

Scope of Works

The works will include but are not limited to the underlisted:

1. Site set up:

Mobilization of the subcontractor to site, coordinating with GHSC-PSM and the ZAMMSA Luanshya Hub management for a work area and the ZAMMSA Luanshya Hub security protocols that the subcontractor will follow.

2. Firefighting system:

Procurement, supply, and installation of various components of the firefighting system including:

- a. Testing of existing pipe work.
- b. Removal of existing sprinkler heads and replacing with sprinkler heads rated as follows:

15mm Brass pendant 68 degrees conventional automatic sprinkler head with white ceiling rosette with operating temperature of 68 / 78 degrees Celsius and jointing complete with heat shield on each sprinkler head.

- c. In the section above the solar system battery bay, the sprinkler heads will be removed and the pipes covering that section will be plugged to cut-off water flow over the said area.
- d. Installation of a mobile foam canon in the hazardous store complete with 90 kg tank, hose, and nozzle on a wheeled frame.
- e. Painting all pipes with one coat etching primer and two coats of signal red gloss enamel.
- f. Drain, clean, and sterilize the existing water tank.
- g. Remove and replace all pipe connections from the tank to the pump house with 200 mm seamless Sch. 40 carbon steel pipes with steel pipe supports.
- h. Remove existing pipe from tank to the warehouse and replace with 200mm seamless Sch. 40 carbon steel pipes wrapped in Denso tape. (Refer to drawings for specifications).
- i. Connect existing tank to the newly installed pump.
- j. Installation of Control Valves (CVs) with all necessary fittings as detailed on the drawings.
- k. Connect existing pipework in the warehouse to the new ICV. (Refer to drawings)
- l. Installation of containerized fire pumps that meet the underlisted requirements

ASIB Approved containerised centrifugal fire pump set comprising 2 X duty and 1 X jockey pumps as described or equivalent by a fully approved manufacturer with minimum Capacity: 2900 l /m @80 m HD, 75.0 KW, 3PHASE /50Hz/ 380V:

(Electric pump) complete installed comprising:

- - Pressure switches
- - Red warning light for fixing on valve chamber
- - Control panels as described
- - Anti-vibration mounts

66 KW,3 PHASE (Diesel) Comprising:

- - Pressure switches
- - Red warning light for fixing on valve chamber
- - Control panels as described
- - Anti-vibration mounts

Pressure maintaining 1.1 KW "Jockey" pump by a fully approved manufacturer and suitable for automatic operation by water pressure switch with:

- Capacity: 20litres / minute at 5.5 bars
- Power Source: 380V/3Phase/50Hz

Comprising:

- - Pressure switch
- - Control panel as described
- - Anti-vibration mounts
- Complete with external siren and strobe light to indicate Fire Pump is running.

3. Pressure testing of all pipework.
4. Install fire detectors, fire resistant cabling and fire alarm panels in the existing Warehouse and Administration block with addressable fire control panel, siren, and strobe light.
5. Re-install existing fire alarm panel with existing detectors and cabling from the administration block in the Hazardous chemicals store complete with siren and strobe light, all installed in a weatherproof enclosure. A new battery will be required for this panel.
6. Test and commission fire sirens and strobe lights.
7. Zone test fire alarm panels.
8. Test, commission, and hand over system.
9. Training, operation of the firefighting system and maintenance.

The contractor will have to train ZAMMSA staff on the safe use and operation of the system. After training the contractor will share with ZAMMSA and GHSC-PSM manuals that guide the safe operation and maintenance of the system. The subcontractor will provide a 1-year warranty for the installed system.

10. Handover project close-out documentation.
11. Attend to any snags or defects during Defects Liability Period of 12 months.