SCOPE OF WORK FOR THE SUPPLY AND INSTALLATION OF HIGH-SECURITY PERIMETER FENCING AT PETROSA FUEL DEPOT, BLOEMFONTEIN

Contents

1 General

1.1 Introduction

The Petroleum Oil and Gas Corporation of South Africa (PetroSA) requires the service of an accredited and PSIRA registered security fencing service provider to remove and dispose old fence and supply and install a high-security perimeter fence, topped with smart coil and including vehicle, pedestrian and train railway gates at the PetroSA Fuel Depot, 2 Mill Street, Bloemfontein. The fence shall be installed around the Fuel Depot. The estimated fence length is approximately seven hundred and ten meters (710m) which includes the gates.

1.2 Abbreviations and Terms

The following terms used in this scope:

Contractor	The party responsible for designing, supplying, and installing high-security electric fencing and performing related activities.
Company	Petroleum Oil and Gas Corporation of South Africa (PetroSA) and any of its subsidiaries or representative agents
Day	Calendar day
hrs	Hours
mm	Millimetre
mm	Millimetres
MPa	megapascal
Optional Scope	The optional will be exercised at COMPANY's sole discretion by the indicated expiry date
Plant	All equipment, machinery, tools, work spreads and other equipment provided by the Contractor and required in the execution of the Work.
QA/QC	Quality Assurance/ Quality Control
Site	Any facility, Plant, or work area where the Work or part of the Work is performed, whether owned, leased or hired by the Contractor or his Sub-contractors.
Specifications	Those specifications contained in the Contract.
Subcontractor	Any party entering into a contractual agreement with the Contractor for performance of any part of the Work
UV	Ultraviolet
V	Volts
Work	The work that the Contractor is required to carry out in accordance with the provisions of the Contract, including the provisions of all

	materials, services and equipment to be rendered in accordance with the Contract

2 SCOPE OF WORK

2.1 General Requirements

This specification covers

- Removal and disposal of the old fence,
- the supply, delivery, and installation of a **high-quality industrial security fence system** with integrated **smart coil intrusion detection**,
- Supply and installation of the following gates as specified and outlined in Annexture 2 & 3 respectively [1]:

Gate Name & Requirement summary	**Panel length (meters)**	**Total Gate Length (meters)**
Main entrance gate - 1 x automated sliding gate	6.61	6.61
Pedestrian gate near/at the main entrance – Manual gate	1.2	1.2
Parking area - 1 x automated sliding gate	3.01	6.02
Rail Gate: railway siding entrance - 1 x double-leaf/swing vehicular gate	3.88	7.76
Emergency entrance - 1x manual sliding gate.	3.14	6.28

- All gates shall be of the same height as the fence and shall have anti-climb topping.

[1] See annexture 3 for typical gate requirement

- The system must comply with **SABS standards (SANS 10222 series)** or equivalent approved international standards.
- Must comply with the minimum physical security standard for high security facilities

The Contractor shall be required to remove and dispose the old fence and supply and install the high-security fencing in accordance with this Scope of Work. The estimated fence **length is approximately 710** meters. The Scope of Work shall include the design, procurement and installation together with the removal and disposal of the old fence. It shall also include the provision of all labour, supervision, QA/QC, equipment, consumables, materials, procurement, services, transport, ablution facilities and other resources necessary for, or incidental to, the complete performance of the work.

All work shall be carried out in accordance with applicable by-laws, national laws and all statutory requirements for the supply and installation of high-security fences.

Where key personnel of the Contractor are specified in the contract, they shall not be replaced without prior written approval from the Company. Any replacement personnel shall work with the person to be replaced for a reasonable handover period, which shall be to the Contractor's sole account.

2.2 Design

The Contractor shall be responsible for all engineering and design work necessary to complete the work. The engineering shall include but not be limited to the fabrication of electrical, structural & civil works for permanent and temporary work required to complete the work.

The Design life of the fence shall be at least 10 -20 years. The contractor shall develop operating and maintenance procedures for Company use.

All designs shall comply with all the relevant National laws, applicable standards and the Local Municipality bylaws regarding electric fencing. The contractor shall obtain all necessary approval necessary to install the fence.

2.3 Procurement

The Contractor shall be responsible for procurement, manufacturing and or fabrication of the fence, consumables, fittings, post, equipment, plant, and tools required to complete the work.

The contractor **shall attend a compulsory site meeting** to satisfy itself with the site and determine all required services and quantities to complete the work. The site will be made available to tenders during the tender period to allow contractors to collect data necessary to prepare a tender proposal.

2.4 Specification

2.4.1 High-Security Perimeter Fencing

The security fencing shall be 3,000 mm high, measured from the outside ground elevation, with a 500 mm straight top on the fence post for an electrified Razor Wire anti-climb topping (Ripper Smart Coil 450mm Galvanised System). The electrical anti-climb topping shall have alarms and a monitoring system.

The fencing system shall consist of:

2.4.1.1 Posts

a) All posts shall be a minimum of 4400mm long galvanised and epoxy-coated steel posts
b) All posts shall be spaced at a maximum of 2 - 3400mm centres
c) Post to be sealed with an Ultraviolet (UV) -resistant polymer cap
d) Posts to include a 'Locking' mechanism on the inside face to secure panel edges
e) Post foundation to be 450mm square x 1000mm deep 20 MPa concrete

2.4.1.2 Fencing Panels (Shutter mesh Panel)

a) The fencing panel shall be an anti-climb, anti-cut, reinforced corrosion-resistant single-welded shutter mesh panel with a 4mm minimum diameter, both vertical and horizontal.
b) Aperture size (centres) shall be 76mm (W) by 12mm (H)
c) Panels to be 2- 3,300m wide max and 3m in height
d) Panels to be placed on 500x500 deep ground beams
e) Panels and fixtures be galvanised and epoxy-coated (Hot-dip galvanised to minimum 450 g/m² zinc coating)

f) The panels shall have a dual zinc-aluminium coating for extended corrosion resistance.
g) **To be included in materials : Galvanized s**training, binding wire, galvanized clamps, tech bolts, dovetail clips, clip applicators
h) Panel to be reinforced with 4x50mm deep v-formation horizontal recessed bands and 2x75mm 70°flanges along sides and 2x30°flanges along top and bolted with vandal-resistant bolts and damping plates to locking posts.
i) Typical details of a fence are given in figure drawing 00-HZ010-**-D014

2.4.1.3 Electrified anti-climbing smart coil razor Toppping (Ripper Smart Coil 450mm Galvanised System)

a) The fence shall have a 500 mm straight top on the fence post for an electrified anti-climb razor topping (Ripper Smart Coil 450mm Galvanised System). An electrified razor smart coil shall be installed on the entire fence and all the gates
b) Anti-climb high-density topping razor smart coil mesh fence shall be fitted on the top of the fence panel
c) **High-density** razor wire mesh shall have corrosion-resistant coating and tensile strength of at least 300MPA
d) It shall have Non-lethal voltage levels, compliant with **SANS 10222-3:2012**
e) The electrical fence (smart coil) must comply with all relevant by-laws, regional provisions, and national regulations governing electrical fencing within the country.
f) The contractor shall provide Certificate of Compliance/Conformity (CoC) for the electrical fence.

2.4.1.3.1 Key Aspects to Include in Proposals:

- Technical Specifications: Comprehensive details of the proposed systems, including features, capabilities, and compliance with industry standards.
- Implementation Timeline: A clear schedule outlining the phases of design, installation, and commissioning, ensuring efficient milestone completion.
- Design Drawings and Documentation: Detailed schematics and support materials that assist in the installation process and provide insights into the system's functionality.
- Training Programs: Tailored training sessions for PetroSA's security personnel to ensure effective operation of the system, management of alarms, and prompt incident response. Training will also be provided to PetroSA's Control Systems Department for in-house maintenance and support.

- 2-year Maintenance plan: The service provider shall guarantee and include a two-year maintenance plan for the electric fence system, in accordance with the manufacturer's recommended guidelines. The plan must integrate both in-house maintenance capabilities and professional service provider support to ensure optimal system performance.

2.4.1.3.2 Applicable Standards

The installed system must comply with the following relevant South African standards:

- SANS 10222-3: Governing the design, installation, and maintenance of electric fencing for security purposes.
- SANS 60335-2-76: Specifying safety requirements for electric fence energizers.
- SANS 10142: Outlining the wiring code for electrical installations.
- Electrical Machinery Regulations: Ensuring safe operation of all electrical machinery.
- National Building Regulations: Adhering to building regulations for safety and structural integrity.

2.4.1.3.3 Legal Compliance and Professional Body Affiliations

- **PSIRA Registration**: The service provider must possess a valid certificate of registration with the Private Security Industry Regulatory Authority (PSIRA)
- **Department of Labour Registration**: The service provider must be an accredited installer registered with the Department of Labour, ensuring compliance with occupational health and safety regulations.

2.4.1.3.4 Key specifications and capabilities of the electrical fencing system

- The electrical fence topping will protrude 500mm above the 3000mm anti-climb high-security fence. The electric fence should meet the specific height requirements to prevent unauthorised access and ensure safety.
- Clearly visible warning signs must be displayed at regular intervals along the fence perimeter, alerting individuals to the presence of an electrified barrier.
- The gap between the wire strands must be spaced 100mm apart to ensure effective deterrence. Low-resistance, high-tensile galvanised steel or stainless steel wire should be used with an operational life of twenty years.
- The electrical fencing system will be divided into distinct zones to facilitate targeted monitoring and control.
- The electric fence system must be capable of detecting and locating attempted intrusions, including cutting, climbing, or lifting the fence fabric,

as well as identifying system faults that trigger an alarm to a monitoring station. Furthermore, the system must activate a flashing light in the affected zone and sound an alarm siren.

- The electric fencing system should incorporate tamper-resistant features to prevent unauthorized access to critical components.
- The system should support remote monitoring capabilities for real-time alerts and status updates.
- The system will be powered by 230V mains supply and must remain operational during mains failure, utilizing a built in battery back-up with a typical standby time of 24hrs from a fully charged battery.
- The energizers must be suitable for outdoor use or housed in weatherproof enclosures that protect against rain, dust and other environmental factors. The location of the energisers shall be kept outside the tank bunded wall section of the perimeter fence.
- The system must have built-in protection against lightning and electrical surges.

2.4.1.4 Alarm Monitoring System

- The zoned electric fence will be integrated into a PC-based monitoring station, which will be installed in the PetroSA security control room allowing for real-time monitoring, remote controlling and programming the system.
- Key features include:
    - **User-Friendly Interface:** Intuitive graphical interface for easy operation and navigation
    - **Alarm Management**: Immediate notifications and logging of alarm events.
    - **Data Logging**: Recording of all activity for analysis and reporting purposes.
    - **Remote Access**: Secure access for authorized personnel from various locations.
    - **Customizable Alerts**: Tailored alert settings for different events allowing for prioritized responses.
    - **Historical Data Analysis**: Tools for identifying patterns in past events and trends in past events to enhance security strategies.
    - **User Management**: Multi-user support with customizable permissions to ensure appropriate access levels for different personnel.

- **Visual Mapping**: Graphical representation of monitored zones.
- **System Diagnostics**: Monitoring of system health and performance.
- **Integration Capabilities**: Ability to integrate with other security systems (e.g., CCTV, access control) for a comprehensive security solution.

2.4.1.5 Detail Design Drawings

The design of the electrical fence system must include detailed plans for the electrification of the fence, as well as the integration and seamless connection of the PC-based monitoring station.

The design must address:

- Power supply and distribution for the electrified fence energisers.
- Cable routing, trenching and management to minimise exposure to environmental hazards.
- Placement of the energizer/s to ensure optimal zoning coverage of the perimeter.
- Seamless connection to the monitoring station.

The following detailed design drawings must be provided for review and be agreed to prior to the installation of the electrical fencing system.

2.4.2 Site Plan:

- A comprehensive layout of the system, including the location of all electrical fencing components (energisers, grounding, sirens, alarm lights, monitoring station, etc.)

2.4.3 Zoned System Layout Diagram:

- A diagram depicting the layout of the different security zones of the electrical fencing system.

2.4.4 Wiring Diagram:

- A schematic representation of the electrical wiring and connections for the zoned fencing system.
- Includes power supply connections, signal pathways between sensors, and connections to the monitoring station.,

2.4.5 Control Panel Configuration Setup (to be provided at the commissioning phase)

- Details on the software configuration and settings of the monitoring station and energiser stations.
- Includes programming settings, user access levels, and zone-specific configurations.

2.5 Training

- System Training: The service provider shall provide training for PetroSA Security and maintenance personnel on the operation and maintenance of the electrical fencing system.
- Training will cover:
  - System functionalities and features.
  - Procedures for monitoring and responding to alarms.
  - Maintenance protocols for the electric fence.
- Training materials shall include:
  - User manuals for the electrical fencing and monitoring station.
  - Troubleshooting guides for common issues.
  - Safety protocols related with the operation of the electric fence, its equipment and the monitoring system.
  - Attendance records for training sessions conducted.

2.6 Site Preparation & Clearance

The Contractor shall prepare the site for installation, including but not limited to the removal and disposal of the existing fence, rubble, vegetation, and any items that may prevent the installation of the fence.

The service provider shall remove all rubble and the existing fence from site and clean and level the ground one meter along both sides of the new fence

2.7 Installation

The Contractor shall install the fence in accordance with applicable by-laws, national laws and all statutory requirements for supply and installation of high security fence. The Contractor shall ensure throughout all phases of the project that hazards and environmental protections have been identified, risks assessed and that appropriate measures to protect personnel, the environment, facilities etc. have been incorporated in the design and during the construction and shall perform Safety reviews as necessary. Contractor personnel shall take a full and active part in the overall safety of operations during all phases of the project.

Where key personnel of the Contractor are specified in the contract then they shall not be replaced without prior written approval of the Company. Any replacement personnel shall work with the person to be replaced for a reasonable handover period which shall be to the Contractor's sole account.

The contractor shall supply all plant, materials, tools, supplies, equipment, machinery, consumables, ablution facilities, supervision, technical and professional to install, inspect and test and all and any other services required to carry out the Work

3 Reporting

Reporting shall be required on a weekly and monthly basis during the execution of the Work.

3.1 Weekly Progress Report

The contractor's weekly reports shall be issued by the close of business on each Friday and shall be submitted to the Company by e-mail.

Contents of the weekly progress report shall consist of, but not be limited to:

Bullet Point summary on progress of all project activities (project management, engineering, supply, procurement, expediting, manufacture, fabrication, inspection, testing);

- Bullet point summary of sub-contractor status if any.
- Safety performance summary.
- Planning/Schedule update.
- One Week Look-ahead.
- Areas of concern and mitigations

3.2 Progress Meetings

The contractor shall attend weekly Progress Meetings with Company by throughout the duration of the Contract. The contractor shall attend regular face-to-face Progress Meetings with the Company throughout the duration of the Contract, the frequency of which shall be at the discretion of, or with the approval of the Company. All meetings shall be minute by Contractor, with minutes submitted to the Company for review/comment within five (5) working days

Progress meetings, will be held at Company's facility.

4 Documentation

The contractor shall supply all documentation necessary to complete the Work.

The contractor shall submit all documents in a timely manner (and in accordance with the Document Register/ Schedule) to ensure Company comments are received and

incorporated prior to implementation of the document.

Documentation Timing

HSE Management Plan	Together with the tender proposal
Master Schedule	One (1) week before site establishment
Safety File	One (1) week before site establishment
Installation drawings	Before completion of site establishment
Fence Installation certification	One (1) week after fence installation
Hand over documents	Three weeks (3) weeks after fence installation

4.1 Handover Documentation List

- The Contractor shall provide three (3) hard copies of the handover documentation and as-built detail design drawings as listed, along with one(1) electronic set. These must be submitted upon completion, prior to final acceptance and handover.
- The Contractor shall submit detailed “As-built“ design drawings of all engineering drawings in Bentley Micro station DGN format or alternatively in AutoCAD format.
- PetroSA will issue drawing templates with PetroSA title blocks and drawing numbers. The Contractor must utilize these templates for all As-built detail design drawings.

The handover documentation and drawings shall comprise of the following:

4.1.1 As-Built Drawings

- Detailed Design Drawings as listed under “Detail Design Drawings”

4.1.2 Manufacturer Documentation

- Product specifications for all key components (sensors, control panels, keypads, energizers, etc.).
- Installation manuals for each component.
- User manuals for the electrical fence system, including operation instructions.
- Maintenance manuals outlining routine checks and servicing procedures.
- Warranty information for all equipment.

4.1.3 Testing and Commissioning Reports

- Certificates of completion for system testing and commissioning.

- Test results for all components, including response times and sensitivity settings.
- Any adjustments made during the commissioning process.
- Signed-off Punch Lists

4.1.4 Maintenance Schedule

- Recommended maintenance schedule outlining when and how to service the system.
- List of critical spares and recommended spares to be kept on site complete with names and contact details of suppliers.

4.1.5 Project Closeout Report

- Summary of the project, including objectives met and challenges faced.
- Final project budget and any variations from the initial budget.

4.1.6 Compliance and Regulatory Documentation

- Certificates of compliance with local codes and standards.
- Any necessary documentation for insurance and liability purposes.

4.1.7 Contact Information

- List of key contacts for ongoing support, including project managers, technicians, and manufacturer representatives.

4.1.8 Final Acceptance Document

A document signed by the client indicating acceptance of the completed work and system performance

5 Quality Requirements

The installer/service provider must be a registered and qualified professional according to South African government's regulations.

The service provider shall issue PetroSA with safety regulations and standards followed for installation, including the certificate of compliance (COC) for the electric fence to assure that the electric fence has been installed and maintained in accordingly.

The contractor shall submit a final Acceptance document for PetroSA's signature to accept the completion of the works.

6 Health and Safety Requirements

The Contractor shall provide PetroSA with a safety file which will demonstrate that they adopt a pro-active approach to all Health, Safety and Environmental matters and that they meet the requirements of all applicable Health, Safety and Environmental legislation and standards. The Contractor's Health, Safety and Environmental file shall include the following:

- Training records/ Necessary Competence
- Letter of Good standing
- Records of Medical Surveillances
- Risk Assessment and method statement/documented procedures
- Legal appointment letters
- Certification/service records/fit-for purpose documents machinery
- PPE control register

The Contractor shall ensure throughout all phases of the project that hazards and environmental protections have been identified, risks assessed and that appropriate measures to protect personnel, the environment, facilities etc. have been incorporated in the design and during the construction and shall perform Safety reviews as necessary. Contractor personnel shall take a full and active part in the overall safety of operations during all phases of the project.

Contractor shall provide and maintain ablution facilities for its personnel for the duration of the Contract.

The contractor shall ensure that the PetroSA fence shall remain secured at the end of each working day.

All contractor employees must complete an induction on PetroSA's Safety, Health, Environmental, and practical safety policies before starting work. They may also need to undergo specific training, such as Working at Heights.

Supervisors must attend "Permit to Work" training to sign PetroSA Work Permits.

The contractor is responsible for ensuring that all staff undergo pre-placement medical examinations, certified by their local Occupational Medical Practitioner, that would have to be submitted to PetroSA’s Medical department for approval before commencing work for PetroSA.

7 Schedule

CONTRACTOR shall perform the WORK in accordance with the KEY DATES herein

Description	Date
Site establishment	Four (4) Weeks after the signing of the contract by both parties.
Completion of all site preparations	Two (2) Weeks after site establishment
Delivery of the fence	At least two (2) WEEKs after completion of site establishment
Completion of the Fence installation, including optional scope if the Company take this options.	Three (3) Weeks after delivery of the fence & completion of
Demobilisation, including rubble removal	One (1) week after Completion of the Fence installation
Handover documentation	Three weeks (3) weeks after fence completion of installation

The Contractor shall provide a Level I schedule as part of the proposal summarising the Work in a number of activities commensurate to the Work being performed. The Contractor shall also provide a Level II Programme post-contract Award within the time specified in Section 4 of this document.

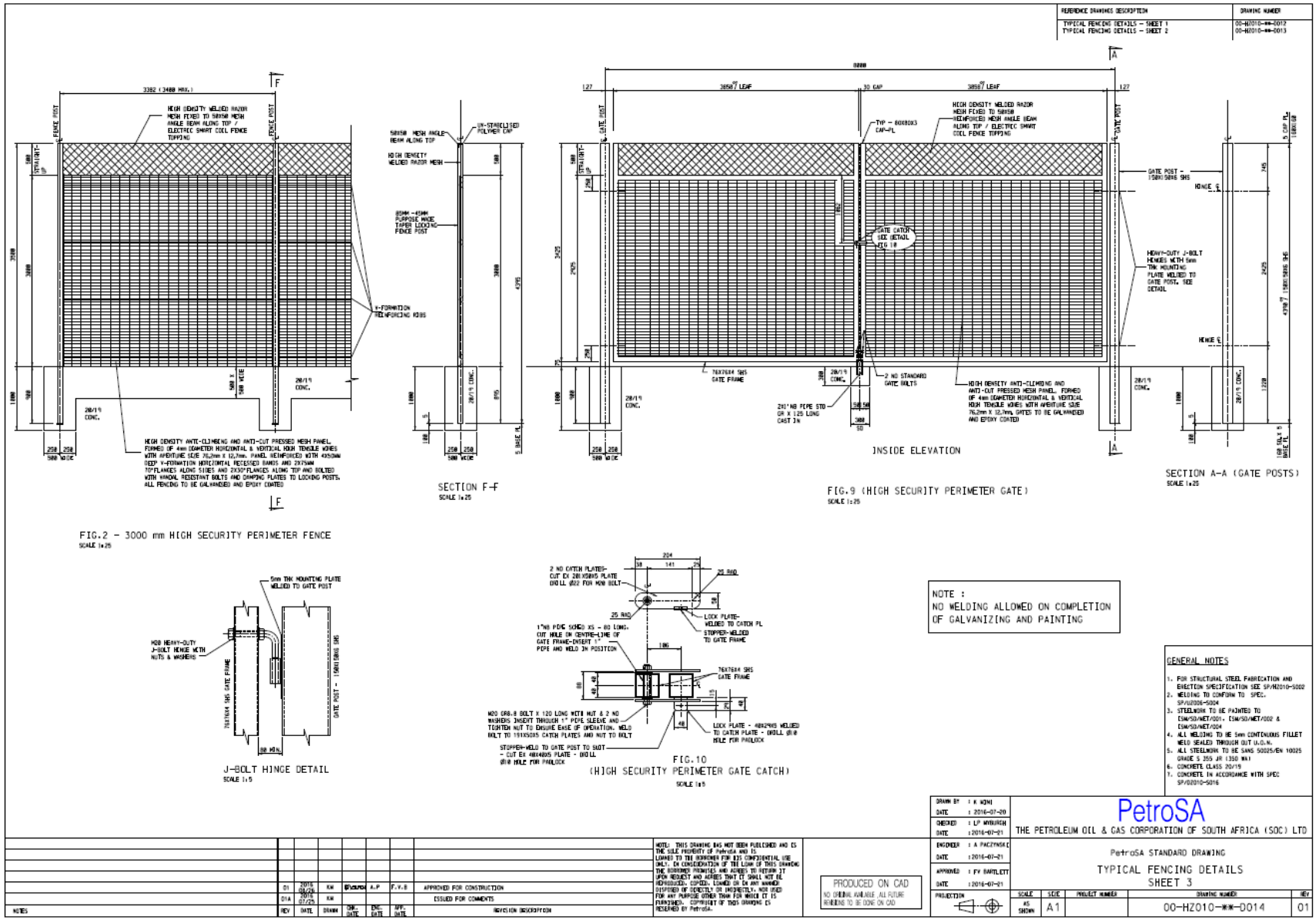
8 Cost, Time & Resource Sheets

The potential Contractors shall provide cost, time and resource sheets (CTRs) necessary for the execution of work..

Annexture 1– Site layout


N
Hamilton Rd
PetroSA BLM Depot
Hamilton Rd
Google Earth

Annexture 2 – Typical details of the Fence & Gate


REFERENCE DRAWINGS DESCRIPTION
TYPICAL FENCING DETAILS – SHEET 1
TYPICAL FENCING DETAILS – SHEET 2
DRAWING NUMBER
00-HZ010-##-0012
00-HZ010-##-0013
HIGH DENSITY WELDED RAZOR MESH FENCE TO 50X50 MESH ANGLE BEAM ALONG TOP / ELECTREC SMART COIL FENCE TOPPING
FENCE POST
3382 (3400 MIN.)
HIGH DENSITY ANTI-CLIMBING AND ANTI-CUT PRESSED MESH PANEL FORMED OF 4mm DIAMETER HORIZONTAL & VERTICAL HIGH TENSILE WIRES WITH APERTURE SIZE 76,2mm X 12,7mm. PANEL REINFORCED WITH 4X50mm DEEP V-FORMATION HORIZONTAL RECESSED BANDS AND 2X75mm TOP FLANGES ALONG SIDES AND 2X30° FLANGES ALONG TOP AND BOTTOM WITH VANDAL RESISTANT BOLTS AND CLAMPING PLATES TO LOCKING POSTS. ALL FENCING TO BE GALVANIZED AND EPOXY COATED
V-FORMATION REINFORCING WIRES
20/19 CONC.
SECTION F-F
SCALE 1:25
INSIDE ELEVATION
SECTION A-A (GATE POSTS)
SCALE 1:25
FIG.9 (HIGH SECURITY PERIMETER GATE)
SCALE 1:25
FIG.2 – 3000 mm HIGH SECURITY PERIMETER FENCE
SCALE 1:25
5mm THK MOUNTING PLATE WELDED TO GATE POST
M20 HEAVY-DUTY J-BOLT HINGE WITH NUTS & WASHERS
J-BOLT HINGE DETAIL
SCALE 1:5
2 NO CATCH PLATES- CUT EX 20X150X5 PLATE DRILL ø22 FOR M20 BOLT
LOCK PLATE- WELDED TO CATCH PL
STOPPER- WELDED TO GATE FRAME
1"NB PIPE SCHED XS – 80 LONG. CUT HOLE ON CENTRE-LINE OF GATE FRAME- INSERT 1" PIPE AND WELD IN POSITION
M20 GR8.8 BOLT X 120 LONG WITH NUT & 2 NO WASHERS INSERT THROUGH 1" PIPE SLEEVE AND TIGHTEN NUT TO ENSURE EASE OF OPERATION. WELD BOLT TO 191X5035 CATCH PLATES AND NUT TO BOLT
STOPPER-WELD TO GATE POST TO SHOT – CUT EX 48X4805 PLATE - DRILL ø18 HOLE FOR PADLOCK
LOCK PLATE – 48X2405 WELDED TO CATCH PLATE – DRILL ø18 HOLE FOR PADLOCK
FIG.10
(HIGH SECURITY PERIMETER GATE CATCH)
SCALE 1:5
NOTE :
NO WELDING ALLOWED ON COMPLETION OF GALVANIZING AND PAINTING
GENERAL NOTES
1. FOR STRUCTURAL STEEL FABRICATION AND ERECTION SPECIFICATION SEE SP/HZ010-5002
2. WELDING TO CONFORM TO SPEC. SP/GZ006-5004
3. STEELWORK TO BE PAINTED TO ESM/SD/MET/001. ESM/SD/MET/002 & ESM/SD/MET/004
4. ALL WELDING TO BE 5mm CONTINUOUS FILLET WELD SEALED THROUGH OUT U.O.N.
5. ALL STEELWORK TO BE SANS 50025/EN 10025 GRADE S 355 JR (350 WA)
6. CONCRETE CLASS 20/19
7. CONCRETE IN ACCORDANCE WITH SPEC SP/GZ010-5016
NOTES
REV | DATE | DRAWN | CHK. DATE | ENG. DATE | APP. DATE | REVISION DESCRIPTION
01 | 2015 08/28 | KM | | A.P | F.V.B | APPROVED FOR CONSTRUCTION
01A | 2016 07/25 | KM | | | | ISSUED FOR COMMENTS
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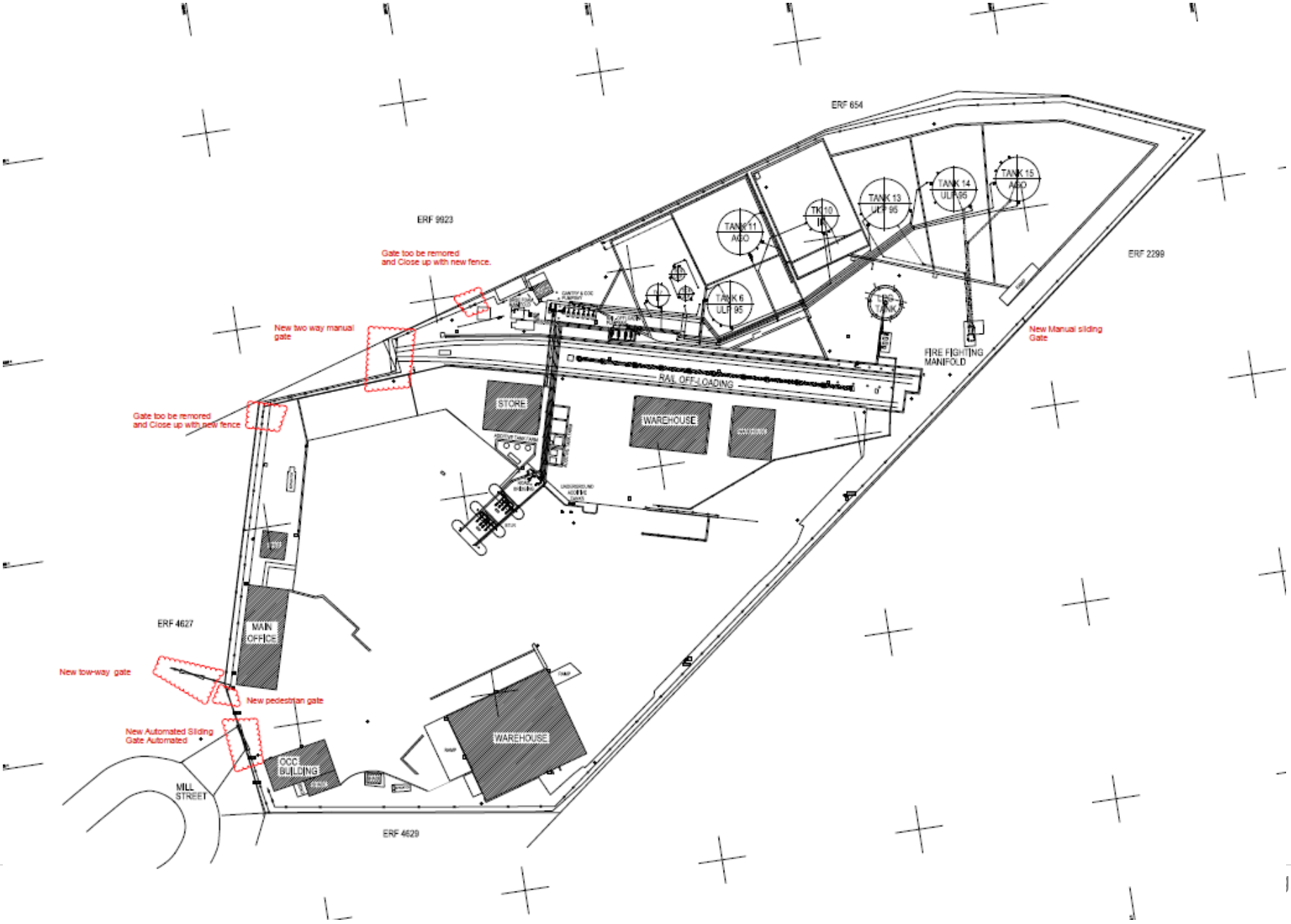
DRAWN BY : K KOMI
DATE : 2016-07-20
CHECKED : LP MYBURGH
DATE : 2016-07-21
ENGINEER : A PACZYNSKI
DATE : 2016-07-21
APPROVED : FV BARTLETT
DATE : 2016-07-21
PROJECTION
PetroSA
THE PETROLEUM OIL & GAS CORPORATION OF SOUTH AFRICA (SOC) LTD
PetroSA STANDARD DRAWING
TYPICAL FENCING DETAILS
SHEET 3
SCALE: AS SHOWN
SIZE: A1
PROJECT NUMBER
DRAWING NUMBER: 00-HZ010-##-0014
REV: 01

Annexture 3– Site layout indicating areas requiring gates


ERF 654
ERF 9923
ERF 2299
Gate too be remored and Close up with new fence.
New two way manual gate
Gate too be remored and Close up with new fence
New Manual sliding Gate
TANK 11 AGO
TK 10
TANK 13 ULP 95
TANK 14 ULP 95
TANK 15 AGO
TANK 6 ULP 95
FIRE FIGHTING MANIFOLD
RAIL OFF-LOADING
STORE
WAREHOUSE
ERF 4627
MAIN OFFICE
New tow-way gate
New pedestrian gate
New Automated Sliding Gate Automated
CCC BUILDING
WAREHOUSE
MILL STREET
ERF 4629