

SCOPE OF WORK AND TECHNICAL SPECIFICATION

FOR SERVICING/REPAIR OF FIRE FIGHTING EQUIPMENT

AT

UNIVERSITY OF THE WITWATERSRAND

JOHANNESBURG – EAST CAMPUS

FIRE FIGHTING EQUIPMENT

CONTENTS

1. BACKGROUND AND PURPOSE
2. SCOPE OF WORK
- 2.1 FIRE FIGHTING EQUIPMENT
3. DEFINITIONS
4. ABBREVIATIONS
5. STANDARD SPECIFICATIONS
- 5.1 SANS SPECIFICATION
- 5.2 OHS, MUNICIPAL AND MANUFACTURERS' STANDARDS
6. CONTRACTUAL MATTERS
- 6.1 CONTRACT DURATION
- 6.2 MAINTENANCE REPORTING
- 6.3 HOUSE KEEPING
- 6.4 WORKING HOURS
- 6.5 RESPONSE TIMES
- 6.6 WORKMANSHIP
- 6.7 PAYMENT TERMS
- 6.8 SUB CONTRACTING
- 6.9 QUALIFIED PERSONNEL
- 6.10 FAILURE TO COMPLY
7. OPERATING AND MAINTENANCE MANUALS

- 8. LOGGING AND RECORDING PROCEDURES
- 9. REPAIR WORK TO INSTALLATIONS, SYSTEMS AND EQUIPMENT
 - 9.1 FIRE FIGHTING EQUIPMENT
- 10. MAINTENANCE TO INSTALLATIONS, SYSTEMS AND EQUIPMENT
 - 10.1 FIRE FIGHTING EQUIPMENT
 - 10.2 SPRINKLER SYSTEM
- 11. MAINTENANCE AND SERVICING FOR FIRE FIGHTING EQUIPMENT
- 12. WARRANTY
- 13. INSURANCE COVER

1. BACKGROUND AND PURPOSE

The University of Witwatersrand (East Campus) has many buildings that have firefighting equipment consisting of handheld fire extinguishers, fire hose reels and fire hydrants. There are sprinklers in some of the buildings. This fire equipment is essential to extinguish fire once it has broken out in any particular area to prevent it spreading in order to prevent injury or loss of life and to save property. Handheld fire extinguishers and fire hose reels are used whilst waiting for the Fire Brigade to arrive.

It is essential that this equipment is maintained regularly as part of statutory requirements and also to increase the lifespan of the equipment.

For this reason, it is important for the University to procure the services of accredited and experienced Service Provider to perform preventative and corrective maintenance on Fire Fighting Equipment.

The following buildings will also be part of the scope of works:

- Tshimilogong
- Campus Lodge
- South Court
- Graduate Lodge
- Esselen Street
- Sterkfontein

2. SCOPE OF WORK

2.1 FIRE FIGHTING EQUIPMENT

This specification covers the general repair and maintenance of firefighting equipment installations, which include the following:

- (a) Fire hydrants
- (b) Fire hose reels
- (c) Fire extinguishers.
- (d) Sprinkler system

This specification shall form an integral part of the repair and maintenance contract document.

3. DEFINITIONS

Call Out	A demand on the Service Provider to act because of equipment or related failure, requiring the Service Provider to visit the site outside of scheduled preventative maintenance.
Client	Customer who receives services which is the University of the Witwatersrand.
Down time	The period the equipment is not in operation due to equipment failure, breakdowns, unplanned repairs and periodic re-commissioning/re-adjusting of the equipment systems. This includes the response and repair time.

Firefighting Equipment	Equipment used to extinguish fires like fire hydrants, fire hose reels, fire extinguishers and sprinklers amongst others.
Emergency	Refers to any equipment part, system failure, or malfunction that results in Downtime and impacts on the University's activities or is life threatening.
Service Provider	An organization or company that provides services of Fire Fighting equipment to the University.
Wits	University of the Witwatersrand

4. ABBREVIATIONS

Term / Acronym	Definition
ASIB	Automatic Sprinkler Inspection Bureau
BoQ	Bill of Quantities
BS	British Specification
CPS	Campus Protection Services
OEM	Original Equipment Manufacturer
OHS	Occupational Health and Safety
SANS	South African National Standards
SAQCC	South African Qualifications Committee

5. STANDARD SPECIFICATIONS

5.1 SANS SPECIFICATION

The latest edition, including all amendments up to date of tender, of the following specifications, publications and codes of practice shall be read in conjunction with this specification and shall deemed to form part thereof.

5.1.1 SANS and other specifications and codes

SANS 10105-1	- Fire extinguishers, portable, classification system, control systems
SANS 1322	- Fire extinguishers, portable, non-refillable
SANS 1567	- Fire extinguishers, portable, rechargeable, carbon dioxide
SANS 1475-1	- Fire extinguishers, portable, reconditioning
SANS 1522	- Fire extinguishers, powders
SANS 10105-1	- Firefighting equipment, fire extinguishers, portable
SANS 1322	- Firefighting equipment, fire extinguishers, portable, non-refillable
SANS 543	- Firefighting equipment, fire hose reels

SANS 10105-2	- Firefighting equipment, fire hose reels
SANS 1128-2	- Firefighting equipment, fire hose, pipe couplings, pipe connections
SANS 1128-1	- Firefighting equipment, fire hydrants
SANS 1475-1	- Firefighting equipment, reconditioning, fire extinguishers, portable
SANS 543	- Fire hose reels
SANS 10105-2	- Fire hose reels, classification systems, control systems
SANS 1475-2	- Fire hose reels, reconditioning
SANS 1456-5	- Fire hoses, collapsible, delivery pipes (firefighting), oil resistance tests, chemical resistance tests
SANS 1456-2	- Fire hoses, collapsible, delivery pipes (firefighting), percolating hoses
SANS 1456-1	- Fire hose, collapsible, delivery pipes (firefighting), testing
SANS 1456-4	- Fire hoses, collapsible, delivery pipes, coated materials, non-percolating hoses
SANS 1456-3	- Fire hoses, collapsible, delivery pipes, uncoated materials, non-percolating hoses
SANS 1128-2	- Fire hoses, pipe couplings, pipe connections
SANS 1128-1	- Fire hydrants, firefighting equipment
SANS 1056-1	- Fire safety, ball valves
SANS 10400	- Application of the National Building Regulations
SANS 10287	- Automatic sprinkler installations for fire-fighting purposes
ASIB Regulations	- Automatic Sprinkler Inspection Bureau

5.2 OHS, MUNICIPAL AND MANUFACTURERS' STANDARDS

5.2.1 Occupational Health and Safety Act of 1993

All regulations and statutory requirements as laid down in the latest edition of the Occupational Health and Safety Act, 1993 (Act no 85 of 1993) shall be adhered to.

5.2.2 Manufacturers' specifications, codes of practice and installation instructions

All equipment and materials shall be installed, serviced and repaired strictly in accordance with the manufacturers' specifications, instructions and codes of practice.

5.2.3 Municipal regulations, laws and by-laws

All municipal regulations laws, by-laws and special requirements of the Local Authority shall be adhered to unless otherwise specified.

6. CONTRACTUAL MATTERS

6.1 Contract Duration

The contract duration will be for 5 years.

6.2 Maintenance Reporting

The Service Provider shall submit two types of documents to the University on an ongoing basis, namely:

- A service log, after every service or inspection.
- A monthly report.
- Quarterly reports

The service logs must highlight:

- Date and time of service.
- The equipment model and serial number being serviced.
- The maintenance tasks performed such as inspections, repairs, or replacements, etc. This will include readings, test results and checklists.
- Issues that were encountered during the service and the actions taken to resolve them.
- Recommendations for future maintenance.
- Materials used, including quantity and cost.
- Record of the personnel involved in the maintenance activities.
- Faults found and their priority.

The service log must be submitted to the University, and the subsequent maintenance activities must factor in previous outcomes where required.

Monthly reports will be required by the University which document all maintenance activities and incidents for that period. The reports are to be succinct and compiled with care. The reports referred to here are separate to the service logs but can be deemed to communicate a summary of events for the month.

6.3 House Keeping

All rubbish and waste arising from the work must be removed and the site and buildings left in a clean and tidy condition. Any waste as a result of the work done by the Service Provider will be cleaned by the Service Provider at no cost to the University.

As part of this submission the bidder is to provide an environmental management plan, that addresses aspects such as but not limited to: electronic waste disposal, gas leaks, etc.

6.4 Response Times

The required response time for Call Outs and other events is as follows:

- Priority 1 (Emergencies) – within 1 hour. The requirement is that the Service Provider is on site within 1 of an emergency condition to provide support. This would typically entail a scenario where a system is not available, or a condition which is life threatening.
- Priority 2 (Urgent) – within 3 hours.
- Priority 3 (General) – within 6 hours.

Any work / event requiring extended repair time shall be discussed and agreed between the University and the Service Provider.

6.5 Working Hours

The Service Provider shall be available 24 hrs a day, 7 days a week including holidays. All planned work or running the generators shall be carried out during normal working hours (7am to 5pm) on days and times agreed with the client.

The University shall issue the Service Provider with the Academic Calendar for each year. This document shall contain key dates that may limit the nature of the work that may take place.

6.6 Payment

The University does not allow upfront payments. All payments will be made within 30 (thirty) days of submitting an invoice. However, where an EME as per the B-BBEE Codes has been appointed as a successful service provider, shorter payments may be considered as part of supplier development, subject to prior written approval by the University.

The rates indicated in the bill of quantities must be adhered to when preparing the invoice. Works involving ad hoc replacement of parts shall be in line with the tendered rates, have sufficient detail provided, and pre-approved by the University.

6.7 Sub-Contracting

The University prefers to contract directly with all service providers and the Service Provider must not sub-contract any of its responsibilities or obligations.

6.8 Workmanship

Works with poor workmanship and unauthorized spares will not be accepted. Acceptance of the maintenance work shall be by means of review and approval of the submitted and fully completed service log by the University. The University may, from time to time, elect to witness any of the tests or inspections relating to the maintenance activities or request a retest to satisfy the University personnel of satisfactory functioning of the equipment.

The University reserves the right to withhold payments until the quality of the Services is acceptable. The Service Provider must have a quality management system such as ISO 9001:2015 or similar in place, and proof of such is to be provided with the bid. The quality management system must encompass, but not be limited to:

- Structured record keeping and retrieval.
- Record keeping for an established duration.
- The Issuance of reviewed service logs by authorised personnel.

In addition to the services being fit for purpose, they should also meet the manufacturer's performance standards.

6.9 Failure to Comply

The Services will be monitored, and penalties will be imposed. Penalties will be imposed as follows:

If the service provider fails to adhere to the provisions of the priority levels described herein, the University reserves the right to levy a penalty fee against the services provider (in line with university policy). Continuous violation of these provisions will result in the contract being terminated.

6.10 Health and Safety

The Service Provider must submit to the University's authorized representative and maintain a health and safety file every year for the duration of the contract.

The Service Provider must ensure that:

- A second person present during maintenance activities in the event of an accident, to ensure the emergency will be detected and help will take place.
- Its personnel wear personal protective clothing and safety equipment.
- Suitably trained personnel perform the Services.

6.11 Qualified Personnel

It is a requirement that personnel performing and overseeing works that the Service Provider is appointed for be suitably qualified and accredited in the specific trade. The required key personnel for this work are as follows:

The Service Provider must be ASIB registered and the technician to be ASIB and SAQCC (Fire) registered

7 OPERATING AND MAINTENANCE MANUALS

The Service Provider shall be responsible for the compilation of an inventory list.

All information shall be recorded and reproduced in electronic format, as well as three sets of hard copies to be supplied to WITS University.

Over and above the afore mentioned, the Service Provider shall also be responsible for the compilation of the following:

- (a) Cataloguing of the fire safety equipment

All the fire safety equipment must be catalogued under the following headings:

- (i) Location and details of equipment
- (ii) Service date
- (iii) Service frequency
- (iv) Condition of equipment
- (v) History: Usage incidents, breaking, etc.

8.0 LOGGING AND RECORDING PROCEDURES

The Service Provider shall under this maintenance contract institute a logging and recording system as part of his maintenance control plan. This shall consist of a log and record book, which shall be utilised to log and record all service records, system checks, breakdowns, maintenance visits, inspections, etc.

The logbook shall be stored in a safe place as agreed with WITS University. Copies of the monthly entries and recordings into the logbook shall be submitted by the Service Provider together with his monthly report to WITS University or the University's representative.

The logbook shall be structured to include at least the following:

- (a) Service records
- (b) Inspection and maintenance actions
- (c) Breakdown reports
- (d) Inspection and test comments and reports.

9.0 REPAIR WORK TO INSTALLATIONS, SYSTEMS AND EQUIPMENT

9.1 FIRE FIGHTING EQUIPMENT

9.1.1 GENERAL

All repair work shall be executed using approved materials and equipment suitable to the systems and/or installations they serve. The said repair work shall be executed in accordance with the relevant codes of practice, standards, regulations, municipal laws and by-laws, manufacturer's specifications and codes of practice and all applicable additional specifications included in this document.

All new equipment, materials and systems shall be furnished with a written guarantee of a defects liability period of 12 months commencing on the date of issue of a certificate for completion of the repair work. These guarantees shall be furnished in favour of WITS University.

Repair work items for the firefighting equipment shall be categorised under the following headings:

- (a) Fire hydrants
- (b) Fire hose reels
- (c) Fire extinguishers
- (d) Sprinkler system

9.1.2 REPAIR WORK OF EXISTING FIRE FIGHTING EQUIPMENT

The Service Provider shall at the start of the repair and maintenance contract inspect, record and report on all the existing Fire Fighting Equipment listed in this specification.

This inspection and report shall comprise the following:

- (a) Establishing the condition of all equipment,
- (b) Reporting all defects to equipment,
- (c) Compliance of equipment in respect of the governing regulations at the time of the start of the Contract,
- (d) Recording all equipment with an identifying system,
- (e) Details of all equipment,
- (f) Water supply pressure and flow rate,
- (g) Listing of latest service.

The Service Provider shall report on the above in writing to the WITS University and/or University's Representative.

9.1.3 FIRE HYDRANTS

Repair work to the fire hydrants system shall include but not be limited to the following:

- (a) Replacement of damaged, broken, leaking, corroded pipe work and fittings,
- (b) Replacement of hydrant seal,
- (c) Repair/replacement of quick coupling catches,
- (d) Replacement of damaged shaft ends (right hand wheel type),
- (e) Replacement of damaged and expired or missing 65 mm diameter hose streamers,
- (f) Replacement of damaged valve stem seal,
- (g) Replacement of fire damaged, missing or shortfall fire signage to equipment.
- (h) Hydrants shall be labelled with identifying tags and details recorded.

9.1.4 FIRE HOSE REELS

Repair work to the fire hose reel systems shall include but no be limited to the following:

- (a) Replacement of the hose drum seal where leaks occur,
- (b) Replacement of the 30 m hose where perished, damaged or missing,
- (c) Replace gland packing and gaskets to hose reel shut-off valve,
- (d) Replace missing hose reel shut-off valve wheel handles,

- (e) Number and catalogue hose reel,
- (f) Where hose reels shut-off valves are damaged beyond repair, these shall be replaced with new,
- (g) All hose reel mountings shall be checked and where loose or damaged, replaced with new,
- (h) Where paintwork of equipment has deteriorated, such equipment items shall be replaced and repainted in accordance with the manufacturer's specification,
- (i) Hose reels shall be labelled with identifying tags and details recorded, including service record. Service sticker to be added inside fire hose reel drum.

9.1.5 FIRE EXTINGUISHERS

Repair work to the fire extinguishers shall include, but not be limited to the following:

- (a) Replace wall mounting boards and brackets where damaged or missing.
- (b) Dry chemical powder extinguishers shall be repaired and serviced and shall include at least the following:
 - (i) Replace discharge hose and nozzle where damaged or missing,
 - (ii) Replace gauge on bottle where reading is incorrect, damaged or missing,
 - (iii) Check, service and repair activation mechanism,
 - (iv) Replace DCP powder,
 - (v) Recharge discharge cylinder to the required capacity,
 - (vi) Reseal discharge mechanism,
 - (vii) Replace instructions on extinguishers where necessary,
 - (viii) Extinguishers shall be labelled with identifying tags and details recorded, including service record.
- (c) CO₂ extinguishers shall be repaired and serviced and shall include at least the following:
 - (i) Replace discharge nozzle and pipe where damaged or missing,
 - (ii) Replace gauge on bottle where reading is incorrect, damaged or missing,
 - (iii) Repair activation mechanism,
 - (iv) Recharge with CO₂ to required capacity,
 - (v) Reseal discharge mechanism,
 - (vi) Replace instructions on extinguishers where necessary,
 - (vii) Extinguishers shall be labelled with identifying tags and details recorded, including service record.

9.1.6 BOOSTER CONNECTIONS

Repair work to the booster connection shall include, but not be limited to the following

- i) Replace damaged couplings and nozzles.
- ii) Ensure all connections are tight and leak-free under pressure.
- iii) Replace the security seal.
- iv) Replace corroded/damaged piping.
- v) Ensure piping is properly supported and not obstructed.
- vi) Replace damaged mounting hardware.
- vii) Replace for missing or damaged knobs and switches.

10. MAINTENANCE TO INSTALLATIONS, SYSTEMS AND EQUIPMENT

10.1 FIRE FIGHTING

10.1.1 GENERAL

Annual maintenance responsibilities for each installation including all units and components as specified, shall commence with access to the site. A difference shall be made in payment prior to and after practical completion of the work.

Maintenance of the completed installation shall commence upon the issue of a certificate of practical completion for repair work and shall continue for the remainder of the 60-month contract period.

This part of the Contract shall include:

- (a) Routine preventative maintenance,
- (b) Corrective maintenance, and
- (d) Breakdown maintenance,

All maintenance work shall be executed in accordance with the relevant codes of practice, statutory regulations, standards, regulations, municipal laws and by-laws and the manufacturers' specifications and codes of practice.

All new equipment, components and materials supplied and installed under the maintenance contract shall be furnished with a prescribed manufacturer's guarantee.

The maintenance work and items are to be categorised for each maintenance activity under the following headings:

- (a) Fire hydrants
- (b) Fire hose reels
- (c) Fire extinguishers
- (d) Sprinkler system
- (e) Booster Connection
- (f) Water tanks

10.1.2 ROUTINE PREVENTATIVE MAINTENANCE

The routine maintenance work to be performed and executed shall include, but not be limited to the items listed below under the respective headings.

These actions and findings shall be logged and reported on the relevant approved schedules and reports.

Fire hydrants

Maintenance work shall include at least the following actions and shall be scheduled in accordance with the relevant regulations and requirements and include six-monthly inspections and yearly services.

- (a) Check hydrant valve seal.
- (b) Check right hand wheel for tightness.
- (c) Check valve stem and or top for damage.
- (d) Check valve stem seal and readjust.
- (e) Check operation of quick couplers.
- (f) Check operation (opening and closing movement of valve).
- (g) Check water pressure and flow.
- (h) Check standpipe for rigidity and leaks.
- (i) Log maintenance schedule.
- (j) Report defects for processing and repair.

Fire hose reels

Maintenance work shall include at least the following actions and shall be scheduled in accordance with the relevant regulations and requirements and include six-monthly inspections and yearly services.

- (a) Check drain seal.
- (b) Roll down hose and check for cracks or perishing.
- (c) Check operation of nozzle.
- (d) Check operation of fire hose reel valve.
- (e) Lubricate moving parts of drum.
- (f) Check pressure and flow of fire hose reel.
- (g) Check piping for leaks and damages.
- (h) Log maintenance schedules.
- (i) Report defects for processing and repair.

Fire extinguishers

Maintenance work shall include at least the following actions and shall be scheduled in accordance with the relevant regulations and requirements and include monthly and six-monthly inspections and yearly services.

(a) General

- (i) Check mounting of backboard and bracket.
- (ii) Check charge of the extinguisher.
- (iii) Check the condition of the discharge.
- (iv) Check the mechanism condition of the discharge hose.
- (v) Update the log entry on the extinguisher.
- (vi) Log maintenance schedule.
- (vii) Report defects for processing and repair.
- (viii) Hydrostatic testing as per SANS 10105-1 & SANS 1825 – hydrostatic testing to be conducted after every 5 years.

(b) Individual types of extinguishers

Over and above the preceding requirements, the following shall apply to individual types of extinguishers.

- (i) DCP extinguishers:
Check charge and replace powder at prescribed intervals.
- (ii) CO₂ extinguisher:
Check charge.

Booster Connection

Maintenance work shall include at least the following actions and shall be scheduled in accordance with the relevant regulations and requirements and include monthly and six-monthly inspections and yearly services.

- a) Check all couplings and nozzles for damage or wear.
- b) Ensure all connections are tight and leak-free under pressure.
- c) Verify the security seal is intact.
- d) Inspect piping for any signs of corrosion, damage, or leaks.
- e) Ensure piping is properly supported and not obstructed.
- f) Tighten any loose mounting hardware.
- h) Check for missing or damaged knobs and switches.
- i) Ensure all components are properly lubricated.

10.1.3 CORRECTIVE MAINTENANCE

The Service Provider shall inspect and check all equipment, materials, systems and installations for any pending breakdowns, maladjustments or anomalies of equipment.

The Service Provider shall report and take actions to correct such shortfall.

The Service Provider shall replace non-compliant and defective fire extinguishers. The Service Provider shall be paid at the rate that they priced under the Corrective Maintenance section of the Bills of Quantities.

10.1.4 BREAKDOWN MAINTENANCE

All breakdown maintenance shall be done in accordance with the relevant specifications, standards, regulations and codes.

The Service Provider shall have access to the necessary spares, equipment and tools for any possible breakdowns.

- a) The Service Provider shall provide a standby phone that is always attended to – twenty-four (24) hours a day, seven (7) days per week, for the duration of the contract.
- b) All costs related to the standby service are for the Service Provider account i.e. procurement of the devices (this includes mobile phone, chargers and battery banks), airtime and data purchases, shall be at the cost of the Service Provider.
- c) The standby service shall be carried out at the cost as specified in the BoQ under Corrective Maintenance. Standby staff shall be equipped with adequate communication equipment to ensure a minimum delay in the response to emergency call-backs.
- d) In the event of faults or other events requiring urgent attention, the Service Provider shall guarantee attending to the request within 1 hour. Any work/event requiring extended repair time shall be discussed and agreed between the Client.

10.2 SPRINKLER SYSTEM

10.2.1 GENERAL

SPRINKLER SYSTEM – MAINTENANCE AND TROUBLE SHOOTING

The sprinkler Service Provider must train at least 5-off staff members on the procedures to conduct weekly tests and issue the training register to WITS university. Sprinkler contractor must be **ASIB** certified.

PUMP SET

Sprinkler system pump set consists of the following

- Jockey Pump
- Electric Pump
- Diesel Pump (Pump Only)

PUMP SET TESTING AND SERVICING SCHEDULE

Below is table 1, reflecting the schedule for the testing and servicing of the pump set.

Item	Description	Frequency			
		Weekly	Monthly	Quarterly	Annually
1	Jockey Pump	√	√		
2	Electric Pump	√	√		√
3	Diesel Pump	√	√	√	√

SERVICE/TEST PROCEDURE

WEEKLY TEST

JOCKEY PUMP

- Check and record discharge pressure sufficient to maintain pressure.
- Check operating pressure not more than 1000kPa and not less than pressure switch setting to start fire pump.
- Check jockey pump start at not less than 85 % of system pressure.
- Check and record pump cut-in pressure setting.
- Check and record pump cut-in pressure.
- Check and record pump cut-out pressure setting.
- Check and record pump cut-out pressure.
- Check jockey pump shut off pressure at churning pressure or 1000kPa, whichever is lesser.
- Check and record jockey pump startup to max operation Amp not to overload.
- Check and record number of jockey pump starts in 15 minute period.
- Jockey pump controller (pump no .)
- Check manual/auto selector switch in auto position.
- Check and record minimum run timer, rated 0 to 30 seconds, set to 20 seconds.
- Check indication lamps for pump run and pump fail operation.
- Check all controllers enclosed damp and dust proof enclosure.
- Check controller doors fitted with sponge gaskets or equivalent.
- Check general condition of all wiring, contactors, and fuses.

MONTHLY TEST/SERVICE

JOCKEY PUMP

- Record jockey pump start pressure.
- Record jockey pump stop pressure.

FIRE PROTECTION WATER STORAGE TANKS

SCHEDULE OF SERVICE/TESTING

The water storage tanks shall be inspected/test according to the following schedule.

Item	Description	Frequency	
		Weekly	Monthly
1	Water storage tanks.	√	√

SERVICE/TEST PROCEDURE

WEEKLY TEST/SERVICE

- Check water tanks and piping for visible leaks, rust.
- Record water tank levels.
- Check water tank overflows for operation.
- Check valves on inlet to be open and locked.
- Check operation of float levels on municipal supply.
- Check general condition and quality of water.

MONTHLY TEST/SERVICE

The water storage tanks must be checked every month for the following:

- Check if tanks are free of leaks.
- Check all stop valves free and in good condition.
- All valves must be secured in right position.
- Check ball valves for correct operation.
- Check water level and adjust.
- Check that tank lids are closed.
- Check all piping and valves.
- Check that main supply valve is open and secured, provide chain and lock if required.

10.2.2 CORRECTIVE MAINTENANCE

The Service Provider shall inspect and check all equipment, materials, systems and installations for any pending breakdowns, maladjustments or anomalies of equipment.

The Service Provider shall report and take actions to correct such shortfall.

10.2.4 BREAKDOWN MAINTENANCE

All breakdown maintenance shall be done in accordance with the relevant specifications, standards, regulations and codes.

The Service Provider shall have access to the necessary spares, equipment and tools for any possible breakdowns.

- a) The Service Provider shall provide a standby phone that is always attended to – twenty-four (24) hours a day, seven (7) days per week, for the duration of the contract.
- b) All costs related to the standby service are for the Service Provider account i.e. procurement of the devices (this includes mobile phone, chargers and battery banks), airtime and data purchases, shall be at the cost of the Service Provider.
- c) The standby service shall be carried out at the cost as specified in the BoQ under Corrective Maintenance. Standby staff shall be equipped with adequate communication equipment to ensure a minimum delay in the response to emergency call-backs.
- d) In the event of faults or other events requiring urgent attention, the Service Provider shall guarantee attending to the request within 1 hour. Any work/event requiring extended repair time shall be discussed and agreed between the Client.

11

MAINTENANCE AND SERVICING SCHEDULE OF FIRE FIGHTING EQUIPMENT

SERVICING SCHEDULE

Firefighting equipment to be inspected once every six months for a period of 5 years.

Fire-Fighting Equipment	1 st year Inspection	2 nd year Inspection	3 rd year Inspection	4 th year Inspection	5 th year Inspection
Fire extinguishers	Y	Y	Y	Y	Y
Fire Hose Reels	Y	Y	Y	Y	Y
Fire Hydrants	Y	Y	Y	Y	Y
Booster Connections	Y	Y	Y	Y	Y
Booster Pumps	Y	Y	Y	Y	Y
Water Storage Tanks	Y	Y	Y	Y	Y
Sprinklers	Y	Y	Y	Y	Y

12 **WARRANTY**

The Service Provider must provide, at least a twelve (12) month OEM warranty on the equipment after installation. Equipment that fails and is found to be defective in workmanship or materials shall be replaced by the supplier at its own cost with equipment carrying the same guarantee as the original offer. All workmanship shall be required to carry a twelve-month warranty

13 **INSURANCE COVER**

The successful bidder shall provide public liability cover of R15 million and R5 million in product liability cover within one month of accepting the appointment. Successful bidder's appointment will be subject to submission of proof of insurance cover to the University.