Maintenance, inspection and testing schedules and procedures must be in place for critical equipment associated with hazardous chemical substances. A system must be in place to ensure that the risks are assessed before any changes are made to equipment and / or processes for the transportation, storage, handling, use or disposal of a hazardous chemical substance.

A programme must be in place to continually investigate possibilities / opportunities for replacing hazardous substances with safer alternatives.

47.6 Thermal Stress

Hot areas or activities where employees have experienced or could experience excessive fatigue, muscle cramp, dehydration, dizziness and other symptoms of heat stress must be identified and described.

Where a risk of thermal stress is determined, a competent person must conduct monitoring surveys on site, in consultation with workers.

For defined extreme thermal conditions and job activities, medical examinations must include information about the operator's physiological and biomedical aspects, and an assessment of fitness for the working conditions.

Cold areas or activities where employees have experienced or could experience pain or loss of feeling in extremities, frostbite, severe shivering, excessive fatigue and other symptoms of cold stress must be identified and described.

Workplace thermal stress levels (temperature, air movement, humidity, etc.), activities (work level, etc.) and conditions (clothing, health, etc.) that have the potential to exacerbate thermal stress effects must be adequately characterised and described. Workplace exposure assessment must be repeated according to regulatory requirements or whenever there is a change in production, work organisation, process or equipment which may impact thermal stress levels.

Detailed heat stress assessment of identified tasks or jobs must be tiered to:

- Commence with the use of a simple heat stress index as a screening tool; then, if necessary;
- Use rational heat stress indices in an iterative manner to determine the 'best' control methods for alleviating potential heat stress; and
- Undertake physiological monitoring when exposure times are calculated to be less than 30 minutes, or where high level PPE that limits heat loss must be worn.

Detailed cold stress assessment of identified tasks or jobs must be conducted according to current appropriate guidelines that incorporate a cold stress index, to determine the 'best' control methods for alleviating potential cold stress.

When a risk of thermal stress is identified, the following exposure controls must be implemented:

- An acclimatisation period for new workers and those returning from extended leave or sickness;
- Training in the recognition of signs and symptoms of heat or cold stress, emergency procedures and preventative measures;
- Protective observation (buddy system or supervision); and
- A requirement for self-paced working.

The following exposure controls must be considered by a competent person:

- Work / rest regimes and job rotation based on measurements conducted;
- Suitable rest areas with a provision of cool drinking water and cool conditions for high temperatures, or provision of warm drinks and warm conditions for cold temperatures;
- Selection of appropriate clothing or other PPE for extreme temperature conditions;
- The use of engineering controls; and
- Undertake hot / cold tasks during a cooler / warmer time of the day.

Where thermal stress is assessed to be a risk, the operation must develop a suitable emergency response plan.

47.7 Fitness for Work

The contractor must develop and implement a programme to manage employee fitness for work. All employees working on site for whom the contractor is responsible (i.e. direct employees of the contractor as well as the employees of any appointed sub-contractors) must be subject to this programme.

All safety critical jobs (i.e. roles where fatigue or other causes of reduced fitness for work could lead to serious injury, illness or death to employees, significant equipment / plant damage, or significant environmental impact) must be identified and the risks associated with reduced fitness for work in these roles must be assessed.

A programme to manage these risks must be implemented, and it must include:

- Mechanisms for managing fatigue, stress and lack of fitness;
- An alcohol and other (including prescription, pharmaceutical or illicit) drugs policy that includes testing;
- An Employee Assistance Programme providing confidential access to resources and counsellors; and
- Training and awareness programmes.

Each employee has an obligation to present himself fit for work at the start of the day / shift, and to remain fit for work throughout the work period. Reporting for work under the influence of alcohol or any other intoxicating substance will not be tolerated. Any transgression concerning the alcohol and other drugs policy applicable to the project may result in the offending employee's access to the project premises being temporarily or permanently withdrawn.

Alcohol and drug testing on the project premises will be carried out randomly (as employees report for duty and during the course of the day / shift), following any incidents (all persons involved), and whenever there is reasonable suspicion. Alcohol and drug testing must also be carried out as part of a Pre-Employment Medical Examination.

Sleep deprivation during shift work or from excessive working hours is a known cause of fatigue. Fatigued employees are at increased risk of accidents. Shift system design must consider:

- The effect on worker fatigue;
- The effects of activities carried out during scheduled and overtime hours;
- The impact on sleep cycles of activities such as commuting to and from site; and
- The monitoring and control of working hours.

The contractor is responsible for the administration of the working hours of his employees as well as the employees of any appointed sub-contractors. The maximum working hours per day and the minimum rest times between shifts must be specified in the contractor's Health and Safety Management Plan and must comply with all applicable legislation.

All employees are required to undergo fitness assessments (medical examinations) which must be carried out prior to the commencement of employment on the project, prior to a change in role, periodically based on an employee's individual risk profile, and on termination of employment on the project:

- Pre-Employment Medical Examination – to assess the physical suitability of the person for the role and environment in which he will work (carried out prior to the commencement of employment on the project and prior to induction). The contractor must take note that employee medicals for this project must include a drug test;
- Periodic (Surveillance) Medical Examination – to assess the ongoing physical condition of an employee to determine if his role is impacting on his health and whether the employee's fitness level is still adequate for the role he holds (these medical examinations are "risk driven" – the specific protocol followed and the frequency of the examinations will depend on the applicable legal requirements and the employee's individual risk profile as determined by his personal fitness, the nature of his role / duties, and the environment in which he works / occupational health hazards to which he is exposed).
- The periodic medical assessment programme must include:
 - ◆ The identification of modifiable risk factors that may impact fitness for work;
 - ◆ Education and support to maintain health or address identified risk factors; and
 - ◆ Education and support to help employees regain their fitness for work.
- Role Change Medical Examination – to assess an employee's physical suitability for a different role and work environment (carried out prior to a change in role / duties);
- Exit (Post-Employment) Medical Examination – to determine the total physical impact of the work the employee performed (carried out on termination of employment on the project).

Note: The results of an Exit Medical Examination from previous employment will not be accepted as a Pre-Employment Medical Examination.

Note: The medical examinations described above may only be carried out by an Occupational Medical Practitioner (i.e. a medical doctor who holds a qualification in occupational medicine).

A detailed job (role) description and an exposure profile (noise, dust, heat, fumes, vapours, etc.) must be provided for each employee or group of employees. The medical examinations that an employee undergoes must be based on (i.e. the employee's fitness must be assessed against) the information contained in these documents as well as the baseline risk assessment for the work. This information must be made available to the occupational medical practitioner performing the medical examination.

For each role, the medical criteria for fitness must be documented and these must be based on an evaluation of the physical and medical requirements for the role. Depending on the circumstances, certain vaccinations may need to be provided to employees.

The medical examinations carried out for all drivers and operators must include testing / assessment for medical conditions that could affect the safe operation of vehicles or equipment.

Specific testing / questioning must be carried out to determine if an individual:

- Suffers from epilepsy or any other medical condition deemed to be a risk by the occupational medical practitioner;
- Makes use of chronic medication that could affect performance;
- Is colour-blind; or
- Has poor day or night vision.

The medical examinations carried out for employees that are required to work at height must include testing / questioning to determine if an individual suffers from epilepsy, hypertension (high blood pressure) or any other medical condition deemed to be a risk (with regard to working at height) by the occupational medical practitioner. Electricians must be tested for colour-blindness.

With regard to the placement of new employees:

- Prospective employees must be referred to a suitable occupational medical practitioner (doctor) for a "Pre-Employment Medical Examination";
- If an individual is found to be medically "unfit for placement", the doctor will indicate which work activities cannot be performed by the person;
- The individual may still be employed on the project if his medical restrictions can be accommodated and provided that no legislation is transgressed.

A process must be established to manage medical restrictions that may be placed on an employee. For every employee with a medical restriction, regular follow up visits with the occupational medical practitioner must be arranged to ensure that each case is proactively managed.

An employee in a safety critical job must report (to his supervisor) any condition that might impair his ability to safely perform the duties associated with his role. A mechanism must be in place for such reports to be referred to an occupational medical practitioner to determine if the employee is fit to continue with his work.

Proof of all medical examinations (i.e. certificates of fitness signed by an occupational medical practitioner) must be kept on site and these records must be readily available for inspection by the nominated project management representative.

An employee's certificates of fitness must be included in his Personal Profile (dossier). If an Employee Personal Profile (dossier) hasn't already been compiled for a particular employee, then this must be done without delay following the employee's Pre-Employment Medical Examination. No employee may commence work on site without proof that he has undergone a Pre-Employment Medical Examination.

Occupational medical examinations and data interpretation may only be carried out by medical practitioners that are appropriately qualified and certified to do so. Occupational medical data contained in reports to management must be grouped and summarised to ensure that the confidentiality rights of each individual employee are maintained. All occupational medical data and records must be retained for at least 40 years.

47.8 Legionnaires Disease

All equipment with the potential for generating Legionella (such as cooling towers and associated equipment, air-handling systems, hot water services and showers) must be identified and the risks of contamination and aerosol generation assessed.

Where there is an assessed risk that Legionella could grow in the system and cause harm, a programme must be in place such that:

- All such equipment is identified on a register. The register must contain details of the regular maintenance, cleaning and checking programmes;
- Control measures are in place to minimise aerosol emissions;
- There must be a documented water treatment programme, including procedures for inspection, assessment and maintenance of the controls; and
- New or retrofitted equipment is designed and constructed to minimise the risk of Legionella growth.

Where available, the Legionella plate count test should be used if more effective methods are not available.

Good maintenance procedures must be followed to minimise the risk of significant contamination of equipment with other bacteria and microbial organisms.

Adequate procedures must be available for disinfecting systems if significant concentrations of Legionella bacteria are present. Once disinfected, systems must be retested to confirm effectiveness of treatment.

47.9 HIV / Aids

The contractor must assess the risks posed by HIV. Appropriate mitigation strategies must be implemented as required. Discrimination towards employees on the basis of actual or perceived HIV status is forbidden. All information on the HIV status and condition of employees including that relating to counselling, care and treatment and receipt of benefits, must be maintained in medical confidence.

HIV / AIDS screening may not be a requirement for recruitment or a condition of employment.

47.10 COVID-19 Management

The Contractor must ensure compliance to COVID-19 management protocols as included in the OSHAct and associated HBA Regulations

47.11 Measuring and Monitoring

The workplace exposure (or potential exposure) of persons to hazardous substances or agents must be measured and monitored to determine the effectiveness of control measures as well as compliance with legal and other requirements, particularly Occupational Exposure Limits. All such measuring and monitoring must be carried out by an Approved Inspection Authority (i.e. a specialist service provider that is appropriately registered with a governing authority).

A plan for measuring and monitoring occupational exposure must be developed and it must include, as a minimum:

- Detail of what must be measured and monitored, based on a risk assessment and / or identified legal or other requirements;
- The frequency of measurement and monitoring;
- A description of the necessary equipment;
- Data quality requirements and controls (including details on the sample size for statistical validation and any rejection criteria);
- The sampling and analysis method(s) including any laboratory certification requirements; and
- The competency requirements for persons carrying out workplace monitoring.

Each instrument and item of equipment used for occupational exposure measurement and / or monitoring must be:

- Properly maintained to ensure compliance with legislative requirements;
- Controlled and safeguarded from unintentional adjustments;
- Suitably stored and protected from damage; and
- Calibrated or verified against a traceable standard at specific intervals (calibration records must be retained).

Each analytical laboratory service that is used must have implemented a credible quality assurance or quality control programme.

All monitoring results obtained must be analysed on a regular basis to:

- Identify trends and potential exceedances of legal or other requirements (such as Occupational Exposure Limits);
- Identify inconsistent or unusual results;
- Evaluate the effectiveness of existing control measures;
- Measure performance against stated objectives; and
- Identify continual improvement opportunities.

Each exceedance of a specified requirement or limit must be recorded, investigated and reported. Appropriate corrective actions must be identified and implemented.

48. Temporary Works

The contractor must appoint a temporary works designer in writing to design, inspect and approve the erected temporary works on site before use.

The 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. The contractor must ensure that, 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.

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. 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, the client, the client's agent or any employee.

All persons required to erect, move or dismantle temporary works structures are provided with adequate training and instruction to perform those operations safely. All equipment used in temporary works structure are carefully examined and checked for suitability by a competent person, before being used.

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;

No person may cast concrete, until authorization in writing has been given by the competent person; 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. Adequate precautionary measures must be taken in order to:

- Secure any deck panels against displacement; and
- Prevent any person from slipping on temporary works due to the application of release agents;
- 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;
- 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);
- 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.
- Provision is made for safe access by means of secured ladders or staircases for
- A temporary works drawing or any other relevant document includes construction sequences and methods statements;
- The temporary works designer has been issued with the latest revision of any relevant structural design drawing;
- A temporary works design and drawing is used only for its intended purpose and for a specific portion of a construction site; and
- 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 work other than its intended purpose.

49. Emergency Preparedness and Response

The contractor must develop, implement, test and maintain an Emergency Response Plan (incorporating emergency evacuation procedures) that focuses specifically on the contractor's team and work activities. The plan must be risk-based and must detail the procedures that must be followed when responding to all potential emergency scenarios such as a medical emergency (including first aid response), a fire, an explosion, a hazardous substance spill, flooding, rescue from height, rescue from a confined space, etc.

Potential off-site emergency scenarios must be included (e.g. emergency scenarios related to the transport of personnel, the transport of hazardous materials, and personnel performing work in remote locations).

Consideration must be given to surrounding Port users and tenants, and to the availability and capability of local emergency services. Details of any arrangements with external emergency response service providers must be included.

The Emergency Response Plan must satisfy and comply with all applicable legal requirements. The plan must be adequately resourced to ensure effective implementation. These resources must include appropriate personnel, external emergency response service providers, emergency response equipment, and warning devices. All equipment and warning devices must be identified, maintained and tested to ensure availability at all times.

Accountability for the Emergency Response Plan must be clearly defined. An Emergency Response Team (ERT) responsible for the implementation, management and execution of the Emergency Response Plan must be established. The roles and responsibilities of each team member must be clearly defined in the plan. Each team member must receive appropriate training to ensure that each role is performed competently.

The process for managing incident communication, notification, and reporting must be incorporated into the Emergency Response Plan. The responsible person(s) must be clearly identified, and the protocols for communicating with internal and external stakeholders must be defined.

Emergency evacuation procedures must be developed and included in the Emergency Response Plan. A copy of the plan must be provided to the nominated project management representative for approval prior to site establishment. The Emergency Response Plan must be formally reviewed (and amended if necessary) when project needs require, and following any emergency situation, to ensure that it remains appropriate and effective.

At each project work site, as a minimum:

- A suitable evacuation alarm (siren) must be provided. All persons working in an area where an evacuation alarm is sounded must respond to it immediately.
- Suitable fire-fighting equipment must be provided and maintained, and personnel must be trained in fire-fighting procedures and the use of fire-fighting equipment.
- Suitable first aid equipment and supplies must be provided and maintained, and an adequate number of appropriately trained First Aiders must be in place.
- Emergency assembly points positioned in safe locations away from buildings, plant and equipment must be designated (and conspicuously signposted). In the event of an evacuation, all persons (i.e. personnel and visitors) must assemble and be accounted for at these emergency assembly points.
- All personnel must receive awareness training on the applicable emergency response procedures, and all visitors entering the site must be properly instructed in these procedures.
- The emergency response procedures must be displayed on each notice board.
- A diagram (site plan) indicating evacuation routes, emergency assembly point locations, and the positioning of emergency equipment (fire extinguishers, first aid boxes, etc.) must be prominently displayed in all buildings and plants, in all offices, on all notice boards, and in other locations on the site as may be required.
- An up-to-date list of emergency telephone numbers must be compiled and maintained. A copy of this list must be posted at each site entrance, in each office, near each telephone, and on every notice board.
- Emergency response drills must be conducted to test the effectiveness of the emergency procedures and equipment, as well as the knowledge and proficiency of the response personnel. Where appropriate, drills must include liaison with and the involvement of external emergency response service providers. A variety of emergency scenarios must be tested including, but not limited to, medical emergencies, fires, rescues, and hazardous substance spills. A drill must be carried out one month after site establishment and then again six months thereafter.

Each drill must be monitored, and the outcomes (highlights and shortcomings) must be documented. Corrective actions must be identified and implemented to address the shortcomings, and the Emergency Response Plan and associated procedures must be amended as required.

49.1 Fire Fighting

The contractor must ensure that Fire Fighting requirements are complied with.

49.2 First Aid

The contractor must ensure that First Aiders are trained and appointed as described in this Specification and in accordance with relevant legislative requirements.

49.3 First Aid Kits

A suitable first aid kit (i.e. appropriate to the level of training) must be readily available to each First Aider. All kits must be provided and maintained by the contractor.

Taking into account the type of injuries that are likely to occur in the workplace, each first aid kit must contain suitable equipment and supplies. First aid equipment and supplies required by applicable legislation must be provided as a minimum.

The contents of each first aid kit must be kept clean and dry. Each kit must be contained in either a portable weather-proof case / bag or a steel box mounted to a fixed structure. Access to first aid equipment / supplies must be limited to train First Aiders only. Access to portable kit bags must be controlled and steel first aid boxes mounted in the workplace must be kept locked. Approved signage must be in place to indicate the locations of the first aid boxes / bags. A record of each treatment administered must be kept in a suitable register.

No tablets or medication not stipulated within table 61-1 are to be stored in the first aid box. No tablets or medication to be administered by first aiders or other personnel to employees who are not feeling well or have been injured.

The first aid kits must, as a minimum, contain the following equipment and supplies:

Table 49-1 Minimum Requirements to be included when equipping first aid boxes

Item 1:	Wound cleaner/ antiseptic – 100ml;
Item 2:	Swabs for cleaning wounds;
Item 3:	Cotton wool for padding – 100g;
Item 4:	Sterile gauze – minimum quantity 10;
Item 5:	1 x Pair of forceps – for splinters;
Item 6:	1 x Pair of scissors – minimum size 100mm
Item 7:	1 x Set of safety pins;
Item 8:	4 x Triangular bandages;
Item 9:	4 x Roller bandages – 75mm x 5m;
Item 10:	4 x Roller bandages – 100mm x 5m;
Item 11:	1 x Roll of elastic adhesive – 25mm x 3m;
Item 12:	1 x Non-allergenic adhesive strip – 25mm x 3m;
Item 13:	1 x Packet of adhesive dressing strips – minimum quantity 10 assorted sizes;
Item 14:	4 x First aid dressings – 75mm x 100mm;
Item 15:	4 x First aid dressings – 150mm x 200mm;
Item 16:	2 x Straight splints;
Item 17:	2 x Pairs large and 2 x pairs medium disposable latex gloves;
Item 18:	2 x CPR mouth pieces or similar devices.

Additional items / supplies may need to be provided depending on the nature of the workplace (specific hazards) and the level of training of the first aider in position of the kit.

50. Management Review

A review of the contractor's Health and Safety Management System must be undertaken as required within the project timeframe to ensure that the system continues to be effective in managing health and safety performance and meeting project requirements.

The review must evaluate if there is any need for change and must identify actions to improve the system.

The review must be led by senior management and the following must be considered:

- The suitability of the policy adopted for the project;
- The impact of changing legislation;
- The management of risk;
- Health and safety objectives and performance indicators;
- Changing expectations and requirements of relevant stakeholders;
- Changes to the contractor's scope, schedule, designs, etc.;
- Changes to the contractor's organisational structure;
- Communication and feedback (particularly from employees, Project representatives, and client representatives);
- The effectiveness of the management of change process;
- Workplace exposure monitoring and medical surveillance;
- The status of corrective actions;
- Performance statistics, including an annual summary of safety statistics, and occupational hygiene monitoring and medical surveillance results;
- Non-conformances (findings) from completed audits;
- Follow up on actions from previous management reviews; and
- Recommendations and opportunities for improving the effectiveness of the management system.

A record of each completed management review must be retained and it must include all decisions and identified actions concerning alterations, modifications or improvements to the management system that demonstrate a commitment to continual improvement.

51. Management of Change

To ensure that proposed changes do not give rise to unacceptable health or safety risk, the contractor must develop and implement a process for identifying and managing change in the workplace (e.g. changes to scope, schedule, procedures, work methods, site conditions, designs, plans, plant and equipment, materials, processes, etc.) that may impact on health or safety performance.

The management of change process must take into consideration that changes may be planned or unplanned, sudden or gradual, temporary or permanent.

The process must aim to ensure that:

- Changes are identified and assessed before they are implemented;
- Careful consideration is given to managing the risks associated with any change;
- Due diligence can be shown to have taken place;
- The number of unsatisfactory or unnecessary changes is minimised;

- The right people are involved in the change process; and
- All statutory requirements are met.

All risks associated with a proposed change must be evaluated and ranked. The risks that are ranked as moderate or higher must be managed to prevent serious injury or illness.

It must not simply be assumed that a change will not result in significant risks. All proposed changes must be formally evaluated. The evaluation or review must include:

- An appropriate level of technical expertise;
- The involvement of the workforce potentially affected by the proposed change; and
- Approval of the change by a person with at least the same level of authority as those who control the existing process or item being changed.

52. Sub-contractor Alignment

Processes must be in place to ensure that the health and safety risks associated with the procurement of materials, equipment, services and labour are identified, evaluated and effectively managed.

A process for evaluating a sub-contractor's (or supplier's) ability to provide materials, equipment, services and labour that meet defined specifications must be in place. A prospective sub-contractor's health and safety management expertise, experience and capability (including previous health and safety performance) must be formally assessed prior to any contract or purchase order being awarded.

Each appointed sub-contractor must develop and implement a detailed Health and Safety Management Plan based on the requirements of the contractor's Health and Safety Management Plan and the Health and Safety Specification for the project. This plan must be reviewed and approved by the contractor prior to the commencement of any work.

The properties of all materials provided to the project must be adequately understood, documented and integrated into operating procedures where exposure to these materials presents a significant health or safety risk.

Procedures, commensurate with the evaluated risk, must be in place for the receiving, storing, dispatching and transporting of all equipment and materials.

Before work commences on any contract, all sub-contractor personnel must receive comprehensive orientation and induction training as required by this Specification. All work carried out by a sub-contractor must be managed (activity supervised) throughout the contract period and performance must be reviewed (audited) on a regular basis.

53. Incident Reporting and Investigation

The contractor must establish a procedure for the management of all health and safety incidents. This procedure must define the responsibilities, methodologies and processes that must be followed for:

- Reporting an incident;
- Investigating an incident;
- Analysing an incident to determine the root cause;
- Identifying and implementing corrective actions to prevent a recurrence; and

- Communicating information concerning an incident to relevant persons and / or groups.

Please Note: Arrangements must be in place to ensure that proper medical care is provided to any contractor (or sub-contractor) employee that suffers an occupational injury or illness. These arrangements must be described briefly in the contractor's Health and Safety Management Plan and in detail in the Incident Management Procedure.

An incident may have multiple impacts. For each impact, the Actual Consequence and the Maximum Reasonable Outcome must be evaluated. Each impact must be evaluated independently, with the most significant classification forming the primary rating of the incident.

A near-miss is an incident. All near-miss incidents must be reported.

Using the defined consequence scales contained in Transnet 5x5 qualitative risk matrix, the Actual Consequence of each impact must be categorised as:

- A Near-miss;
- Insignificant (Level 4; as per TRANSNET incident level classification guidance);
- Minor (Level 3; as per TRANSNET incident level classification guidance);
- Moderate (Level 2; as per TRANSNET incident level classification guidance);
- Major (Level 1; as per TRANSNET incident level classification guidance); or
- Catastrophic (Level 1; as per TRANSNET incident level classification guidance).

The Maximum Reasonable Outcome (MRO) is based on a risk evaluation of the maximum reasonable consequence of an impact and the likelihood of the event occurring again given a reasonable failure of existing controls. Using the matrix referred to above, each impact must be evaluated and classified as:

- Low;
- Moderate;
- High; or
- Extreme.

An incident must be reported on the same work day or shift on which it occurs and preliminary details must be recorded and a TRANSNET Incident Flash Report must be completed and submitted within 24 hours to the relevant Project Construction Manager or representative. Depending on the Actual Consequence and Maximum Reasonable Potential Outcome of the impact(s), the relevant internal and external parties must be notified in accordance with specified protocols and timeframes, and legislative requirements.

In the event of a significant incident (i.e. an incident with an Actual Consequence of Moderate, Major or Catastrophic, or a Maximum Reasonable Potential Outcome of High or Extreme), work must cease and must only resume once the necessary actions (including the re-evaluation of any relevant risk assessments) have been taken to eliminate or reduce the risk of recurrence. Work must only be permitted to recommence once formal authorisation has been granted by the Project Construction Manager. In the case of incidents with an Actual Consequence of Major or Catastrophic, work must not be permitted to recommence until authorisation has been granted by the relevant government authorities (i.e. the South African Police, the Department of Labour or the Department of Mineral Resources).

The Project Construction Manager must ensure that an investigation is completed for each incident that occurs, and that appropriately senior personnel participate in, and authorise the outcomes of, each investigation. Incident investigations must be facilitated by competent and experienced

persons who have been trained in the appropriate methodology. (e.g TCAM – Transnet Causal Analysis Methodology).

All significant incidents (i.e. incidents with an Actual Consequence of Moderate, Major or Catastrophic, or a Maximum Reasonable Outcome of High or Extreme) must be investigated using the approved Transnet investigation methodology. Such an investigation must be facilitated by a trained project representative within 7 calendar days.

For all other incidents (i.e. incidents with an Actual Consequence of Insignificant or Minor, or a Maximum Reasonable Outcome of Low or Moderate) other methodologies approved by the Project Health and Safety Manager may be used.

Each incident (including near-miss incidents) must be investigated to a level of detail that is appropriate for the Maximum Reasonable Potential Outcome of the incident.

Each incident must be analysed to determine the root cause, and corrective actions must be identified and prioritised for implementation to eliminate or reduce the risk(s) in order to prevent recurrence of the incident.

For each corrective action, a responsible person must be designated and an appropriate timeframe (target date) for completion of the corrective action must be specified. Progress on implementing corrective actions (i.e. closing incidents) must be monitored and reported on. The implementation of corrective actions must be verified during monthly audits by the TRANSNET Project Health and Safety Practitioners but also no later than 30 calendar days after the conclusion of the incident investigation. The contractor must document the results of each investigation and a report must be submitted to the nominated project management representative within a stipulated time frame as determined by the nominated project management representative.

As a minimum, each incident report must include:

- The date, time and location of the incident;
- A detailed description of the incident, including photographs;
- The names of any injured persons;
- Injury details (if applicable);
- A summary of the first aid and / or medical treatment provided (if applicable);
- The current status of any injured persons;
- The root causes of the incident; and
- Detailed corrective actions, including responsible persons and target dates for implementation.

Each significant incident must be summarised for its lessons learnt following the investigation. This information must be reviewed by the contractor's Project Manager to assure completeness, accuracy and relevance before it is shared with (communicated to) all project personnel. Non-conformance

Non-conformance Reports (NCR) will be issued to Contractors upon the identification of non-compliances to this specification. NCR's will be issued to Contractors for their response and implementation of corrective actions. NCR's must be closed out within a 48hour period depending on the severity of the non-conformance.

The contractor must establish a process for identifying and recording corrective actions arising from:

- Non-compliances;

- Incident investigations;
- Hazard identification and risk assessment;
- Measurement and monitoring;
- Improvement plans and suggestions;
- Managing change;
- Audits and inspections; and
- Safety observations and Conversations (safety interactions).

The contractor must establish a procedure for managing actions that addresses:

- Identification, categorisation and prioritisation of actions;
- Formal evaluation and approval of actions (management of change process);
- Assignment of responsibilities, resources and schedules for implementation;
- Implementation of actions;
- Tracking and reporting on implementation status; and
- Monitoring and verifying the effectiveness of the actions.

54. Performance Assessment and Auditing

The contractor must establish and maintain programmes for measuring and monitoring health and safety performance on a regular basis. Metrics must include leading and lagging indicators, and be based on qualitative and quantitative data.

54.1 Reporting on Performance

Reports summarising the contractor's health and safety performance on the project must be compiled on a weekly and a monthly basis.

The contractor must be prepared to discuss the content of these reports at scheduled health and safety meetings.

The reports must contain the following minimum information:

- Number of contractor and sub-contractor employees on site;
- Total hours worked on site by contractor and sub-contractor employees (by company);
- Number of incidents by category (i.e. Near-miss, FAI, MTI and LTI);
- Lost Time Injury Frequency Rate (LTIFR) (project to date and 12-month rolling);
- Details of all new incidents for the reporting period and the corrective actions taken or to be taken;
- Feedback (progress updates) on all open incidents and outstanding corrective actions;
- Status and feedback on any employee that may have been injured and has not yet returned to work;
- Details of all health and safety training carried out during the reporting period;
- Number of SOC's (Safety Observations and Conversations) carried out during the reporting period;
- SOC trends identified and proposed action for the coming week or month to maintain positive trends and / or address negative trends;
- Details of all audits, inspections and site visits carried out during the reporting period, and the corrective actions taken (or to be taken) to address all non-conformances;
- Feedback (progress updates) on all open non-conformances and outstanding corrective actions;
- Number of Toolbox Talks conducted during the reporting period (monthly);
- Number of Planned Task Observations (PTO's) carried out during the reporting period (monthly);

- Details of all active risk assessments and Safe Work Procedures highlighting those that are due for review in the coming month (monthly);
- A look ahead (to the coming week, month or quarter) to ensure that appropriate health and safety planning and preparation is done for upcoming work;
- Challenges faced with regard to health and safety; and
- Any other health and safety related information specific to the project that may be required.

Leading indicators (e.g. audit findings, observations, etc.) must be analysed, and any negative trends identified with regard to unsafe behaviour or conditions must be appropriately addressed to prevent incidents.

Lagging indicators (e.g. injuries, illnesses, near-miss, etc.) must be investigated in detail to determine the root causes. Corrective actions must be identified, implemented and integrated into Safe Work Procedures to prevent recurrences.

55. Audits and Inspections

On a monthly basis, the health and safety management system and workplace activities of the contractor will be audited by a Project Health and Safety Practitioner to assess compliance with the project health and safety requirements. Any deviation from these requirements (i.e. non-conformance) that places the health or safety of any person in immediate danger will result in the specific activity being stopped until the non-conformance is corrected.

For each non-conformance determined during any audit, the contractor must identify and implement appropriate corrective actions.

For each corrective action, a responsible person must be designated and an appropriate timeframe (target date) for completion of the corrective action must be specified. Progress on implementing corrective actions (i.e. closing non-conformances) must be monitored and reported on. The implementation of corrective actions will be verified during the monthly audits.

Should it be determined that the contractor's level of compliance is unsatisfactory, all work being performed by the contractor on the project site may be stopped (at the contractor's expense) until an investigation into the reasons for the poor performance has been carried out, a corrective action plan has been developed, and corrective actions have been implemented.

In addition to the audit carried out by the Project Health and Safety Practitioner, the contractor must carry out an internal audit on a monthly basis to assess compliance with the project health and safety requirements (including the requirements of this specification and the contractor's Health and Safety Management Plan). Furthermore, the contractor must ensure that each appointed sub-contractor is audited and measured to the same standard. Copies of these audit reports must be submitted to the Project Health and Safety Practitioner on a monthly basis.

The contractor must carry out internal health and safety inspections as follows:

- General site health and safety inspections on a daily basis; and
- Inspections of plant, tools and equipment prior to establishment or use on site, and at least monthly thereafter.

All audits and inspections must be carried out by competent persons who have been appointed in writing.

A schedule of planned audits and inspections must be compiled and maintained ensuring that:

- All work areas and all activities are covered at regular intervals;
- All applicable legal requirements are complied with; and
- Areas or activities with significant associated hazards or risks receive greater attention.

56. Reference Documents

1. Occupational Health and Safety act, No 85 of 1993 and Regulations
2. Compensation for Occupational Injuries and Diseases Act, No 130 of 1993
3. TIMS – Contractor Management Procedure 014



PART C4: SITE INFORMATION

TRANSNET NATIONAL PORTS AUTHORITY – PORT OF EAST LONDON

TENDER NUMBER: TNPA/2025/06/0016/97939/RFP

DESCRIPTION OF GOODS AND SERVICES: SUPPLY, DELIVERY, INSTALLATION, INTEGRATION, TESTING AND COMMISSIONING OF THREE (3) FIRE SUPPRESSION MONITORS AT TANKER BERTH IN THE PORT OF EAST LONDON FOR A PERIOD OF SIX (6) MONTHS

PART C4: SITE INFORMATION

Document reference	Title	No of page
C4	This cover page	1
	Site Information	3
	Total number of pages	4

PART 4: SITE INFORMATION

Core clause 11.2(16) states

“Site Information is information which

- describes the Site and its surroundings and
- is in the documents which the Contract Data states it is in.”

In Contract Data, reference has been made to this Part 4 of the contract for the location of Site Information.

1. Description of the Site and its surroundings

1.1. General description

The area where the works will take place is within the Tanker berth area within the Port of East London Boundary. Access to the Port of East London and Tanker berth site is through the West bank Main gate. Annexure A shows the location of the berth and West Bank Port entrance. Access shall be subject to the National Ports Authority security requirements and regulations, which should be obtained for all Contractors’ personnel at CRD building security building on East bank precinct.

The Tenderer personnel will be required to have Identity documents or driver’s licence whenever they access the Site and ensure that the PPE in the form of Safety boots, overalls during removal and installation, reflector vest and hard hats are always clothed.

Normal working hours at the Port of East London are from 07:00 to 16:30, Monday to Friday, Inclusive. Transnet National Ports Authority has a strict Health and Safety policy in place. No person(s) may enter the site and undertake work on the site until undergoing the mandatory induction. The induction must be arranged by the Port personnel at no cost to the Supplier. Prior arrangement must be made with the Purchaser.

1.2. Existing buildings, structures, and plant & machinery on the Site

Existing buildings in the Tanker berth area include pump houses, a diesel engine building, a transformer room, and a firefighting system that includes firefighting monitors. The firefighting monitors are placed along the berth and may only be removed or installed when no vessel is present. An electric motor installed at the bottom of the tower drives the monitors. The contractor

must provide their own equipment and plant for the removal and installation of the existing monitor.

1.3. Subsoil information

N/A

1.4. Hidden services

The Tenderer is to apply care not to damage existing services during removal of the existing fire monitor and during installation of the new monitor. When the contractor is removing the existing monitor, they must ensure the existing connections such as hydraulic pipes are in a good condition to receive the new monitor.

1.5. Other reports and publicly available information

The Tenderer will have to notify TNPA in advance before the start of the Works as Tanker Berth is an operational area where Vessels are loading oil. No other works is required at Tanker Berth when the Vessel operation is in progress.

TRANSNET NATIONAL PORTS AUTHORITY – PORT OF EAST LONDON

TENDER NUMBER: TNPA/2025/06/0016/97939/RFP

DESCRIPTION OF GOODS AND SERVICES: SUPPLY, DELIVERY, INSTALLATION, INTEGRATION, TESTING AND COMMISSIONING OF THREE (3) FIRE SUPPRESSION MONITORS AT TANKER BERTH IN THE PORT OF EAST LONDON FOR A PERIOD OF SIX (6) MONTHS

Tanker Berth Fire Fighting Monitors Location

