

Annexure A

SERVICE REQUIREMENTS

SCOPE OF WORK

1. INTRODUCTION

- 1.1 Effective Mechanical maintenance is essential for the safety, reliability, and efficiency of any facility's operations. To ensure that the mechanical systems of SANPC Refinery's assets are properly maintained and potential issues are promptly addressed, it is important to establish this contract.
- 1.2 The purpose of this contract is to appoint a suitably qualified Mechanical contractor for the provision of Mechanical services at SANPC Refinery located at 1 Refinery Road, Prospecton, Durban.
- 1.3 The work includes, but is not limited to the provision of supervision, labour, PPE, consumables, material, equipment, and traveling necessary to carry out Mechanical Maintenance work at SANPC Refinery's static equipment including vessels, columns, heat exchangers, piping, storage tanks and structures.
- 1.4 The contractor is required to have a standby crew available for emergencies. The response time for emergencies should be immediate with resources on site within 2 hours.
- 1.5 The scope of works covers maintenance and project related activities specific to mechanical, hotwork, rigging and supply of materials and equipment required to execute work at the SANPC Refinery site.
- 1.6 Work performed will be measured and remuneration shall be based on the Schedule of prices.
- 1.7 The contractor normal hours of work will be from 07h00 to 15h30, Monday to Friday. Public holidays and weekends are non-working days.
- 1.8 The contractor shall not, without the prior written consent of SANPC Refinery, make any alteration or addition to this Scope of Work.

2. SCOPE OF WORK – PARTICULAR

- 2.1 The contractor is required to perform various tasks for SANPC Refinery, the scope of which shall be determined by the Area Engineer or a duly authorised person in accordance with the provisions set out below.
- 2.2 The works shall comprise of but not be limited to mechanical, hotwork and rigging detailed below:

2.2.1 Mechanical Functions –

- a. Installation and Removal of Flanges and blinds.
- b. Installation and Removal of Flanged and Screwed Water-wash fittings for process washouts.
- c. Opening, Repairing and Boxing up of Vessels, Columns, tanks and piping for Inspection.
- d. Opening all types of Heat exchangers and removal of Tube bundles for Cleaning and Inspection.
- e. Removal and Installation of Valves of all sizes.
- f. Removal, flushing and installation of filters and strainers.
- g. Cold cutting of redundant Piping Lines including bolting.
- h. Hydrotesting of Various equipment and Piping as per Inspection requirements.
- i. Installation of mobile pumps and flexible hoses for product transfers.
- j. Connecting of hoses for maintenance or operations activities.
- k. Flange management of assemblies.
- l. Dismantling, repairs and assembly of structures.

2.2.2 Hot work Functions –

- a. QCP development, AIA Approval of workpacks with associated certifications and documents in line with ISO3834 standards.
- b. Fabrication and inspection of piping as per SANPC Refinery requirements.
- c. Repairs of structures and refinery pressurised plant equipment.
- d. Fabrication and Installation of damaged Grating replacements.
- e. Fabrication and Installation of Piping supports (i.e. Shoes, dummy supports, Trunnions)
- f. Repairs of Inline piping and equipment as required and scoped by SANPC Refinery Scoper.
- g. Inspection during, before and after all Welding activities as prescribed by the approved QCP.
- h. Scoping and planning of required hot-work activities.
- i. Tracking of all welding and welder stats kept and readily available via the Welding System Application.
- j. All Hot-work activities Approved, Fabricated and Installed under the surveillance of qualified and experienced quality control personnel.

2.2.3. Rigging Functions –

- a. Rigging of all plant equipment including internals.
- b. Rigging of piping systems including valves.
- c. Rigging of all types of Exchangers and bundles Tube Bundles.
- d. Rigging of Pumps and Motors.
- e. Rigging of scaffold material for scaffold contractor to elevated areas.
- f. Rigging of structures and platforms.

- 2.3 The works as generally described may be carried out in all operating and non-operating areas, and at all levels within the unit structures within the SANPC refinery precinct. Included in the scope of work are seven transfer lines that run underground from the refinery to the Island View Terminal which is 12km away from the refinery- Mechanical repairs (including welding activities) may need to be carried out on these lines if defects are noted.
- 2.4 The Contractor must have valid certifications for ISO 9001, ISO 14001, ISO 45001 and ISO 3834
- 2.5 **The contractor is required to have fabrication premises within 50km of SANPC Refinery to enable offsite fabrications and testing.**
- 2.6 All work completed must be accepted/ signed off by the relevant SANPC Refinery Engineer or designated representative.

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 work order shall follow the sequence of events as per Central the Planning Workflow and as outlined in 3.1.1 to 3.1.10 below:

3.1.1

- a) SANPC Refinery normally uses individual work order 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	INITIAL COMPLETION 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 Scoper or the discipline Artisan.

A work order 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 work order 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 work order 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 contractors 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-ahead 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 also 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 requires 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
 - e) Any other requirements as dictated by SANPC Refinery Standby Callouts, After Hours
- 3.3 The contractor must be able to cater for emergency maintenance requirements outside of the "normal working week" hours. The Tender submission must identify the extent of the contractor's ability to provide the required coverage. There must be a standby system available which will have the following skills as a minimum:
- 3.3.1 Mechanical- 1 Supervisor, 1 Mechanical Foreman (Clearance Receiver), 2 Mechanical Fitters, 1 OC Inspector, 1 QC Clerk and 1 Assistant
Hotwork- 1 Welding Foreman, 1 Welder, 1 Pipe Fitter
Rigging- 1 Rigging Foreman, 1 Rigger, 1 Rigging Assistant
- 3.3.2 For call out of other contractor resources the contractor is to have a senior staff member available by (cellular) phone, which can mobilise emergency crews as required.

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** In accordance with the OHS Act the contractor will appoint a 16.2 to manage health and safety matters within SANPC Refinery.
- 4.3** The contractor shall be required to ensure that all employees working on site are made aware of their responsibilities with regards to safety, health and environment during induction awareness training.
- 4.4** Good housekeeping practices to ensure that the work area is kept clean, neat and tidy at all times.
- 4.5** Ensure that staff are aware of the site emergency evacuation procedures and first-aid and medical facilities
- 4.6** Daily Tool Box Talks to be conducted by the contractor supervision and signed attendance registers to be kept on file.
- 4.7** Last minute risk assessments to be conducted before commencement of every activity and registers to be kept on file.
- 4.8** The contractor will also comply with the SANPC Refinery rules and regulations.
- 4.9** 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 incident management system
- 4.10** 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:
 - 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, and 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 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. All staff are to undergo training through a SETA approved Training facility.
- 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.
- 5.3.3 A contractor standby list must be issued weekly to the CCM (or as periodically stipulated otherwise in writing by the CCM), indicating the standby personnel, their disciplines and their full contact details. In the event of an "E" priority, only the CCM will mobilise the relevant disciplines to attend to the "E" priority work, through the contractor Site Manager or his duly authorised designate.

5.4 Staff Issues

- 5.4.1 As a control system the contractor is to supply a full organogram with functions and names of all resources to SANPC Refinery. In the listing, a distinction will be made between core resources (always based at SANPC Refinery) and additional labour pool. The contractor will also submit to SANPC Refinery detailed skill testing procedures, indicating his benchmarking criteria for evaluating all levels of manpower and supervision in his organisation. SANPC Refinery reserves the right to evaluate all candidates and will be given full personal details (CV, skill test results) on request. SANPC Refinery reserves the right to assess 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 Permit	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

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

Equipment Description	By CONTRACTOR	By Others	By SANPC Refinery
Transportation	S		
Site huts, ablution facilities, storage when required	M		S
Lighting – General			S/M
Required protective clothing and equipment include. B.A. Compresso	S/M		
Cranage		S/M	
Lifting gear, ropes, slings and shackles			S/M
Safety Equipment	S/M		
Fire fighting facilities			S/M
Resuscitator			S/M
Standby B.A. set			S/M

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 Work Order			E/A
Prepare and issue detailed scope of work	P		E
Price	E		A
Rates for non-billed items	E		A
Plan sequence of work	E		A
Carry out the work	E		
Progress reporting	E		A
Prepare V.O	P		E/A
QA	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. DRAWINGS

- 7.1 Drawings/ sketches may be issued by SANPC Refinery as required to clarify written instructions given.