

# **ANNEXURE 5**

## **FIRE PREVENTION AND PROTECTION EQUIPMENT**

PROVISION OF INTEGRATED FACILITIES  
MANAGEMENT AT TRANSNET ISANDO, SENTRA  
RAND & ELANDSFONTEIN PRECINCT FOR A PERIOD  
OF 3 YEARS

## 1 INVENTORY

Item/ Equipment	Quantity
Fire Extinguisher - 4.5 kg	106
Hydrants – 80 millimetre	19
Horse Reels – 30 meters	20
Fire sprinkler system: dry and wet (heads, valves, riser, alarms, detectors etc)	<ul style="list-style-type: none"> <li>▪ City Deep main building – 8000 sqm</li> </ul>

## 2 SERVICING AND MAINTENANCE

Tenderers to ensure that the proposed maintenance programme agrees with the Original Equipment Manufacturer (OEM) maintenance recommendations. All maintenance work shall be scheduled, at least, to the requirements of the following table (the bidder/ contractor must ensure that sufficient allowance for all the items are made with the pricing schedule).

Item	Activity Description	Frequency
DCP Fire Extinguisher	Check for the following: a) Gauge reacting b) Discharge hose c) Instruction label (must be I good condition) d) Seal must be intact.	Monthly
	Remove discharge hose and check for blockages.	Yearly
	Discharge fire extinguisher into Getz machine.	
	a) Remove head assembly. b) Strip and clean. c) Check all components for wear and tear. d) Replace damaged components (only after approval). e) Lubricate "O" ring and valve stem assembly. f) Re-assemble valve assembly and check operation.	
	Do internal inspection of the fire extinguisher for damage, corrosion and pitting. Check neck threads.	
	Check extinguisher last pressure date.	
	Refill extinguisher with powder to the correct weight.	
	a) Fit valve assembly to extinguisher. b) Charge with Nitrogen to correct pressure.	
	Check extinguisher for leaks	

Item	Activity Description	Frequency
	Seal extinguisher and attach service label	
	Use MAP 70 powder.	Always
CO <sub>2</sub> Fire Extinguisher	Check for the following: a) Last pressure test date b) Gross and tare weight. Determine charge weight. c) Condition of instruction label.	Yearly
	Remove hose & horn assembly, check for blockage/ thread condition.	
	Puff-test for correct lever action.	
	Check for rust under the hose clip assembly.	
	Re-assemble hose & horn to extinguisher.	
	Seal extinguisher.	
	Attach service label.	
	Check that pressure safety device is seated and intact.	
	Ensure Extinguisher weight is within 5% of charge weight.	
Horse Reels	Check external condition: a) Frame b) Secure bolting c) Hose fitted and free running d) CP valve wheel in place and sealed	Monthly
	Unroll the hose fully and check the following: a) Nozzle for free action b) Make sure nozzle is not blocked. c) Check hose for cracks and damages. d) Check condition of hose clamps. e) Check condition of frame.	
	Open water and check flow (Min 30l/min).	
	Close CP valve, leave nozzle open until hose is rolled up.	
	Seal CP valve	
	Attach service labels	
	Check that CP valve box is in good condition.	
	Check that CP valve box break glass is fitted	
	Make sure hose reel is rolled up tidy and close nozzle	
	Check condition of hydrant	
Hydrant	Check seal in side hydrant head	Monthly
	Check operation of hydrant	

Item	Activity Description	Frequency
	Measure water flow and pressure	
	Attach service label	
	Seal hydrant	
Sprinkler	<p>Visually inspect control valves to ensure that they are:</p> <ul style="list-style-type: none"> <li>a) In the normal open position</li> <li>b) Accessible</li> <li>c) Properly sealed</li> <li>d) Locked and/or supervised</li> <li>e) Free from leaks</li> <li>f) Provided with appropriate signage identifying the portion of the system they control</li> </ul> <p>Visually inspect gauges on wet pipe systems to verify that they are in good condition and that normal water pressure is being maintained.</p> <ul style="list-style-type: none"> <li>a) Visually inspect gauges on dry pipe systems to verify that they are in good condition and that normal air and water pressure are being maintained.</li> <li>b) Note: Where air pressure is not supervised at a constantly attended location, these gauges need to be inspected on a weekly basis.</li> </ul>	Monthly
	<p>The following quarterly inspections are in addition to those required monthly and can be performed by facility staff:</p> <ul style="list-style-type: none"> <li>a) For hydraulically designed sprinkler systems, inspect the hydraulic nameplate to verify that it's securely attached to the sprinkler riser and is legible. Note: Most newly installed fire sprinkler systems are now hydraulically designed. When in doubt, ask your sprinkler contractor.</li> <li>b) Inspect alarm devices to verify that they are free of physical damage.</li> <li>c) Inspect fire department connections to verify that: <ul style="list-style-type: none"> <li>▪ They are visible and accessible</li> <li>▪ Couplings or swivels are not damaged and rotate smoothly</li> <li>▪ Plugs or caps are in place and not damaged</li> <li>▪ Gaskets are in place and in good condition</li> <li>▪ Identification signs are in place</li> <li>▪ The check valve is not leaking</li> <li>▪ The automatic drain valve is in place and operating properly</li> </ul> </li> </ul>	Quarterly

Item	Activity Description	Frequency
	<p>With proper training the following quarterly tests can be performed by facility staff:</p> <p>a) Test the waterflow alarm on wet pipe sprinkler systems by opening the inspector's test connection. This simulates the opening of a sprinkler head.</p> <ul style="list-style-type: none"> <li>▪ Note: Where freezing weather conditions or other circumstances prohibit the use of the inspector's test connection, the bypass connection is allowed to be used.</li> </ul> <p>b) Test the waterflow alarm on dry pipe sprinkler systems by using the bypass connection.</p> <ul style="list-style-type: none"> <li>▪ Caution: Opening the inspector's test connection can cause the system to trip accidentally.</li> </ul>	
	<p>A check of all sprinklers, hangers, pipe and fittings</p> <p>a) Testing of the main drain</p> <p>b) Testing of any antifreeze solution used</p> <p>c) Testing and maintenance of valves</p>	Yearly
	<p>a) An annual test of the fire pump assembly is required.</p> <p>b) This test must be conducted under minimum, rated and peak flows of the pump.</p>	
	<p>Prior to carrying out test inform the:</p> <p>a) Water authority if necessary</p> <p>b) Building owner or occupier</p> <p>c) Local fire brigade, particularly when the installation is connected to the brigade control room</p>	Always
	<p>A permanent record of all inspections and maintenance should be kept and the following recorded:</p> <p>a) Date and time of inspection</p> <p>b) Name of person carrying out test</p> <p>c) Result of test</p> <p>d) Factors which may have affected the test</p> <p>e) Recommendations and follow-up action.</p>	
<p>Additional inspection/maintenance schedule for fire sprinkler systems:</p>		

Component	Remarks	Component	Remarks
F	Acceptance test must be carried out by contractor in presence of end user and local fire department		Six monthly inspection should be carried out only by sprinkler specialist

Item	Activity Description	Frequency

**3 MAINTENANCE RECORD SHEETS**

- a) When maintenance is performed record sheets must be completed and signed off.

- b) These record sheets must be stored for the duration of the contract and should be available for inspection at any time.
- c) The lack of complete history files will result in immediate cancellation of the contract.
- d) All record sheets, job cards, history reports etc. will stay the property of Transnet and should be available on request.
- e) At the end of the contract period a complete set of documentation must be handed over to Transnet.
- f) The contractor shall further provide copies of these record sheets to Transnet.

#### **4 FIRE PRECAUTIONS**

The service provider must liaise with the City/ Municipality Fire Officer over their routine inspections and immediately report to Transnet on any recommendations the Officer makes.

#### **5 GENERAL**

- a) Extinguishers must be located in their designated location, secured properly and the proper type for the hazard area.
- b) Ensure that access to extinguishers, hydrants and hose reels is not obstructed.
- c) Ensure that legible operating instructions are on the extinguisher nameplate facing outward.
- d) Ensure that inspection tags are initialled and dated.