

ANNEXURE A- SCOPE OF WORK

THE APPOINTMENT OF SERVICE PROVIDER TO PROVIDE AIRCONDITIONING INSTALLATION AND MAINTENANCE SERVICES AT THE SANPC REFINERY FOR 36 MONTHS.

1. INTRODUCTION

- 1.1 The scope of **work** as detailed in this document is indicated for the purpose of a contractor to manage the entire Air-conditioning infrastructure for **SANPC Refinery**.
- 1.2 The **contractor** shall supply all labour, supervision and equipment as required for the performance of the **work**.
- 1.3 This scope details the work to be done on **SANPC Refinery** premises as agreed to between the parties.
- 1.4 All existing Airconditioning equipment are to be serviced and maintained as per the agreed service routine for HVAC equipment.
- 1.5 **SANPC** requires the Air-conditioning Units that are currently operational and provide cooling to be serviced monthly to ensure the trouble-free operation of these units.
- 1.6 **SANPC Refinery** may require **additional** OR **non-operational** units to be resuscitated at any time, these units will then follow the maintenance routine.
- 1.7 Air- conditioning units that have failed or are in process of failure must be brought to the attention of the SANPC Refinery lead promptly.
- 1.8 Daily Job cards shall be submitted to the **SANPC Refinery** lead for each day detailing the Work performed and bear details of the contractor staff, details of units with defects.
- 1.9 Remuneration shall be based on the completion of the required monthly services stated in the **daily Job cards** provided by the contractor to SANPC Refinery lead or Authorised person who will sign off the job cards monthly, usually on the date of invoice submission to SANPC Refinery for payment of services.
- 1.10 **The SANPC Refinery** lead may request certain priority changes as may be required from time to time.
- 1.11 The **contractor** shall not, without the prior written consent of **SANPC Refinery**, deviate from this agreed **Scope of Work**.
- 1.12 The contractor shall ensure that the staff required for the performance of this scope of work is always available to carry out the work.

2. SCOPE OF WORK

The Contractor shall comply with the requirements of SANS 10147:2014 – *Refrigerating systems, including plants associated with air-conditioning systems*; and all other relevant standards. All inspection, testing, service, repairs, installation and maintenance of the HVAC equipment shall be performed by competent persons only. The Employees of the service provider shall comply with SANPC Refinery's policies and site regulations. Workmanship shall, always, be of a grade accepted as the best practice of the trade involved and as stipulated in written standards of recognised organisations or institutions of the respective trades, or better. The Contractor shall provide a complete Quality Assurance plan in accordance with the requirements of ISO 9001: 2015 to the SANPC Refinery for approval.

2.1. Schedule of equipment and location

The Contractor shall carry out regular unit checks, service, maintenance and repairs of the equipment listed below. SANPC Refinery may require additional or non-operational units to be resuscitated at any time. These units will then follow the maintenance routine.

Location	HVAC Equipment
Check point	2 x 24 000 btu window wall units.
Check point (Park home offices)	1 x 12 000 btu mid-wall split unit. 1 x 12 000 btu window unit.
Tanker Gate	2 x 12 000 btu mid-wall split units
Main gate	1 x 12000 btu mid-wall split unit
Security office (Main gate)	2 x 12000 btu mid-wall split units
Security Command Centre	3 x 12000 btu mid-wall split units 4 x 18 000 btu mid-wall split units
Sub 27	6 X 60 000 btu Under ceiling Split Units
Utilities – Sub 26	4 X 60 000 btu Under ceiling Split Units
SZ Far – Substation	1 X 60 000 btu Under ceiling Split unit
STF Far	1 X 36 000 btu Under ceiling Split unit 1 x 12 000 btu Mid wall split unit
STF Sub 1	2 X 36 000 btu Under ceiling Split units
STF Sub 2	1 X 24 000 btu Under ceiling Split unit
33kV Sub	2 X 42 000 btu Under ceiling Split Unit
Sub 17	2 x 36 000 btu Under ceiling split units
Sub 7C	1 x 24 000 btu Mid wall Split Unit
FCCU LV Sub	4 x 74 000 btu Industrial Packaged Units
FCCU MV Sub	4 x 60 000 btu Under ceiling split units

Sub 14	2 x 36 000 btu Under ceiling units
Sub 3	2 x 36 000 btu Under ceiling units
Lion Sub	4 x 60 000 btu Under ceiling units
Samco Sub LV	4 x 60 000 btu Under ceiling units.
Samco MV	2 x 60 000 btu under ceiling units.
Sub 10	2 x 36 000 btu under ceiling units.
Admin Aircon Chiller Plant	<p>Chiller 1 – TRANE RTWD CHILLER</p> <p>Chiller 2 – TRANE RTWD CHILLER</p> <p>Admin Ground floor left wing: Apache chilled water Air handling unit</p> <p>Fresh air intake fan Unit: TROX motorized.</p> <p>Admin Ground floor open plan: Apache Chilled water Air handling unit.</p> <p>Admin 1st floor management: Apache Chilled water Air handling unit.</p> <p>Fresh air intake fan Unit: TROX motorized.</p> <p>Admin 1st floor left wing: Apache Chilled water Air handling unit.</p> <p>Admin Ground Floor west wing: Apache Chilled water Air handling unit.</p> <p>Fresh Air intake fan unit: TROX motorized.</p> <p>Admin 1st Floor E&S dept.: Apache Chilled water Air handling Unit.</p> <p>Admin 2nd Floor HR dept: Apache Chilled water Air handling Unit.</p> <p>Fresh Air Fan intake unit: TROX Motorized.</p> <p>Admin 2nd floor Technology: Apache Chilled water Air handling unit.</p> <p>Fresh Air intake fan Unit: TROX motorized.</p> <p>Admin 2nd Floor Drawing office: Apache Chilled water Air handling unit.</p> <p>Admin 2nd Floor Inspection: Apache Chilled water Air handling unit.</p>
ICT Dept.	<p>3 x Cubistar 60 000 btu industrial air-cooled packaged ducted unit.</p> <p>1 x Gree 60 000 Btu Ducted Free blowing unit.</p> <p>1 x Uniflare 60 000 btu close control ducted unit</p>
Management Board Room	1 x 42 000 btu ducted unit.
Management Conference Room	1 x 42 000 btu Ducted unit.
SANPC Refinery – MD's office	1 x 18 000 btu cassette Unit

Engineering Male and Female changerooms	Change room ventilation extraction fan units.
NCR Male and Female Changerooms	Change room Ventilation and extraction fan units.
SANPC Refinery – Clubhouse	3 x 24 000 btu mid wall split units. 4 x 60 000 btu under ceiling units 1 x Brema Ice machine 2 x Glass display fridges Upright 2 x horizontal display fridges.

2.2. Generic monthly maintenance scope for HVAC unitary equipment

Indoor Units

- Switch unit off on isolator and place “serviceman hold tag’ over switch.
- Remove and clean filters, washable with detergent.
- Strip off blower cover and clean thoroughly.
- Strip and clean drip tray.
- Brush off blower wheel using a dry pain brush to remove dust, if heavily soiled, strip of and remove to clean using detergent.
- Check condition of cooling coils and clean using a damp cloth.
- Flush drainpipe with clean water and check flow.
- Check and tighten electrical plugs and terminals – verify isolation.
- Wipe entire unit using a damp cloth.
- Re- assemble covers and refit filters.

Outdoor unit

- Strip off external covers.
- Check and observe any oil leaks or oil spots.
- Using a pressure washer, clean condenser coils thoroughly.
- Apply detergent over coils and entire unit.
- Rinse off thoroughly using pressure washer and clean water.
- Dry out unit.
- Check all terminals and wiring plugs.
- Check and treat corrosion using a primer.
- Assemble covers and complete external touch-ups.
- Connect gauges and switch unit on, set on cooling, check and note refrigerant pressures.
- If unit has a refrigerant leak, do not top up without repairing the leak first.
- Observe the condensate flow out of the unit.

2.3. Generic annual service scope for unitary air-conditioning

- All above as stated.
- Check for corrosion and repair, repaint and tectyl where required.
- Replace filter / filter media where required.
- Replace flexible ducting where damaged or required.
- Replace corroded supports / bolts where required.
- Replace piping insulation where required.

Evapco Cooling Tower

- Isolate the Cooling tower fan and ensure LOTO is applied.
- Strip off fan cover, clean thoroughly.
- Observe fan motor and treat corrosion.
- Grease the motor bearings and assemble the fan cover.
- Check mounting bolt tightness where possible.
- Isolate pump, isolate water incoming valve.
- Remove sidewall honeycomb packs.
- Drain and clean cooling towers.
- Strip off cooling tower suction strainer and clean.
- Remove condenser water pump housing and clean around the pump.
- Clean the motor fan cover.
- Check and observe tightness of pump mountings.
- Grease the pump bearings.
- Apply Nickle compound to all boltheads to prevent corrosion.
- Apply primer to pump bolts and nuts where required.
- Assemble the housing.
- Assemble the strainer cover, ensure seal is intact and torque bolts.
- Apply Nickel compound onto all the external bolts and nuts.
- Check flow switch and spray with switch cleaner.
- Check isolation valves and apply Nickle compound to thread and bolts.
- Open purging lines.
- Open inlet valve and allow tower to fill up, observe for water leaks.
- Start-up pump and purge until all air is out.
- Assemble the side wall packs. and switch on the tower fan.
- Compile and submit a detailed report.

Apache Air handling units

- Isolate Air handling Units.
- Remove filters and wash using detergent.
- Strip and Clean Air handling unit and cooling coil.
- Check and clean drains, drip trays and water traps.
- Remove motor fan cover and clean motor fan and cover.
- Remove terminal box cover and check wiring and connections.
- Check fan belts and tension, worn belts should be replaced.

- Check all mounting bolts for tightness.
- Check all auxiliary controls, operations, and safety devices.
- Check Siemens controller settings, maximum and minimum set points and test.
- Check all wiring and tighten where required.
- Check and set VSD operation.

Annual Scope for APACHE AHU

- All of the above procedures as stated.
- Apply Nickle compound to all bolts and tensioners.
- Check for motor bearing noises and replace bearings.
- Check for burnt or heat damage on wiring and terminals and repair.
- Check VSD and replace if faulty.
- Check actuator and cooling valve and replace if defective.

Trane RTWD Chiller – Monthly Service

- Daily Operational checks for Alarms and alerts.
- Check operations and Safety controls.
- Check circuits and modules.
- Check all plug-in modules, sensors and wiring tightness on terminals.
- Check contactors and switchgear terminals and tightness.
- Check control cables and wiring for chaffing and abrasion.
- Check for refrigerant leaks, oil leaks and anomalies around the chiller.
- Check solenoids and operational loading and unloading.
- Check level sensor operations.
- Check Chiller logs: alarms and faults.
- Check refrigerant levels, pressures, compressor loading and unloading currents.
- Check oil heater and temperature, check sight glasses, solenoid valve stems and service valve stems for oil and refrigerant leaks.
- Check expansion valve for correct superheat settings and adjustments.
- Check condenser water temperature for abnormal condition indicating tube fouling.
- Check evaporator water temp for abnormal conditions indicating dirty tubes.
- Check chilled water flow switches and response to lack of water flow.
- Check chilled water rate of flow.
- Check condenser water rate of flow.

Trane RTWD chiller Annual service

- All the above steps to be included.
- Isolate Refrigerant and drain sump oil for both compressor circuits.
- Remove oil filters and replace with OEM spares for both circuits.
- Install new oil strainer on both circuits.
- Top up with new compressor oil.

- Remove and replace refrigerant filter drier on both circuits.
- Retorque compressor terminal bolts on both compressors for each chiller.
- Mechanically clean chiller tubes – condenser side.
- Replace gasket on condenser cover plate and tighten cover after cleaning.
- Mechanically clean evaporator tubes.
- Replace O ring seal and close-up covers.
- Fill up water into Evaporator and condenser until both sides are full. Check for water leaks.
- Start-up chiller and run full tests, check refrigerant levels and top up if required.
- Compile a detailed report- if any problems persist, call TRANE OEM for repair work, software downloads, sensor coding and bonding etc. Quote will be submitted prior.

Chilled water pump

- Check operation for undue noises and vibrations.
- Check and clean fan cover.
- Check oil level and top up, grease motor bearings on both ends.
- If pump is defective, isolate strip and remove for repairs.

Condenser water pump

- Check for undue noises and vibrations.
- Check and clean fan cover.
- Check oil level, if possible, grease bearings on both ends.
- If defective, isolate, strip and remove for repairs.

2.4. Spares and consumables

Spare parts and consumables shall be procured by the contractor. Where there are no unit rates, the OEM invoice shall be included with the monthly contractor invoice to SANPC Refinery. An agreed percentage mark-up which covers the procurement and delivery of spares shall be applicable.

2.5. New and replacement equipment

The Contractor shall provide air-conditioning units which use ozone-friendly refrigerants and comply with all national specifications from reputable brands. Midea, Gree and Samsung are the brands approved for use on site. Any other proposed brands shall be submitted to SANPC Refinery for approval.

SANPC Refinery air-conditioning focal point approval will be required prior to any new equipment being purchased and installed. New air-conditioning units and equipment of the type covered within the scope and inventory of this contract, shall

be procured and supplied by the contractor. Equipment of a greater cost shall be discussed and may be procured through the SANPC Refinery Procurement Department.

2.6. Work planning customer interface.

It is the intention for this contract to be self-managed with reduction in the SANPC Refinery interface. The air conditioning core contractor prioritizes the repair, feeds back the status to SANPC Refinery air-conditioning focal point. New units are to be given individual tag numbers and added onto the Inventory. The contractor will be required to manage this Airconditioning Maintenance service once priorities are understood.

All monthly and annual services, service requested from customers and other work shall be planned by the contractor and the plan shared with the SANPC Refinery Lead. Deviations from plan shall be discussed.

2.7. Scaffolding and Rigging

Cognizance with respect to scaffolding, civils, rigging etc. requirements shall be considered when planning work. SANPC Refinery will manage these activities, and the contractor shall make a request to the relevant departments via the SANPC Refinery Aircon contract focal point.

2.8. Electrical Motors

All repairs to Electrical motors which form part of Airconditioning plant and equipment, including pump motors, Cooling Tower motors and Air handling Unit motors shall be sent to the SANPC Refinery nominated specialist service provider / contractor. Cost of these services shall be for SANPC Refinery account.

2.9. Contractors In house workshop

The following facilities are provided by SANPC Refinery:

- A Workshop for the on-site Repairs and storage of Airconditioning related equipment.
- A Messroom for the staff.
- Ablutions and changeroom facilities.

Costs for these to be excluded from P&Gs

2.10. Week-end Work

Some work may only be done on weekends or after hours due to the interference to office staff or plant conditions. This work will be approved by the SANPC Refinery and planned accordingly. Note the general restriction on overtime work applies.

2.11. Monthly Report

A monthly report indicating the following shall be provided in an electronic and hard copy format.

- Work planned: Number of Units serviced- monthly and/ or Annual.
- Work completed: Number of Units serviced- monthly and/ or Annual.
- Breakdowns and activities related thereto
- Repairs and existing units approaching replacement value.
- Replacements – new equipment
- Man, hours expended with job cards.
- Standby and any callouts
- Key performance measurements (KPI's) to be finalized at contract award. These include no fires, no LTI no medically treated cases, limit backlog to between 4-6 weeks.
- HSE issues
- Response times to callouts and breakdown- purpose of this is to manage any undue, lengthy periods between a call and response.
- Any guarantee/warranty issues. Note these are to be strictly controlled by the contractor on behalf of SANPC Refinery and a register is required.
- Workmanship quality: rework is monitored strictly and shall be discussed and agreed prior to it taking place- or as soon thereafter as possible. The contractor is expected to be honest and declare any rework.
- Record keeping; strict record keeping shall apply.
- The contractor shall be pre-trained to service existing manufacturer's equipment and in effect, represent them on site.
- Existing warranties units to be maintained as set out by the manufacturer.

2.12. Standby and callouts

Due to SANPC Refinery being a 24/7 operation, it is necessary to include standby and call out system. The contractor shall provide the name of the individual on standby for a specific week (Thursday 15H30 to Thursday 07H00). This individual shall comply with the mandatory security breathalyser requirements and provide a response time as per the Tier 1 requirement.

2.13. Exclusions to this contract:

- Fume cupboards in the lab environment.
- Such scope will be covered separately and on labour rates per occurrence.

2.14. Service level agreement.

The following response times shall be applicable to the Contract:

Tier 1 (Emergency breakdowns) – 3 hours 24/7 for ICT server room, FAR Rooms, Admin building and Substations.

Tier 2 (Non Critical Breakdowns) – 12 hours or next working day for offices

3. SCOPE OF THE WORKS - GENERAL

- 3.1 The description given below defines the general requirements particular to the scope of the **works** and is to be read in conjunction with the other documents forming the Tender and/or the agreement as the case may be. Procedures for job card shall follow the sequence of events as per Central the Planning Workflow and as outlined below:

3.1.1.

- a) SANPC Refinery normally uses individual job card numbers to apportion the **works**. The **contractor** will be required to use the job card system for call-offs (pricing) and the SANPC Refinery **job card system** for progress reporting of the **works** in conjunction with the duly authorised SANPC Refinery **Zone Supervisor**. SANPC Refinery will provide the level 1 schedule (overall schedule – early start and late finish) for the contractors planning and execution.
- b) The contractor is required to provide man-hours expended to execute the work from the schedule of prices and compare against those listed in the man-hour norms for the job. The overall schedule will be compared against the initially agreed schedule.
- c) This information will be used in the KPI measures.

- 3.1.2. The **Area Engineer or the duly authorised person**, together with the **Zone Supervisor** identifies the required maintenance work, where after a priority is placed against each maintenance activity.

MAINTENANCE PRIORITISATION TABLE

PRIORITY	PRIORITY/RISK LEVEL	START DATE	INITIALCOMPLETION PERIOD
C	Routine	Request Date + 30 days	3 Months
B	Routine	Request Date + 14 days	1 Month
A	Schedule Breaker	Request Date + 1 days	1 Week
E	Emergency	Immediate	ASAP + Overtime

Priorities A, B, C & E are scoped by the respective Zone Scooper or the discipline Artisan.

A job card number is assigned to the scope and job card is issued to the contractor. Emergency Status Classification will be the 'A' and 'E' priority jobs. In such a case the Area Engineer agrees upon the staffing and general planning requirements with his execution Team (Scoper, Planner, Zone Supervisor and the Contractor). The Area Engineer confirms

the release of the works and identifies which lower priority job(s) can be postponed to accommodate the Emergency priority job.

- a) An 'E' priority job is supposed to commence immediately, and shift work is to be effected, and an 'A' priority job will require the contractor to commence within 24hrs of receiving the scoping form and order number. An 'A' priority job may require extended hours to be undertaken by the dayshift crew.
- b) In the event that the contractor resources in the Zone are insufficient for the Emergency Job, then the Area Engineer is to be consulted as he/she has overview of all resources and is in the position of suggesting what jobs across site could be postponed to accommodate the 'E' priority job.
- c) For an 'E' priority job after hours, the Planner is to immediately issue a Manual job card for the work to start. In the event the 'E' priority job occurs outside of normal working hours, the system generated job card with a valid job card number will be issued at the beginning of the next normal working day.
- d) The contractor is expected to obtain the necessary permits and

proceed with the works. The workflow from here shall proceed in the same manner as for normal priority works.

- 3.1.3. For (A, B, C & E) priority work a scope of work package, in the form of a Contractor Work Request (CWR), is generated in SAGE by the Area Scoper. A job card is generated by the Zone Scoper and followed up with a manual scoping form to the contractor. The contractor estimates the cost and man hours for a CWR, in accordance with the Schedule of prices, and returns the estimated CWR in electronic format to the Area Engineer. The Area Engineer evaluates and awards the contractor's estimated CWR.
 - a) When awarded, the contractor compiles a Work Pack which includes the relevant drawings and Material Take-off's (MTO's) etc.
 - b) The Contractor's supervisor is required to facilitate the generation of the Safety Certificate.
- 3.1.4. The contractor presents the compiled work pack to SANPC Refinery, which must be reviewed and verified in writing by the respective SANPC Refinery authorities. SANPC Refinery shall, at the same time, ensure that the material required is in stock or ordered. Central Planning draws up a 30-day look-a-head schedule, for review by the Area Execution Team including the contractor. From time to time, SANPC Refinery may impose a limit to contractor numbers on site.
- 3.1.5. After confirmation with all relevant parties in the Weekly planning meeting, the Planner issues a seven-day look-ahead level 1 schedule. From that schedule, job cards will be issued to the relevant contractor. The seven-day schedule will be extracted from the monthly schedule.
 - a) The contractor is to ensure that the relevant QCP, Work-pack is approved and that the permits are obtained at the latest by close of business of the day prior to the planned start date.
 - c) Thereafter the contractor is to get daily clearances for each activity from the respective Maintenance Services Focal Point (MSFP) before commencing with the works.
- 3.1.6. In the event of any variations to the scope of the works, SANPC Refinery Authorised person (Area Engineer, the Zone Planner, the Zone Scoper) and the contractor shall identify such variation/s and this must

be recorded. The contractor shall include such variations into the work pack. A variation order (VO) shall be raised and approval by the Area Engineer before the extra work commences.

Execution of works without a job cards will not be accepted.

3.1.7. The contractor must submit the job cards to the Planner for progress reporting. These job cards must be signed by the Discipline Supervisor as verification that the work is completed to the required standard and to process payments.

3.1.8. The Planner updates all progress and closes off the work upon issue of the handover/takeover certificate from the contractor.

3.1.9. Quality of workmanship must be verified by duly appointed persons for all categories of work which will be on record as part of the contractor workpacks.

3.1.10. All material specifications must be as per SANPC Refinery /ISO standards. If at any instance the specifications are not clear, then the SANPC Refinery Area Engineer is to be consulted for guidance and resolution.

3.2. SANPC Refinery may require the contractor to prepare a workpack prior to commencement of the works, which may include:

- a) Health, Safety and Environment Action Plan.
- b) Method Statement.
- c) Quality Plan.
- d) Completion of the SANPC Refinery integrated Risk Assessment Method Statement ("RAMS"); and

4 SAFETY

4.1 The contractor and contractor personnel must, as far as reasonably practical comply with requirements prescribed by the OHS Act and OHS

Regulations- Act 85 of 1993.

- 4.2** The contractor will also comply with the SANPC/ CEF rules and regulations
- 4.3** The contractor safety officer will ensure that regular audits are done on site to identify and intervene on unsafe situations and near miss acts during work execution. Any findings to be reported and recorded in the SANPC/ CEF incident management system
- 4.4** All incidents to be reported to the relevant clearance issuers and maintenance supervisors

5. ADMINISTRATION PROCEDURES

5.1 Meetings

- 5.1.1 The following meetings are compulsory for contractor's representative to attend when any work is in progress:
 - a) Daily planning and progress meetings as directed by Area Engineer and/or the Zone Planner.
 - b) Weekly look-ahead meetings as directed by Area Engineer and/or the Zone Planner.
- 5.1.2 The following meetings are compulsory for the contractor Site Manager to attend:
 - a) Monthly KPI review meeting
 - b) Quarterly performance and safety review meetings or as directed by the CCM.

5.2 Planning and Progress

- 5.2.1 SANPC Refinery shall provide the contractor with a 30-day look-a-head schedule outlining planned windows for activities. The contractor is to manage and administer the manpower resources as such to enable him to comply with the defined service levels and meet the required works order completion dates, irrespective of absenteeism or leave. The contractor must ensure these objectives are fully understood and that management structures and procedures are in place to ensure timeous

and successful execution under the above-mentioned constraints.

- 5.2.2 The contractor is responsible to plan, supply, coordinate and manage his manpower, logistics, equipment and materials resources for the works in accordance with the schedule from Central Planning as a guide. The coordination, progress monitoring and reporting is the responsibility of the contractor and shall take place at the daily progress meetings. These meetings shall be recorded (as per respective meeting's criteria) by the Zone Planner and agreed to or signed by the contractor. The contractor shall update his plan, provide progress at the daily and weekly progress meetings.
- 5.2.3 The contractor is to arrange and coordinate with the required SANPC Refinery personnel, all RAMS sessions in order to ensure that work starts timeously.
- 5.2.4 The operations of SANPC Refinery and interconnecting facilities in outlying areas will be carried out continuously during the period of this agreement, and the contractor shall allow for working in close proximity to and in liaison with other contractors in order to minimise inconvenience and shall plan for flexibility in labour resources input and any other factors in complying with these restrictions.
- 5.2.5 Restrictions may be imposed upon the contractor in his execution of the works as a result of SANPC Refinery 's operations. The contractor is to immediately notify SANPC Refinery (Area Engineer and the CCM in writing, of such an interruption. The contractor along with the Area Engineer shall re-coordinate the manpower to other available sections, areas, items of equipment in order to minimise standing time.
- 5.2.6 All priority "E" and "A" work to be clearly defined by the Area Engineer and closely coordinated with the CCM. The Planner/Planning Manager will ensure that the necessary job cards are raised within 24 Hrs (or the next normal working shift). The contractor Supervisor and the Supervisor will both sign the Job Card for progressing purposes.
- 5.2.7 The contractor shall, at all times, demonstrate positive and proactive participation in the efficient execution of the works in order to achieve satisfactory levels of productivity.

- 5.2.8 The contractor is to note that whilst the overall scope of works must be completed in the required time, the contractor must ensure that by proper preparation and quality execution the planned man-hours are not exceeded.
- 5.2.9 The contractor's attention is drawn to the fact that the works to be executed may be in the vicinity of insulated pipework, equipment and electrical and instrument installations. The contractor shall be held responsible for any damage caused to these or any other installations by his operations. If damages are identified prior to commencing work, the Area Engineer or the Supervisor must be notified of such damages immediately.
- 5.2.10 Access to and from the worksite is by means of existing hard roads or temporary access roads and will be through such gates and by such routes as will be defined by SANPC Refinery. The contractor is to operate his own vehicles with minimum of inconvenience to other traffic at the Refinery sites.
- 5.2.11 All electrical equipment brought on site for work execution must be inspected and approved by the SANPC Refinery electrical department.

5.3 Contractor Organisation and Training

- 5.3.1 SANPC Refinery will not pay for trainees. It is however acknowledged that consistency in staff qualifications is of mutual benefit. All workers are to undergo training through a SETA approved Training facility. For the manning of strategic positions the contractor may present proposals for trainee-ships, for approval by the CCM.
- 5.3.2 In the event that the candidate is found to be not coping with the work, SANPC Refinery reserves the right to insist on change for a more suitable candidate.

5.4 Staff Issues

- 5.4.1 As a control system the contractor is to supply a full organogram with functions and names of resources to SANPC Refinery. labour pool. SANPC Refinery reserves the right to asses all contractor supervisors before they report for work at the SANPC Refinery sites.

- 5.4.2 SANPC Refinery shall have the right to assess the contractor's core resources and performance on a continuous basis for the duration of this agreement.
- 5.4.3 Only approved resources may be used by the contractor. Changes in core resource staff shall be justified to and approved by the SANPC Refinery CCM, whose approval will not be unreasonably withheld. (This includes non-recoverable resources).

6. DIVISION OF RESPONSIBILITIES

Definitions:

- E Execute
P Participate
A Approve
S Supply
M Maintain

6.1 Division of Responsibilities - Work Descriptions

The following work descriptions define the division of responsibilities with respect to the work required and exclusions from the **agreement** scope of work: -

Work Description	By Contractor	By Others	By SANPC Refinery
Timeous Application for Work Permits	E		P
Issue of daily work permits			A/E
Gas Testing			E
Quality Checking	E		P/A

6.2 Division of Responsibilities - Provision of Construction and associated Equipment

Equipment Description	By CONTRACTOR	By Others	By SANPC Refinery
Transportation	S		
Site huts, ablution facilities	M		S

Equipment Description	By CONTRACTOR	By Others	By SANPC Refinery
storage and where require services			
Lighting – General			S/M
Required protective clothing and equipment include. B Compressor	S/M		
Cranage		S/M	
Lifting gear, ropes, slings and shackles			S/M
Safety Equipment	S/M		
Firefighting facilities			S/M
Resuscitator			S/M
Standby B.A. set			S/M

The following defines the division of responsibility with respect to the provision of construction and associated equipment for the implementation of the **agreement** work:

6.3 Division of Responsibilities - Supply of Installed Equipment and Materials

The following defines the division of responsibility with respect to the supply of installed equipment and materials required for the **agreement** work:

Task Description	By CONTRACTOR	By Others	By SANPC Refinery
Identify work and raise Job card			E/A
Prepare and issue detailed scope of work	S/P		A
Price	E		A
Rates for non-bill items	E		A
Plan sequence of work	E		A
Carry out the work	E		

Task Description	By CONTRACTOR	By Others	By SANPC Refinery
Progress reporting	E		A
Prepare V.O.	P		E/A
Handover (ready to use)	E		A

The above noted items are intended to be indicative of the categories of work to be undertaken. They are not intended as a comprehensive list of the same.

7. PRELIMINARY AND GENERAL

7.1 Workshop facilities that can be used for repairs and storage of equipment will be provided by SANPC.

7.2 The Contractor must have a minimum team consisting of a technician, a semi-skilled artisan and an artisan assistant to support this contract. The team will be responsible for executing the above scope as and when required.

8. PRICING SCHEDULE

The Service Provider shall complete a pricing schedule summary shown in Table A below and a spares and major service costing sheet shown in Table B.

Table A – Pricing Schedule Summary

ITEM	DESCRIPTION	Qty	Unit	Unit Price	Total Price
1.0	PRELIMINARY & GENERAL				
1.1	Site establishment & de-establishment	1	Sum		
1.2	Other (please specify)	1	Sum		
	Total P & G:				
2.0	SERVICE AND MAINTENANCE				
2.1	Monthly service and maintenance	36	Months		
2.2	Annual Service and maintenance	3			
	Total Labour:				R
3.0	SUPPLY AND INSTALL NEW EQUIPMENT				
3.1	Supply and install 12 000 BTU window wall air conditioning split unit	1	ea.		
3.2	Supply and install 24 000 BTU window wall air conditioning split unit	2	ea.		
3.3	Supply and install 12 000 BTU mid-wall air conditioning split unit	7	ea.		
3.4	Supply and install 24 000 BTU under ceiling air conditioning split unit	1	ea.		
3.5	Supply and install 36 000 BTU under ceiling air conditioning split unit	6	ea.		
3.6	Supply and install 42 000 BTU under ceiling air conditioning split unit	1	ea.		
3.7	Supply and install 60 000 BTU under ceiling air conditioning split unit	10	ea.		
3.8	Supply and install 42 000 BTU ducted air conditioning split unit	2	ea.		
3.9	Supply and install 60 000 BTU ducted air conditioning split unit	2	ea.		
	Total New Equipment:				R
4.0	MAJOR SERVICE				
4.1	Trane OEM filters and oil service	6			R
	Total Major Service:				R
5.0	SUPPLY SPARES				
5.1	As per attached spares list (Table B)	1	Sum		R
	Total Spares:				R
	GRAND TOTAL (1.0 + 2.0 + 3.0 + 4.0 +5.0)				R

Table B - List of spares

Item No.	Description	Qty	Unit	Unit Price	Total Price
1	R410 Refrigerant @ 11.3kgs per cylinder	30	cylinder		R
2	R134A Refrigerant @ 11.3kgs per cylinder	30	cylinder		R
3	Copper Tubing 1/4 @ 15m per length	24	length		R
4	Copper Tubing 3/8 @ 15m per length	15	length		R
5	Copper tubing 1/2 @ 15m per length	15	length		R
6	Copper tubing 5/8 @ 15m per length	15	length		R
7	Copper Tubing 3/4 @ 15m per length	12	length		R
8	tubing insulation 3/8 x 3/8 @ 1,83m per length	123	length		R
9	tubing insulation 1/2 x 3/8 @ 1,83m per length	123	length		R
10	tubing insulation 5/8 x 3/8 @ 1,83m per length	123	length		R
11	tubing insulation 3/4 x 3/8 @ 1,83m per length	99	length		R
12	tubing insulation 1/4 x 3/8 @ 1,83m per length	198	length		R
13	copper rods 3mm @ 100g per rod	180	rod		R
14	Trunking 75 x75 PVC white @ 3m per length	24	length		R
15	Cable tie T50i @ 100 per packet	60	Pkt.		R
16	Hilti screws 6 x 40 @ 100 per box	6	box		R
17	Flare nuts 1/4 brass	60	ea.		R
18	Flare nuts 3/8 brass	60	ea.		R
19	Flare nuts 1/2 brass	60	ea.		R
20	Flare nuts 5/8brass	60	ea.		R
21	Flare nuts 3/4 brass	60	ea.		R
22	brass Union 5/8	30	ea.		R
23	brass Union 3/4	30	ea.		R
24	MAPP gas (400g) + gas torch	24	ea.		R
25	access valves	60	ea.		R
26	Condenser fans	6	ea.		R
27	isolator 2 pole Aircon 35amp	18	ea.		R
28	isolator 3 pole Aircon 35amp	18	ea.		R
29	Vacuum pump oil	60	litre		R
30	Refrigerant R407C @ 11.3kgs per cylinder	30	cylinder		R
31	WEG CFW 500 5.5kw VSD	18	ea.		R
32	CAT 1515 evaporator fan assembly for AHU	6	ea.		R
33	fan belts for AHU 970 x 1000	30	ea.		R
34	Degreaser (fallaway)	750	litre		R
35	Paddle water flow switches	18	ea.		R
36	Trane chilled water sensors	12	ea.		R
	TOTAL				R

Annexure B

1. EVALUATION CRITERIA

1.1. Phase 1

Mandatory Requirements

At this phase, bidder's responses are reviewed against the below Mandatory Requirements. **Failure to comply with any of the Mandatory Requirements will lead to the bidder being disqualified and not be considered for further evaluation on Technical Requirements.**

No.	Description of the Mandatory requirements	Comply	Not Comply
1.1.1.	The Technician MUST have completed an apprenticeship or equivalent in air conditioning and refrigeration and holds a Refrigeration Mechanic (Industrial) trade test certificate AND is registered with SAQCC Gas as an Air Conditioning & Refrigeration Practitioner Category B. The Bidder to submit apprenticeship (or equivalent), trade test and SAQCC Gas certificates.		
1.1.2.	Semi-skilled artisan MUST have a minimum of NQF level 2 qualification or equivalent in air conditioning and refrigeration. The Bidder to submit minimum of NQF level 2 (or equivalent) certificate.		

1.2. Phase 2

Technical evaluation: Bidders will be evaluated according to the below technical evaluation criteria. Minimum Technical Threshold is **70%**. It must be noted that if the Bidder does not meet the **70%** minimum threshold, the bidder will be disqualified and not be

1.2.1. Company Experience

The service provider is required to have the necessary experience to provide the services to install and maintain Airconditioning systems for use in industrial applications in accordance with applicable standards. Please submit a minimum of three (3) relevant and contactable references of your current and/or previous heavy industry clients for installation and maintenance of Airconditioning systems.

The assignments/contracts/projects completed must be in the heavy industry clients in the past 5 years **(2020-2024)**.

Please provide reference letters as proof of similar services or work done in the past 5 years.

The reference letter must be signed, dated by the client, and must be on the client's letterhead and include the date when the work was executed, the company name and contact details.

	Evaluation Criteria	Document as Evidence	Score	Weighting %
Experience in Airconditioning installation and maintenance.	3 Reference letters and more submitted	Reference letters	5	25%
	2 Reference letters submitted		3	
	1 Reference letter submitted		1	
	No Reference letter Submitted		0	

1.2.2. Company Response times

Bidder must provide response times for **high priority (emergency)** breakdowns or callouts

	Evaluation Criteria	Document as Evidence	Weighting %
	Service provider to provide their response times	Bidder to submit Service level Agreement (SLA) that specifies turnaround times for critical breakdowns.	7.5%

1.2.3. Company Response times

Bidder must provide response times for **Non Critical breakdowns** or callouts

	Evaluation Criteria	Document as Evidence	Weighting %
	Service provider to provide their response times	Bidder to submit Service level Agreement (SLA) that specifies turnaround times for Non -critical breakdowns.	7.5%

1.2.4. Team Lead Experience

The Technician that will be assigned to CEF must have a minimum of ten (10) years' experience in installation and maintenance of Airconditioning systems used in industrial plants. Experience with Ex-rated equipment is preferable.

Provide a C.V. for the Technician that will be part of the team, clearly indicating roles, responsibilities and references.

	Evaluation Criteria	Document as Evidence	Score	Weighting %
Team Leader	10 and more years of experience	CV of the Technician clearly listing the name of clients and work done	5	20%
	8 years but less than 10 of experience		4	
	6 years but less than 8 of experience		3	
	Less than 6 years of experience		0	

1.2.5. Team Experience

The semi-skilled artisan and assistant that will be assigned must have an average minimum experience of 5 years' experience in installation and maintenance of Airconditioning systems used in industrial plants.

Provide a C.V's. for the semi-skilled artisan and assistant that will be part of the team, clearly indicating roles, responsibilities and references.

	Evaluation Criteria	Document as Evidence	Score	Weighting %
Team Experience	5 and more years of experience	CV's of the semi-skilled artisan and assistant clearly listing the name	5	20%
	4 years of experience		4	
	3 years of experience		3	
	Less than 3 years of experience		0	

		of clients and work done	
--	--	--------------------------	--

1.2.5. The Services Provider to have Quality Management System (QMS) in place

The bidder to submit a copy of its Quality Management System (QMS) which includes, specimen check sheets, reports and Quality Control Plans showing holding points, for Airconditioning installation and maintenance services in heavy industry?

	Evaluation Criteria	Document as Evidence	Score	Weighting %
Quality Management System (QMS)	Bidder submitted a copy of its Quality Management System (QMS) which includes, specimen check sheets, reports and Quality Control Plans showing holding points, for Airconditioning installation and maintenance services	Specimen check sheets, reports and Quality Control Plans	5	20%
	Bidder did not submit a copy of its Quality Management System (QMS) which includes, specimen check sheets, reports and Quality Control Plans showing holding points, for Airconditioning installation and maintenance services		0	

Final Pricing Schedule

YEAR 1

Item No	Description	Unit Rate	Quantity	Total Amount
1	Site establishment			
2	Monthly service and maintenance		12	
3	Annual Service and maintenance		1	
3	Supply And Install New Equipment		As per above table	
4	Major Service		2	
5	Supply Spares		As per above table	
6	Call out Fee		60	
7	Others (Specify Clearly)			
Total Cost Excl. Vat				R
Vat@15%				R
Grand Total Cost (Vat Incl)				R

YEAR 2

Item No	Description	Unit Rate	Quantity	Total Amount
1	Monthly service and maintenance		12	
2	Annual Service and maintenance		1	
3	Major Service		2	
4	Call out Fee		60	
5	Others (Specify Clearly)			
Total Cost Excl. Vat				R
Vat@15%				R
Grand Total Cost (Vat Incl)				R

Year 3

Item No	Description	Unit Rate	Quantity	Total Amount
1	Site de-establishment			
2	Monthly service and maintenance		12	
3	Annual Service and maintenance		1	
4	Major Service		2	
5	Call out Fee		60	
6	Others (Specify Clearly)			
Total Cost Excl. Vat				R
Vat@15%				R
Grand Total Cost (Vat Incl)				R

Total Cost (YEAR 1 + YEAR 2 YEAR 3)

Item no	Description	Total Year 1	Total Year 2	Total Year 3
1	The Appointment Of Service Provider To Provide Airconditioning Installation And Maintenance Services At The SANPC Refinery For 36 Months			
Grand Total Cost (Vat Incl) (YEAR 1 + YEAR 2 YEAR 3)		R		