



STANDARD TERMS AND CONDITIONS OF CONTRACT

FOR THE PROVISION OF SERVICES TO TRANSNET

FORM US7 – SERVICES Revised August 2008

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SCHEDULE 1 - SCHEDULE OF REQUIREMENTS and / or WORK ORDER/S

- SCHEDULE 2 ADDRESSES FOR NOTICES
- SCHEDULE 3 NON-DISCLOSURE AGREEMENT

Respondent's Signature

1. INTRODUCTION

When an Agreement is entered into between Transnet and the Supplier of Services to Transnet, these Standard Terms and Conditions of Contract, the General Tender Conditions, a Schedule of Requirements and/or Work Order(s) including such special conditions as applicable, and any terms in the associated tender documents, exclusively govern the provision of Services by the Supplier to Transnet.

2. **DEFINITIONS**

Where the following words or phrases are used in the Agreement, such words or phrases shall have the meaning assigned thereto in this clause, except where the context clearly requires otherwise:

- 2.1. "AFSA" means the Arbitration Foundation of South Africa;
- 2.2. "Agreement" means the Agreement and its associated schedules and/or annexures and/or appendices, including the Schedule of Requirements and/or Work Order(s), specifications for the Services and such special conditions as shall apply to the Agreement, together with the General Tender Conditions and any additional provisions in the associated bid documents tendered by the Supplier (as agreed between the Parties), which collectively and exclusively govern the provision of Services by the Supplier to Transnet;
- 2.3. "Background Intellectual Property" means all Intellectual Property introduced and required by either Party to give effect to their obligations under this Agreement owned in whole or in part by or licensed to either Party or their affiliates prior to the Commencement Date or developed after the Commencement Date otherwise pursuant to the Agreement;
- 2.4. "Business Day(s)" means Mondays to Fridays between 07:30 and 16:00, excluding public holidays;
- 2.5. **Commencement Date**" means the effective date at which time the Supplier's provision of Services to Transnet in terms of the Agreement shall commence, as detailed in Schedule 1 hereto (SCHEDULE OF REQUIREMENTS / WORK ORDER);
- 2.6. "Confidential Information" means any information or other data, whether in written, oral, graphic or in any other form such as in documents, papers, memoranda, correspondence, notebooks, reports, drawings, diagrams, discs, articles, samples, test results, prototypes, designs, plans, formulae, patents, or inventor's certificates, which a Party discloses or provides to the other Party (intentionally or unintentionally, or as a result of one Party permitting the representative of the other Party to visit any of its premises), or which otherwise becomes

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known to a Party, and which is not in the public domain and includes, without limiting the generality of the term –

- 2.6.1. information relating to methods of operation, data and plans of the disclosing Party;
- 2.6.2. the contents of the Agreement;
- 2.6.3. private and personal details of employees or clients of the disclosing Party or any other person where an onus rests on the disclosing Party to maintain the confidentiality of such information;
- 2.6.4. any information disclosed by either Party and which is clearly marked as being confidential or secret;
- 2.6.5. information relating to the strategic objectives and planning of the disclosing Party relating to its existing and planned future business activities;
- 2.6.6. information relating to the past, present and future research and development of the disclosing Party;
- 2.6.7. information relating to the business activities, business relationships, products, services, customers, clients and subcontractors of the disclosing Party where an onus rests on the disclosing Party to maintain the confidentiality of such information;
- 2.6.8. information contained in the software and associated material and documentation belonging to the disclosing Party;
- 2.6.9. technical and scientific information, Know-How and trade secrets of a disclosing Party including inventions, applications and processes;

2.6.10. Copyright works;

commercial, financial and marketing information;

data concerning architecture, demonstrations, tools and techniques, processes, machinery and equipment of the disclosing Party;

- 2.6.13. plans, designs, concepts, drawings, functional and technical requirements and specifications of the disclosing Party;
- 2.6.14. information concerning faults or defects in goods, equipment, hardware or software or the incidence of such faults or defects; and
- 2.6.15. information concerning the charges, Fees and / or costs of the disclosing Party or its authorised subcontractors, or their methods, practices or service performance levels actually achieved;

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2.6.

- 2.7. "Copyright" means the right in expressions, procedures, methods of operations or mathematical concepts, computer program codes, compilations of data or other material, literary works, musical works, artistic works, sound recordings, broadcasts, program carrying signals, published editions, photographic works, or cinematographic works of the copyright owner to do or to authorise the doing of certain acts specified in respect of the different categories of works;
- 2.8. **"Default"** means any breach of the obligations of either Party (including but not limited to fundamental breach or breach of a fundamental term) or any Default, act, omission, negligence or statement of either Party, its employees, agents or subcontractors in connection with or in relation to the subject of the Agreement and in respect of which such Party is liable to the;
- 2.9. "Deliverable(s)" means any and all works of authorship, products and materials developed, written, prepared, assembled, integrated, modified or provided by the Supplier in relation to the Services;
- 2.10. "**Designs**" means registered designs and/or design applications and will include the monopoly right granted for the protection of an independently created industrial design including designs dictated essentially by technical or functional considerations as well as topographies of integrated circuits and integrated circuits;
- 2.11. **"Fee(s)"** shall mean the agreed Fees for the Services to be purchased from the Supplier by Transnet, as detailed in the Schedule of Requirements or Work Order(s), issued in accordance with the Agreement, as amended by mutual agreement between the Parties and in accordance with the provisions of the Agreement from time to time;
- 2.12. **"Foreground Intellectual Property**" means all Intellectual Property developed by either Party pursuant to the Agreement;
- 2.13. "Intellectual Property" means Patents, Designs, Know-How, Copyright and Trade Marks and all rights having equivalent or similar effect which may exist anywhere in the world and includes all future additions and improvements to the Intellectual Property;
 - * * Now-How" means all Confidential Information of whatever nature relating to the Intellectual Property and its exploitation as well as all other Confidential Information generally relating to Transnet's field of technology, including technical information, processing or manufacturing techniques, Designs, specifications, formulae, systems, processes, information concerning materials and marketing and business information in general;
- 2.15. "Materials" means the Deliverables, the Supplier Materials and the Third Party Materials;
- 2.16. **"Parties"** means the Parties to the Agreement together with their subsidiaries, divisions, business units, successors-in-title and their assigns;

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- 2.17. "Party" means either one of these Parties;
- 2.18. "**Patents**" means registered patents and patent applications, once the latter have proceeded to grant, and includes a right granted for any inventions, products or processes in all fields of technology;
- 2.19. "Permitted Purpose" means any activity or process to be undertaken or supervised by Personnel or employees of one Party during the term of the Agreement, for which purpose authorised disclosure of the other Party's Confidential Information or Intellectual Property is a prerequisite in order to enable such activity or process to be accomplished;
- 2.20. **"Personnel"** means any partner, employee, agent, consultant, independent associate or supplier, subcontractor and the staff of such subcontractor, or other authorised representative of either Party;
- 2.21. "**Purchase Order(s)**" means official orders issued by an operating division of Transnet to the Supplier for the provision of Services;
- 2.22. "Schedule of Requirements" means Schedule 1 hereto, unless substituted by a Work Order or Work Orders, as defined;
- 2.23. "Service(s)" means Service(s) provided to Transnet by the Supplier, pursuant to the Schedule of Requirements or Work Order(s) in terms of the Agreement;
- 2.24. **"Service Level Agreement"** or **"SLA"** means the processes, deliverables, key performance indicators and performance standards relating to the Services to be provided by the Supplier;
- 2.25. **"Subcontract"** means any contract or agreement or proposed contract or agreement between the Supplier and any third party whereby that third party agrees to provide to the Supplier the Services or any part thereof;
- 2.26. **"Supplier Materials**" means all works of authorship, products and materials (including, but not limited to, data, diagrams, charts, reports, specifications, studies, inventions, software, software development tools, methodologies, ideas, methods, processes, concepts and techniques) owned by, or licensed to, the Supplier prior to the Commencement Date or independently developed by the Supplier outside the scope of the Agreement at no expense to Transnet, and used by the Supplier in the performance of the Services;
- 2.27. "Third Party Material" means software, software development tools, methodologies, ideas, methods, processes, concepts and techniques owned by, or licensed to a third party and used by the Supplier in the performance of the Services;

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- 2.28. **"Trade Marks"** means registered trade marks and trade mark applications and includes any sign or logo, or combination of signs and/or logos capable of distinguishing the goods or services of one undertaking from those of another undertaking;
- 2.29. "VAT" means Value-Added Tax in terms of the Value-Added Tax Act, No 89 of 1991: and
- 2.30. "Work Order(s)" means a detailed scope of work for a Service required by Transnet, including timeframes, deliverable, Fees and costs for the supply of the Service to Transnet, which may be appended to the Agreement from time to time.

3. INTERPRETATION

- 3.1. Clause headings in the Agreement are included for ease of reference only and do not form part of the Agreement for the purposes of interpretation or for any other purpose. No provision shall be construed against or interpreted to the disadvantage of any Party hereto by reason of such Party having or being deemed to have structured or drafted such provision.
- 3.2. Any term, word, acronym or phrase used in the Agreement, other than those defined under the clause heading "DEFINITIONS," shall be given its plain English meaning, and those terms, words, acronyms, and phrases used in the Agreement will be interpreted in accordance with the generally accepted meanings accorded thereto.
- 3.3. A reference to the singular incorporates a reference to the plural and vice versa.
- 3.4. A reference to natural persons incorporates a reference to legal persons and vice versa.
- 3.5. A reference to a particular gender incorporates a reference to the other genders.

4. NATURE AND SCOPE

4.1. The Agreement is an agreement under the terms and conditions of which the Supplier will arrange for the provision to Transnet of the Services, which meet the requirements of Transnet, the delivery of which Services is controlled by means of Purchase Orders to be issued by Transnet and executed by the Supplier, in accordance with the Agreement.

Such Purchase Orders shall be agreed between the Parties from time to time, subject to the terms of the Schedule of Requirements and / or relevant Work Order(s).

- 4.3. Each properly executed Purchase Order forms an inseparable part of the Agreement as if it were fully incorporated into the body of the Agreement.
- 4.4. During the period of the Agreement, both Parties can make written suggestions for amendments to the Schedule of Requirements or Work Orders, in accordance with procedures set out in clause 28 (AMENDMENT AND CHANGE CONTROL) below. A Party will advise the other

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Party within 14 (fourteen) Business Days, or such other period as mutually agreed, whether the amendment is acceptable.

- 4.5. Insofar as any term, provision or condition in the Schedule of Requirements and/or Work Order(s) conflicts with a like term, provision or condition in the Agreement and/or a Purchase Order, or where the Agreement is silent on the matter, the term, provision or condition in the Schedule of Requirements and/or Work Order(s) shall prevail.
- 4.6. Time will be of the essence and the Supplier will perform its obligations under the Agreement in accordance with the timeframe(s) (if any) set out in the relevant schedule, save that the Supplier will not be liable under this clause if it is unable to meet such obligation within the time required as a direct result of any act or omission by Transnet and it has used its best endeavours to advise Transnet of such act or omission. In the event of such delay, any time deadlines detailed in the relevant schedule shall be extended by a period equal to the period of that delay.

5. AUTHORITY OF PARTIES

- 5.1. Nothing in the Agreement will constitute or be deemed to constitute a partnership between the Parties, or constitute or be deemed to constitute the Parties as agents or employees of one another for any purpose or in any form whatsoever.
- 5.2. Neither Party shall be entitled to, or have the power or authority to enter into an agreement in the name of the other; or give any warranty, representation or undertaking on the other's behalf; or create any liability against the other or bind the other's credit in any way or for any purpose whatsoever.

6. WARRANTIES

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6.1.2.

6.1. The Supplier warrants to Transnet that -

it has full capacity and authority to enter into and to perform the Agreement and that the Agreement is executed by duly authorised representatives of the Supplier;

- it will discharge its obligations under the Agreement and any annexure or schedule hereto with all due skill, care and diligence;
- 6.1.3. it will be solely responsible for the payment of remuneration of its Personnel. The Supplier will be solely responsible for the payment of remuneration and associated benefits, if any, and for withholding and remitting income tax for its Personnel in conformance with any applicable laws and regulations;
- 6.1.4. it will procure licences for Transnet in respect of all Third Party Material detailed in the Work Order(s), and will procure the right for Transnet to take such copies (in

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whole or in part) of such Third Party Materials as it may reasonably require for the purposes of back-up for archiving and disaster recovery; and

- 6.1.5. the use or possession by Transnet of any Materials will not subject Transnet to any claim for infringement of any Intellectual Property Rights of any third party.
- 6.2. The Supplier warrants that it will perform its obligations under the Agreement in accordance with the Service Levels as defined in the relevant schedule. Transnet may at its discretion audit compliance with the Service Levels, provided that any such audit is carried out with reasonable prior notice and in a reasonable way so as not to have an adverse effect on the performance of the Services. Without prejudice to sub-clause 6.3 below, in the event that the Supplier fails to meet the Service Levels, Transnet may claim appropriate service credits or invoke a retention of Fees as detailed in the relevant schedule and/or Work Order.
- 6.3. The Supplier warrants that for a period of 90 (ninety) days from Acceptance of the Deliverables they will, if properly used, conform in all materials respects with the requirements set out in the relevant schedule. The Supplier will at its expense remedy any such non-conformance as soon as possible but in any event within 30 (thirty) days of notification by Transnet. In the event that the Supplier fails or is unable to remedy such non-conformance within such time-scale, Transnet will be entitled to employ a third party to do so in place of the Supplier and any excess charges or costs incurred by Transnet as a result shall be paid by the Supplier.
- 6.4. The Supplier will remedy any defect within 14 (fourteen) days of being notified of that defect by Transnet in writing.
- 6.5. The Supplier will not be liable to remedy any problem arising from or caused by any modification made by Transnet to the Deliverables, or any part thereof, without the prior approval of the Supplier.
- 6.6. The Supplier shall advise Transnet of the effects of any steps proposed by Transnet pursuant to sub-clause 6.5 above, including but not limited to any cost implications or any disruption or delay in the performance of the Services. The Parties agree that any changes to the Services, including the charges for the Services or any timetables for delivery of the Services, will be agreed in accordance with the change control procedure, as set out in clause 28 (AMENDMENT AND CHANGE CONTROL).
- 6.7. The Supplier warrants that -
 - 6.7.1. it has, using the most up-to-date software available, tested for (and deleted) all commonly known viruses in the Materials and for all viruses known by the Supplier at the date of the relevant Work Order; and

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6.7.2. at the time of delivery to Transnet, the Materials do not contain any trojan horse, worm, logic bomb, time bomb, back door, trap door, keys or other harmful components.

The Supplier agrees that, in the event that a virus is found, it will at its own expense use its best endeavours to assist Transnet in reducing the effect of the virus and, particularly in the event that a virus causes loss of operational efficiency or loss of data, to assist Transnet to the same extent to mitigate such losses and to restore Transnet to its original operating efficiency.

- 6.8. The Supplier undertakes to comply with South Africa's general privacy protection in terms of the Bill of Rights (Section 14) in connection with the Agreement and shall procure that its Personnel shall observe the provisions of such Act (as applicable) or any amendments and re-enactments thereof and any regulations made pursuant thereto.
- 6.9. The Supplier warrants that it has taken all reasonable precautions to ensure that, in the event of a disaster, the impact of such disaster on the ability of the Supplier to comply with its obligations under the Agreement will be reduced to the greatest extent possible, and that the Supplier shall ensure that it has appropriate, tested and documented recovery arrangements in place.

7. TRANSNET'S OBLIGATIONS

- 7.1. Transnet undertakes to promptly comply with any reasonable request by the Supplier for information, including information concerning Transnet's operations and activities, that relate to the Services as may be necessary for the Supplier to perform the Services, but for no other purpose. However, Transnet's compliance with any request for information is subject to any internal security rules and requirements and subject to the observance by the Supplier of its confidentiality obligations under the Agreement.
- 7.2. The Supplier shall give Transnet reasonable notice of any information it requires in accordance with sub-clause 7.1 above.
- 7.3. Subject to 13 (SUPPLIER'S PERSONNEL), Transnet agrees to provide the Supplier or its Personnel such access to and use of its facilities as is necessary to allow the Supplier to perform its obligations under the Agreement.

8. GENERAL OBLIGATIONS OF THE SUPPLIER

- 8.1. The Supplier shall
 - 8.1.1. respond promptly to all complaints and enquiries from Transnet;
 - 8.1.2. inform Transnet immediately of any dispute or complaint arising in relation to the provision of the Services.

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- 8.1.3. conduct its business in a professional manner that will reflect positively upon the Supplier and the Supplier's Services;
- 8.1.4. keep full records clearly indicating all transactions concluded by the Supplier relating to the performance of the Services and keep such records for at least 5 (five) years from the date of each such transaction;
- 8.1.5. obtain, and at all times maintain in full force and effect, any and all licenses, permits and the like required under applicable laws for the provision of the Services and the conduct of the business and activities of the Supplier; and
- 8.1.6. comply with all applicable environmental legislation and regulations, and demonstrate sound environmental policies, management and performance.
- 8.2. The Supplier acknowledges and agrees that it shall at all times -
 - 8.2.1. render the Services and perform all its duties with honesty and integrity;
 - 8.2.2. communicate openly and honestly with Transnet and demonstrate a commitment to performing the Services timeously, efficiently and to the required standards;
 - 8.2.3. endeavour to provide the highest possible standards of service and professionalism, with a reasonable degree of care and diligence;
 - 8.2.4. use its best endeavours and make every diligent effort to meet agreed deadlines;
 - 8.2.5. treat its own Personnel, as well as all Transnet's officers, employees, agents and consultants, with fairness and courtesy and respect for their human rights;
 - 8.2.6. practice and promote its own internal policies aimed at prohibiting and preventing unfair discrimination (as further referred to in clause 22 EQUALITY AND DIVERSITY);



Treat all enquiries from Transnet in connection with the Services with courtesy and respond to all enquiries promptly and efficiently. Where the Supplier is unable to comply with the provisions of this clause, the Supplier will advise Transnet of the delay and the reasons therefore and will keep Transnet informed of progress made regarding the enquiry;

8.2.8. when requested by Transnet, provide clear and accurate information regarding the Supplier's own policies and procedures, excluding Know-How and other Confidential Information, except where a Non-Disclosure Agreement has been entered into between the Parties;

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- 8.2.9. not allow a conflict of interest to develop between its own interests (or the interests of any of its other customers) and the interests of Transnet;
- 8.2.10. not accept or offer, nor allow, induce or promote the acceptance or offering of any gratuity, enticement, incentive or gift that could reasonably be regarded as bribery or an attempt to otherwise exert undue influence over the recipient;
- 8.2.11. not mislead Transnet or its officers, employees and stakeholders, whether by act or omission;
- 8.2.12. not otherwise act in an unethical manner or do anything which could reasonably be expected to damage or tarnish Transnet's reputation or business image; and
- 8.2.13. immediately report to Transnet any unethical, fraudulent or otherwise unlawful conduct of which it becomes aware in connection with Transnet or the provision of Services.

9. FEES AND EXPENSES

- 9.1. In consideration of the provision of the Services, Transnet will pay to the Supplier the Fees detailed in the relevant schedule or Work Order
- 9.2. Transnet will not be invoiced for materials used in the provision of the Services save for those materials (if any) set out in the Work Order and accepted by Transnet or in any relevant Work Order (which will be invoiced to Transnet at cost).
- 9.3. Unless otherwise agreed in a schedule or Work Order, Transnet will reimburse to the Supplier all reasonable and proper expenses incurred directly and solely in connection with the provision of the Services, provided that all such expenses -
 - 9.3.1. are agreed by Transnet in advance;

are incurred in accordance with Transnet's standard travel and expenses policies;

are passed on to Transnet at cost with no administration fee; and

- 9.3.4. will only be reimbursed if supported by relevant receipts.
- 9.4. All invoices relating to Fees, out of pocket expenses and, if applicable, travel and accommodation costs, will provide the detail for each of the Personnel carrying out the Services and incurring the expenses, and the invoice will, where appropriate, include VAT as a separate item.

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3.3.

10. INVOICING AND PAYMENT

- 10.1. Transnet shall pay the Supplier the amounts stipulated in the relevant schedule or Work Order, subject to the terms and conditions of the Agreement.
- 10.2. Transnet shall pay such amounts to the Supplier, upon receipt of a correct and undisputed invoice together with the supporting documentation as specified in the Schedule of Requirements or Work Order appended hereto, once the undisputed invoices, or such portion of invoices which are undisputed become due and payable to the Supplier for the provision of the Services, in terms of sub-clause 10.4 below.
- 10.3. All Fees and other sums payable under the Agreement are exclusive of VAT, which will be payable at the applicable rate.
- 10.4. Unless otherwise provided for in the Schedule of Requirements or Work Order(s) appended to the Agreement, invoices shall be submitted together with a month-end statement. Payment against such month-end statement shall be made by Transnet within 30 (thirty) days after date of receipt by Transnet of the statement together with all undisputed invoices and supporting documentation.
- 10.5. Where the payment of any invoice, or any part of an invoice which is not in dispute, is not made in accordance with this clause 10, the Supplier shall be entitled to charge interest on the outstanding amount, at The Standard Bank of South Africa's prime rate of interest in force, for the period from the due date of payment until the outstanding amount is paid.

11. FEE ADJUSTMENTS

- 11.1. Fees for Services rendered in terms of the Agreement shall be subject to review as indicated in the Schedule of Requirements or Work Orders annexed hereto from time to time.
- 11.2. No less than 2 (two) months prior to any proposed Fee adjustment, the Parties shall commence negotiations for Fees for the next period or as otherwise indicated and appended hereto.
- 1.3 Should Transnet and the Supplier fail to reach an agreement on Fees for the successive period, either Party shall be entitled to terminate the Agreement and/or the relevant Work Order after giving 30 (thirty) days written notice to the other.
- 11.4. Neither Party shall have any claim against the other of whatsoever nature by reason of such cancellation as envisaged in sub-clause 11.3 above.

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12. INTELLECTUAL PROPERTY RIGHTS

12.1. Title to Confidential Information

- 12.1.1. Transnet will retain all right, title and interest in and to its Confidential Information and Background Intellectual Property and the Supplier acknowledges that it has no claim of any nature in and to the Confidential Information and Background Intellectual Property that is proprietary to Transnet. For the avoidance of doubt, all the Supplier's Background Intellectual Property shall remain vested in the Supplier.
- 12.1.2. Transnet shall grant to the Supplier an irrevocable royalty free non-exclusive license to use Transnet's Background Intellectual Property only for the Permitted Purpose. This license shall not permit the Supplier to sub-license to other parties.
- 12.1.3. The Supplier shall grant to Transnet an irrevocable, royalty free, non-exclusive licence to use the Supplier's Background Intellectual Property for the Permitted Purpose. This licence shall not permit Transnet to sub-licence to other parties.
- 12.1.4. The Supplier shall grant Transnet access to the Supplier's Background Intellectual Property on terms which shall be bona fide negotiated between the Parties for the purpose of commercially exploiting the Foreground Intellectual Property, to the extent that such access is required.

12.2. Title to Intellectual Property

- 12.2.1. All right, title and interest in and to Foreground Intellectual Property prepared conceived or developed by the Supplier, its researchers, agents and employees shall vest in Transnet and the Supplier acknowledges that it has no claim of any nature in and to the Foreground Intellectual Property. The Supplier shall not at any time during or after the termination or cancellation of the Agreement dispute the validity or enforceability of such Foreground Intellectual Property, or cause to be done any act or thing contesting or in any way impairing or tending to impair any part of that right, title and interest to any of the Foreground Intellectual Property and shall not counsel or assist any person to do so.
- 12.2.2. Transnet shall be entitled to seek protection in respect of the Foreground Intellectual Property anywhere in the world as it shall decide in its own absolute discretion and the Supplier shall reasonably assist Transnet in attaining and maintaining protection of the Foreground Intellectual Property.
- 12.2.3. Where the Foreground Intellectual Property was created by the Supplier or its researchers, agents and employees and where Transnet elects not to exercise its

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option to seek protection or decides to discontinue the financial support of the prosecution or maintenance of any such protection, Transnet shall notify the Supplier who shall have the right of first refusal to file or continue prosecution or maintain any such applications and to maintain any protection issuing on the Foreground Intellectual Property.

- 12.2.4. No consideration shall be paid by Transnet to the Supplier for the assignment of any Foreground Intellectual Property from the Supplier to Transnet, over and above the sums payable in terms of this Agreement. The Supplier undertakes to sign all documents and do all things as may be necessary to effect, record and perfect the assignment of the Foreground Intellectual Property to Transnet.
- 12.2.5. Subject to anything contrary contained in the Agreement and/or the prior written consent of Transnet (which consent shall not be unreasonably be withheld), the Supplier shall under no circumstances be entitled as of right, or to claim the right, to use Transnet's Background Intellectual Property and/or Foreground intellectual Property.

12.3. Title to Improvements

12.3.1. Any improvements, developments, adaptations and/or modifications to the Foreground Intellectual Property, and any and all new inventions or discoveries, based on or resulting from the use of Transnet's Background Intellectual Property and/or Confidential Information shall be exclusively owned by Transnet. The Supplier shall disclose promptly to Transnet all such improvements, developments, adaptations and/or modifications, inventions or discoveries. The Supplier hereby undertakes to sign all documents and do all things as may be necessary to effect, record and perfect the assignment of such improvements, developments, adaptations and/or modifications, inventions or discoveries to Transnet and the Supplier shall reasonably assist Transnet in attaining, maintaining or documenting ownership and/or protection of the improved Foreground Intellectual Property.

4. Unauthorised Use of Confidential Information

12.4.1. The Supplier shall not authorise any party to act on or use in any way any Confidential Information belonging to Transnet whether or not such supplier is aware of such Confidential Information, and shall promptly notify Transnet of the information if it becomes aware of any party so acting, and shall provide Transnet the information with such assistance as Transnet reasonably requires, at Transnet's cost and expense, to prevent such third party from so acting.

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12.5. Unauthorised Use of Intellectual Property

- 12.5.1. The Supplier agrees to notify Transnet in writing of any conflicting uses of, and applications of registrations of Patents, Designs and Trade Marks or any act of infringement, unfair competition or passing off involving the Intellectual Property of Transnet of which the Supplier acquires knowledge and Transnet shall have the right, as its own option, to proceed against any party infringing its Intellectual Property.
- 12.5.2. It shall be within the discretion of Transnet to determine what steps shall be taken against the infringer and the Supplier shall co-operate fully with Transnet, at Transnet's cost, in whatever measure including legal action to bring any infringement of illegal use to an end.
- 12.5.3. The Supplier shall cooperate to provide Transnet promptly with all relevant ascertainable facts.
- 12.5.4. If proceedings are commenced by Transnet alone, Transnet shall be responsible for all expenses but shall be entitled to all damages or other award arising out of such proceedings. If proceedings are commenced by both Parties, both Parties will be responsible for the expenses and both Parties shall be entitled to damages or other award arising out of proceedings.

13. SUPPLIER'S PERSONNEL

- 13.1. The Supplier's Personnel shall be regarded at all times as employees, agents or subcontractors of the Supplier and no relationship of employer and employee shall arise between Transnet and any Supplier Personnel under any circumstances regardless of the degree of supervision that may be exercised over the Personnel by Transnet.
- 13.2. The Supplier warrants that all its Personnel will be entitled to work in South Africa or any other country in which the Services are to be performed.
 - 3. The Supplier will ensure that its Personnel comply with all reasonable requirements made known to the Supplier by Transnet concerning conduct at any Transnet premises or any other premises upon which the Services are to be performed (including but not limited to security regulations, policy standards and codes of practice and health and safety requirements). The Supplier will ensure that such Personnel at all times act in a lawful and proper manner in accordance with these requirements.
- 13.4. Transnet reserves the right to refuse to admit or to remove from any premises occupied by or on behalf of it, any Supplier Personnel whose admission or presence would, in the reasonable opinion of Transnet, be undesirable or who represents a threat to confidentiality or security or

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whose presence would be in breach of any rules and regulations governing Transnet's Personnel, provided that Transnet notifies the Supplier of any such refusal (with reasons why). The reasonable exclusion of any such individual from such premises shall not relieve the Supplier from the performance of its obligations under the Agreement.

13.5. The Supplier agrees to use all reasonable endeavours to ensure the continuity of its Personnel assigned to perform the Services. If any re-assignment by the Supplier of those Personnel is necessary, or if Transnet advises that any such Personnel assigned are in any respect unsatisfactory, including where any such Personnel are, or are expected to be or have been absent for any period, then the Supplier will promptly supply a replacement of equivalent calibre and experience, and any such replacement shall be approved by Transnet prior to commencing provision of the Services, such approval not to be unreasonably withheld.

14. LIMITATION OF LIABILITY

- 14.1. Neither Party excludes or limits liability to the other Party for -
 - 14.1.1. death or personal injury due to negligence; o
 - 14.1.2. fraud.
- 14.2. The Supplier shall indemnify and keep Transnet indemnified from and against liability for damage to any Transnet property (whether tangible or intangible) or any other loss, costs or damage suffered by Transnet to the extent that it results from any act of or omission by the Supplier or its Personnel in connection with the Agreement. The Supplier's liability arising out of this sub-clause 14.2 shall be limited to a maximum amount payable in respect of any one occurrence or a series of related occurrences in a single calendar year, such amount to be agreed in writing by the Parties.
- 14.3. Subject always to sub-clauses 14.1 and 14.2, the liability of either the Supplier or Transnet under or in connection with the Agreement, whether for negligence, misrepresentation, breach of contract or otherwise, for direct loss or damage arising out of each Default or series of related Defaults shall not exceed 100% (one hundred percent) of the Fees paid under the schedule or Work Order to which the Default(s) relates.
- 14.4. Subject to sub-clause 14.1 above, and except as provided in sub-clauses 14.2 and 14.3 above, in no event shall either Party be liable to the other for indirect or consequential loss or damage or including indirect or consequential loss of profits, business, revenue, goodwill or anticipated savings of an indirect nature or loss or damage incurred by the other Party as a result of third party claims.

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- 14.5. If for any reason the exclusion of liability in sub-clause 14.4 above is void or unenforceable, either Party's total liability for all loss or damage under the Agreement shall be as provided in sub-clause 14.3 above.
- 14.6. Nothing in this clause 14 shall be taken as limiting the liability of the Supplier in respect of clause 12 (INTELLECTUAL PROPERTY RIGHTS) or clause 16 (CONFIDENTIALITY).

15. INSURANCES

- 15.1. Without limiting the liability of the Supplier under the Agreement, the Supplier shall take out insurance in respect of all risks for which it is prudent for the Supplier to insure against including any liability it may have as a result of its activities under the Agreement for theft, destruction, death or injury to any person and damage to property. The level of insurance will be kept under review by Transnet, on an annual basis, to ensure its adequacy, provided that any variation to the level of such insurance shall be entirely at the discretion of the Supplier.
- 15.2. The Supplier shall arrange insurance with reputable insurers and will produce to Transnet evidence of the existence of the policies and the receipts for payment of the current premiums, on an annual basis within thirty (30) days after date of policy renewals.
- 15.3. Subject to sub-clause 15.4 below, if the Supplier fails to effect adequate insurance under this clause 15, it shall notify Transnet in writing as soon as it becomes aware of the reduction or inadequate cover and Transnet may arrange or purchase such insurance. The Supplier shall promptly reimburse Transnet for any premiums paid provided such insurance protects the Supplier's liability. Transnet assumes no responsibility for such insurance being adequate to protect all of the Supplier's liability.
- 15.4. In the event that the Supplier receives written notice from its insurers advising of the termination of its insurance cover referred to in sub-clause 15.1 above or if the insurance ceases to be available upon commercially reasonable terms, the Supplier shall immediately notify Transnet in writing of such termination and/or unavailablility whereafter either the Supplier or Transnet may terminate the Agreement on giving the other party not less than 30 (thirty) days prior written notice to that effect

16. CONFIDENTIALITY

- 16.1. The Parties hereby undertake the following, with regard to Confidential Information -
 - 16.1.1. not to divulge or disclose to any person whomsoever in any form or manner whatsoever, either directly or indirectly, any Confidential Information of the other, without the prior written consent of such other Party, other than when called upon to do so in accordance with a statute, or by a court having jurisdiction, or by any other duly authorised and empowered authority or official, in which event the Party

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concerned shall do what is reasonably possible to inform the other of such a demand and each shall assist the other in seeking appropriate relief or the instituting of a defensive action to protect the Confidential Information concerned;

- 16.1.2. not to use, exploit, permit the use of, directly or indirectly, or in any other manner whatsoever apply the Confidential Information, disclosed to it as a result of the Agreement, for any purpose whatsoever other than for the purpose for which it is disclosed or otherwise than in strict compliance with the provisions in the Agreement;
- 16.1.3. not to make any notes, sketches, drawings, photographs or copies of any kind of any part of the disclosed Confidential Information, without the prior written consent of such other Party, except when reasonably necessary for the purpose of this Agreement, in which case such copies shall be regarded as Confidential Information;
- 16.1.4. not to de-compile, disassemble or reverse engineer any composition, compilation, concept application, item, component de-compilation, including software or hardware disclosed and shall not analyse any sample provided by Transnet, or otherwise determine the composition or structure or cause to permit these tasks to be carried out except in the performance of its obligations pursuant to this Agreement;
- 16.1.5. not to exercise less care to safeguard Transnet Confidential Information than the Party exercises in safeguarding its own competitive, sensitive or Confidential Information;
- 16.1.6. Confidential Information disclosed by either Party to the other or by either Party to any other party used by such Party in the performance of the Agreement, shall be dealt with as "restricted" or shall be dealt with according to any other appropriate level of confidentiality relevant to the nature of the information concerned, agreed between the Parties concerned and stipulated in writing for such information in such cases;
 - 16.1.7. the Parties shall not make or permit to be made by any other person subject to their control, any public statements or issue press releases or disclose Confidential Information with regard to any matter related to the Agreement, unless written authorisation to do so has first been obtained from the Party first disclosing such information;

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- 16.1.8. each Party shall be entitled to disclose such aspects of Confidential Information as may be relevant to one or more technically qualified employees or consultants of the Party who are required in the course of their duties to receive the Confidential Information for the Permitted Purpose provided that the employee or consultant concerned has a legitimate interest therein, and then only to the extent necessary for the Permitted Purpose, and is informed by the Party of the confidential nature of the Confidential Information and the obligations of the confidentiality to which such disclosure is subject and the Party shall ensure such employees or consultants honour such obligations;
- 16.1.9. each Party shall notify the other Party of the name of each person or entity to whom any Confidential Information has been disclosed as soon as practicable after such disclosure;
- 16.1.10. each Party shall ensure that any person or entity to which it discloses Confidential Information shall observe and perform all of the covenants the Party has accepted in the Agreement as if such person or entity has signed the Agreement. The Party disclosing the Confidential Information shall be responsible for any breach of the provisions of the Agreement by the person or entity; and
- 16.1.11. each Party may by written notice to the other Party specify which of the Party's employees, officers or agents are required to sign a non-disclosure undertaking.
- 16.2. The duties and obligations with regard to Confidential Information in this clause 16 shall not apply where -
 - a Party can demonstrate that such information is already in the public domain or becomes available to the public through no breach of the Agreement by that Party, or its Personnel; or
 - was rightfully in a Party's possession prior to receipt from the other Party, as proven by the first-mentioned Party's written records, without an infringement of an obligation or duty of confidentiality; or
 - 16.2.3. can be proved to have been rightfully received by a Party from a third party without a breach of a duty or obligation of confidentiality; or
 - 16.2.4. is independently developed by a Party as proven by its written records.
- 16.3. This clause 16 shall survive termination for any reason of the Agreement and shall remain in force and effect from the Commencement Date of the Agreement and 5 (five) years after the termination of the Agreement. Upon termination of the Agreement, all documentation furnished to the Supplier by Transnet pursuant to the Agreement shall be returned to Transnet including,

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16.2.2

without limitation all corporate identity equipment including dies, blocks, labels, advertising matter, printing matter and the like.

17. TOTAL OR PARTIAL FAILURE TO PERFORM THE SCOPE OF SERVICES

Should the Supplier fail or neglect to execute the work or to deliver any portion of the Service, as required by the terms of the Agreement or Work Order, Transnet may cancel the Agreement or Work Order in so far as it relates to the unexecuted work or rejected portion of the Service, and, in such event, the provision of any remaining commitment shall remain subject in all respects to these conditions.

18. TERM AND TERMINATION

- 18.1. The Agreement shall commence on the Commencement Date, as specified in the schedules hereto, and shall continue subject to termination in accordance with the provisions of the Agreement or otherwise in accordance with law or equity.
- 18.2. Transnet may terminate the Agreement without cause by giving the Supplier 30 (thirty) days' notice in writing.
- 18.3. Either Party may terminate the Agreement forthwith by notice in writing to the other Party where the other Party has committed a material Default and, where such Default is capable of remedy, has failed to remedy such Default within 30 (thirty) days of receiving notice specifying the Default and requiring its remedy.
- 18.4. Either Party may terminate the Agreement forthwith by notice in writing to the other Party when the other Party is unable to pay its debts as they fall due or commits any act or omission which would be an act of insolvency in terms of the Insolvency Act, 1936 (as amended), or if any action, application or proceeding is made with regard to it for -
 - 18.41. / a voluntary arrangement or composition or reconstruction of its debts;

the presentation of an administrative petition;

- 18.4.3. its winding-up or dissolution;
- 18.4.4. the appointment of a liquidator, trustee, receiver, administrative receiver or similar officer; or
- 18.4.5. any similar action, application or proceeding in any jurisdiction to which it is subject.
- 18.5. Transnet may terminate the Agreement at any time within 2 (two) months of becoming aware of a change of control of the Supplier by notice in writing to the Supplier. For the purposes of this clause, "control" means the right to direct the affairs of a company whether by ownership of shares, membership of the board of directors, agreement or otherwise.

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18.4.2

18.6. Transnet may cancel any schedule hereto or Work Order at any time on giving the Supplier 30 (thirty) days' notice.

19. CONSEQUENCE OF TERMINATION

- 19.1. Termination in accordance with clause 18 (TERM AND TERMINATION) shall not prejudice or affect any right of action or remedy which shall have accrued or shall thereafter accrue to either Party and all provisions which are to survive the Agreement or impliedly do so shall remain in force and in effect.
- 19.2. On termination of the Agreement or a Work Order, the Supplier will immediately deliver up, and procure that its Personnel will immediately deliver up to Transnet, all Deliverables and property belonging to Transnet (or, in the event of termination of a Work Order, such as is relevant to that Work Order) which may be in the possession of, or under the control of the Supplier, and certify to Transnet in writing that this has been done.
- 19.3. To the extent that any of the Deliverables and property referred to in sub-clause 19.2 above are in electronic form and contained on non-detachable storage devices, the Supplier will provide Transnet with unencrypted copies of the same on magnetic media and will irretrievably destroy and delete copies so held.
- 19.4. In the event that the Agreement is terminated by the Supplier under sub-clause 18.3 (TERM AND TERMINATION), or in the event that a Work Order is terminated by Transnet under sub-clause 18.6 (TERM AND TERMINATION), Transnet will pay to the Supplier all outstanding Fees (apportioned on a daily basis) relating to the work undertaken by the Supplier up until the date of such termination. Transnet will also pay the costs of any goods and materials ordered by the Supplier in relation to the such work for which the Supplier has paid or is legally obliged to pay, in which case, on delivery of such goods or materials, the Supplier will promptly deliver such goods and materials to Transnet or as it may direct.
- 19.5. The provisions of clauses 2 (DEFINITIONS), 6 (WARRANTIES), 12 (INTELLECTUAL PROPERTY RIGHTS), 14 (LIABILITY), 16 (CONFIDENTIALITY), 19 (CONSEQUENCE OF TERMINATION), 25 (DISPUTE RESOLUTION) and 29 (GOVERNING LAW) shall survive termination or expiry of the Agreement.
- 19.6. If either Party (the "Defaulting Party") commits a material breach of the Agreement and fails to remedy such breach within 10 (ten) Business Days of written notice thereof, the other Party (hereinafter the "Aggrieved Party"), shall be entitled, in addition to any other rights and remedies that it may have in terms of the Agreement, to terminate the Agreement forthwith without any liability and without prejudice to any claims which the Aggrieved Party may have for damages against the Defaulting Party. For the avoidance of doubt, if -

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- 19.6.1. the Supplier effects or attempts to effect a compromise or composition with its creditors; or
- 19.6.2. either Party is provisionally or finally liquidated or is placed under judicial management, whether provisionally or finally; or
- 19.6.3. either Party ceases or threatens to cease to carry on its normal line of business or defaults or threatens to default in the payment of its liabilities generally, or commits any act or omission which would be an act of insolvency in terms of the Insolvency Act, 1936 (as amended); then

the other Party shall be entitled, but not obliged, to terminate the Agreement on written notice, in which event such termination shall be without any liability and without prejudice to any claims which either Party may have for damages against the other.

20. ASSIGNMENT

Neither Party may assign the benefit of the Agreement or any interest bereunder except with the prior written consent of the other. Further, in the event that Transnet wishes to assign or novate the Agreement to any third party, the Supplier agrees that it shall not unreasonably withhold or delay its consent to such assignment or novation and that it shall only be entitled to recover from Transnet any reasonable legal costs incurred by it as a direct result of such assignment or novation.

21. FORCE MAJEURE

- 21.1. Neither Party shall have any claim against the other Party arising from any failure or delay in the performance of any obligation of either Party under the Agreement, caused by an act of force majeure such as acts of God, fire, flood, war, strike, lockout, industrial dispute, government action, laws or regulations, riots, terrorism or civil disturbance, defaults, delays or discontinuance on the part of independent contractors, suppliers, or other circumstances or factors beyond the reasonable control of either Party, and to the extent that the performance of obligations of either Party hereunder is delayed by virtue of the aforegoing, any period stipulated for any such performance shall be reasonably extended.
 - 2. Each Party will take all reasonable steps by whatever lawful means that are available, to resume full performance as soon as practicable and will seek agreement to modification of the relevant provisions of the Agreement in order to accommodate the new circumstances caused by the act of force majeure. If a Party fails to agree to such modifications proposed by the other Party within 90 (ninety) days of the act of force majeure first occurring, either Party may thereafter terminate the Agreement with immediate notice.

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22. EQUALITY AND DIVERSITY

- 22.1. The Supplier will not victimise, harass or discriminate against any employee of either Party to the Agreement or any applicant for employment with either Party to the Agreement due to their gender, race, disability, age, religious belief, sexual orientation or part-time status. This provision applies, but is not limited to employment, upgrading, work environment, demotion, transfer, recruitment, recruitment advertising, termination of employment, rates of pay or other forms of compensation and selection for training.
- 22.2. Both Parties to the Agreement undertake that they will not, and shall procure that its employees, agents and subcontractors will not breach any applicable discrimination legislation and any amendments and re-enactments thereof.

23. NON-WAIVER

- 23.1. Failure or neglect by either Party, at any time, to enforce any of the provisions of the Agreement, shall not, in any manner, be construed to be a waiver of any of that Party's rights in that regard and in terms of the Agreement.
- 23.2. Such failure or neglect shall not, in any manner, affect the continued, unaltered validity of the Agreement, or prejudice the right of that Party to institute subsequent action.

24. PARTIAL INVALIDITY

If any provision of the Agreement shall be held to be invalid, illegal or unenforceable, or shall be required to be modified, the validity legality and enforceability of the remaining provisions shall not be affected thereby.

25. DISPUTE RESOLUTION

25.1. Should any dispute of whatsoever nature arise between the Parties concerning the Agreement, the Parties shall try to resolve the dispute by negotiation within 10 (ten) Business Days of such dispute arising.

. If the dispute has not been resolved by such negotiation, either of the Parties may refer the dispute to AFSA and notify the other Party accordingly.

- 25.3. Such dispute shall be finally resolved in accordance with the rules of AFSA by an arbitrator or arbitrators appointed by AFSA.
- 25.4. This clause constitutes an irrevocable consent by the Parties to any proceedings in terms hereof, and neither of the Parties shall be entitled to withdraw from the provisions of this clause or claim at any such proceedings that it is not bound by this clause 25.

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- 25.5. This clause 25 is severable from the rest of the Agreement and shall remain in effect even if the Agreement is terminated for any reason.
- 25.6. This clause 25 shall not preclude either Party from seeking urgent relief in a court of appropriate jurisdiction, where grounds for urgency exist.

26. ADDRESSES FOR NOTICES

- 26.1. The Parties to the Agreement select the physical addresses and facsimile ("fax") numbers, detailed in Schedule 2 hereto, as their respective addresses for giving or sending any notice provided for or required in terms of the Agreement, provided that either Party shall be entitled to substitute such other address or fax number, as may be, by written notice to the other.
- 26.2. Any notice addressed to a Party at its physical or postal address shall be sent by prepaid registered post, or delivered by hand, or sent by fax.
- 26.3. Any notice shall be deemed to have been given -
 - 26.3.1. if posted by prepaid registered post, 10 (ten) days after the date of posting thereof;
 - 26.3.2. if hand delivered, on the day of delivery; or
 - 26.3.3. if faxed, on the date and time of sending of such fax, as evidenced by a fax confirmation printout, provided that such notice shall be confirmed by prepaid registered post on the date of dispatch of such fax, or, should no postal facilities be available on that date, on the next Business Day.

27. WHOLE AND ONLY AGREEMENT

- 27.1. The Parties hereby confirm that the Agreement constitutes the whole and only agreement between them with regard to the subject matter of the Agreement.
- 27.2. The Parties hereby confirm that the Agreement replaces all other agreements which exist or may have existed in any form whatever between them, with regard to the subject matter dealt with in the Agreement, including any annexures, schedules or Work Order(s) appended hereto.

28. AMENDMENT AND CHANGE CONTROL

- 28.1. Any requirement for an amendment or change to the Agreement or to the Schedule of Requirements or to a Work Order shall only be valid if it is in writing, signed by both Parties and added to the Agreement as an addendum hereto.
- 28.2. In the event the Parties cannot agree upon changes, the Parties shall in good faith seek to agree any proposed changes using the dispute resolution procedures in clause 25 (DISPUTE RESOLUTION).

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29. **GOVERNING LAW**

The Agreement is exclusively governed by and construed in accordance with the laws of the Republic of South Africa and is subject to the jurisdiction of the courts of the Republic of South Africa.

30. **COUNTERPARTS**

The Agreement may be signed in any number of counterparts, all of which taken together shall constitute one and the same instrument. Either Party may enter into the Agreement by signing any such counterpart.

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GENERAL TENDER CONDITIONS - SERVICES

FORM CSS5

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1. GENERAL

All tenders and subsequent contracts and orders shall be subject to the following procedures as laid down by Transnet Limited (hereinafter referred to as "Transnet") and are to be strictly adhered to by any person or enterprise or company responding to this tender (hereinafter referred to as "Respondents" or the "Respondent).

2. LODGING OF TENDER

- 2.1 Tenders shall be lodged with Transnet no later than the closing date and time specified for the receipt thereof, in accordance with the directions issued with tender documents.
- 2.2 Tenders shall be transmitted in a sealed envelope and placed in the Tender Box at a venue stipulated in the Request for Tender (RFT) or Request for Proposal (RFP) or Request for Quotation (RFQ) (collectively "Tender Documents"), with the tender number and subject endorsed on the left hand bottom corner of the envelope.

3. USE OF TENDER FORMS

Where special forms are issued by Transnet for the submission of tenders, Respondents are required to submit their tenders by completion of the appropriate sections on such official forms and not on office stationery bearing their own special conditions of tender; non-compliance with this conditions may result in the rejection of a tender.

4. THE RAISING OF A CHARGE FOR PLANS, SPECIFICATIONS AND TENDER FORMS

- 4.1 A non-refundable charge may be raised for Tender Documents, depending on the nature, magnitude and value of technical information supplied.
- 4.2 If any of the drawings and specifications referred to in Tender Documents are the official publications of recognised standardising bodies, copies of such drawings and specifications shall be acquired by Respondents at their own expense.

5. DEFAULTS BY RESPONDENTS



If the Respondent, after it has been notified of the acceptance of its tender/quotation fails to:

- (a) enter into a formal contract when called upon to do so in terms of clause 13 (*Contract Documents*), within such period as Transnet may specify; or
- (b) accept an order in terms of the tender or quotation; or
- (c) when called upon to do so, furnish satisfactory security of the fulfilment of the contract in terms of clause 14 (*Securities*);

Transnet may, in any such case, without prejudice to any other legal remedy which it may have, proceed to accept any other tender or quotation or, if it is necessary to do so, call for tenders or quotations afresh, and may recover from the defaulting Respondent any additional expense incurred by it in calling for new offers or in accepting a higher offer.

- 5.2 If any Respondent, who has submitted a tender or quotation, concluded a contract with Transnet (hereinafter referred to as "the Supplier"), or in the capacity of agent or subcontractor has been associated with such tender or contract -
 - (a) has withdrawn such tender/quotation after the advertised date and hour for the receipt of tenders; or
 - (b) has, after having been notified of the acceptance of its tender or quotation, failed or refused to sign a contract when called upon to do so in terms of any condition forming part of the tender documents; or
 - (c) has carried out any contract resulting from such tender or quotation in an unsatisfactory manner or has breached any condition of such contract; or
 - (d) has offered, promised or given a bribe in relation to the obtaining or the execution of such contract; or
 - (e) has acted in a fraudulent or improper manner or in bad faith towards Transnet or any government department or towards any public body, company or person; or
 - (f) has made any incorrect statement in the affidavit or certificate referred to in clause 11 (Formal Notification Regarding Name of Successful Respondent) and is unable to prove to the satisfaction of Transnet that
 - (i) it made the statement in good faith honestly believing it to be correct; and
 - (ii) before making such statement, it took all reasonable steps to satisfy itself of its correctness; or
 - (g) caused Transnet damage, or to incur costs in order to meet the Supplier's requirements which could not be recovered from the Supplier;

then a tender from any such Respondent shall be disqualified and the person, enterprise or company (including any directors) shall, subject to clause 5.3 below, be disqualified from tendering for any Transnet business.

Any person or enterprise or company against whom a decision has been given under the provisions of sub-clauses 5.2(b), 5.2(d) or 5.2(e) above, may make representations to the Chief Operating Officer of Transnet Group, whose decision shall be final.

5.4 Any disqualification imposed upon any person or enterprise or company, unless Transnet determines otherwise, shall apply to any other enterprise under the same or different names of disqualified persons or enterprise or company (or associates thereof) and shall for avoidance of doubt also be applied to any agent or employee of the person or enterprise or company concerned.

6. CURRENCY

Prices or fees must be quoted in the currency of the Republic of South Africa in respect of local Services. Prices or fees in any other currency may be rejected by Transnet save where such price is quoted by a foreign Respondent.

7. EXCHANGE AND REMITTANCE

The Respondent should note that where the whole or a portion of the contract or order value is to be remitted overseas, Transnet shall, if requested to do so by the Supplier, effect payment overseas directly to the foreign principal or service provider of such percentage of the contract or order value as may be stipulated by the Respondent in its Tender Documents and any variation in the amount to be so paid, which may arise as a result of fluctuations in the rate of exchange involved, will be for the account of the Supplier.

- 7.1 The Respondent who desires to avail itself of the aforementioned facility must at the time of tendering furnish the information called for in the clause "Exchange and Remittance" of the Tender Documents and also furnish full details of the principals or service providers to whom payment is to be made.
- 7.2 The Supplier shall at its own cost obtain forward exchange cover on foreign currency to protect itself against any currency rate fluctuation risks for the duration of any resulting contract or order. Transnet will NOT accept any fluctuations in the rate of exchange at the time when payments are made.

Transnet will not recognise any claim for adjustment of the order and/or contract price under clause 7.2 above, if the increase in price arises after the date on which the Services were to be delivered, as set out in the order and/or contract, or any subsequent agreement between the parties.

8. ACCEPTANCE OF TENDER OR QUOTATION

8.1 Transnet does not bind itself to accept the lowest or any tender or quotation nor will it give any reasons for the rejection of a tender or quotation. Transnet reserves the right to accept any tender in whole or in part.

Upon the acceptance of a tender or quotation by Transnet, the parties shall be bound by these General Tender Conditions and the Standard Terms and Conditions of Contract (Form US7 - Services).

8.3 Where the acceptance by Transnet of the Respondent's offer/bid is delivered by letter, the South African Post Office shall be regarded as the agent of Transnet and delivery of such notice of acceptance to the South African Post Office shall be considered as delivery to the Respondent.

8.4 Where the Respondent has been informed by Transnet per facsimile message of the acceptance of its tender or quotation, the acknowledgement of receipt transmitted by its facsimile machine shall be regarded as proof of delivery to the Respondent.

9. LAW GOVERNING CONTRACT

The law of the Republic of South Africa shall govern the contract created by the acceptance of a tender/quotation. The *domicilium citandi et executandi* shall be a place in the Republic of South Africa to be specified by the Respondent in its tender/quotation at which all legal documents may be served on the Respondent who shall agree to submit to the jurisdiction of the courts of the Republic of South Africa. A foreign Respondent shall, therefore, state in its tender/quotation the name of its accredited agent in the Republic of South Africa who is empowered to sign any contract which may be entered into in the event of its tender/quotation being accepted and to act on its behalf in all matters relating to the contract.

10. IDENTIFICATION

If the Respondent is a company, the full names of the directors shall be stated in the tender/quotation. If the Respondent is a close corporation, the full names of the members shall be stated in the tender/quotation. If the Respondent is a partnership or an individual trading under a trade name, the full names of the partners or of such individual, as the case may be, shall be furnished.

11. FORMAL NOTIFICATION REGARDING NAME OF SUCCESSFUL RESPONDENT

In the case of tenders submitted to the Secretary of a Divisional Acquisition Council, unsuccessful Respondents will be formally notified of the names of successful Respondent(s) as soon as possible after the closing date for receipt of the tender in question. In the case of tenders or quotations submitted to Transnet Acquisition Council, unsuccessful Respondents shall, upon application, be furnished with similar information.

12. UNAUTHORISED COMMUNICATION ABOUT TENDERS

Where tenders are submitted to the Secretary of an Acquisition Council, Respondents may at any time communicate with the Secretary on any matter relating to its tender but, in the absence of written authority from the Secretary, no communication on a question affecting the subject of a tender shall take place between Respondents or other potential suppliers or any member of the Acquisition Council or official of Transnet during the period between the closing date for the receipt of the tender and the date of the notification of the successful Respondent(s). A tender, in respect of which any such unauthorised communication has occurred, may be disqualified.

13. CONTRACT DOCUMENTS

The contract documents will comprise these General Tender Conditions and the Standard Terms and Conditions of Contract (Form US7 - Services) which will constitute the contract between the parties upon receipt by the Respondent of Transnet's letter of acceptance / intent, subject to all additional amendments and/or special conditions thereto as agreed to by the parties.

14. SECURITIES

- 14.1 The successful Respondent, when called upon to do so, shall provide security to the satisfaction of Transnet for the due fulfilment of a contract or order. Such security shall be in the form of a deed of suretyship furnished by an approved bank, building society, insurance or guarantee corporation carrying on business in South Africa.
- 14.2 The security may be applied in whole or part at the discretion of Transnet to make good any loss or damage which Transnet may incur in consequence of a breach of the contract or any part thereof.
- 14.3 Such security, if required, shall be an amount which will be stipulated in the Tender Documents.
- 14.4 For the purpose of clause 14.1 above, Transnet will supply "Deed of Suretyship" forms to the successful Respondent for completion and no guarantee in any other form will be accepted. Copies of such forms will be supplied to Respondents on request. For this purpose "Deed of Suretyship" forms will be provided which shall be completed and returned to Transnet or a designated official by the successful Respondent within 30 (thirty) days from the date of the letter of acceptance. No payment will be made until the forms, duly completed, are delivered to Transnet. Failure to return the Deed of Suretyship within the prescribed time shall, save where prior extension has been granted, entitle Transnet without notice to the Supplier to cancel the contract with immediate effect.
- 14.5 Additional costs incurred by Transnet necessitated by reason of default on the part of the Supplier in relation to the conditions of this clause 14 will be for the account of the Supplier.

VPRICES SUBJECT TO CONFIRMATION

15

- 15.1 A tender or quotation with prices which are subject to confirmation will not be considered.
- 15.2 Tenders where firm prices are quoted for the duration of any resulting order and/or contract will receive precedence over prices which are subject to adjustment.

16. DELETION OF SERVICES EXCLUDED FROM OFFER/BID

The Respondent must delete Services for which it has not tendered or for which the price or fee has been included elsewhere in the tender.

17. ALTERATIONS MADE BY THE RESPONDENT TO TENDERED PRICES

All alterations made by the Respondent to its tendered price(s) prior to the submission of its Tender Documents must be done by deleting the incorrect figures and words where required and by inserting the correct figures and words against the items/Services concerned. All such alterations must be initialled by the person who signs the Tender Documents. Failure to observe this requirement may result in the particular item(s) or Services concerned being excluded in the matter of the award of the business.

18. VALUE-ADDED TAX

- 18.1 In respect of local Services, i.e. Services to be provided by a South African company, the prices or fees quoted by the Respondent are to be exclusive of Value-Added Tax (VAT) which <u>must</u> be shown separately at the standard rate on the Supplier's Tax Invoice
- 18.2 In respect of Services to be provided by a foreign principal -
 - (a) The invoicing by a local Supplier on behalf of its foreign principal represents a Service rendered by the principal, which is <u>not</u> subject to VAT;
 - (b) The Supplier's Tax Invoice(s) for the local portion only (i.e. the "commission" for the Services rendered locally) must show the Value-Added Tax (VAT) separately at zero percent if the Services are in compliance with Section 11(2) of the VAT Act, 89 of 1991.

19. TERMS AND CONDITIONS OF TENDER

The Supplier shall adhere to the Standard Terms and Conditions of Contract as set out in Form US7 - Services), a copy of which is attached hereto. Should the Respondent find any conditions unacceptable, it should indicate which conditions are unacceptable and offer an alternative. Please note that any alternative offered shall be compared with acceptance of the Form US7 conditions or alternatives offered by other Respondents.

20. IMPORTANT NOTICE TO RESPONDENTS REGARDING PAYMENT

Method of Payment

- (a) The attention of the Respondent is directed to clause 10 (*Invoicing and Payment*) of Form US7 – Services, which sets out the conditions of payment on which tender price(s) shall be based.
- (b) However, in addition to the aforegoing the Respondent is invited to submit offers based on alternative methods of payment and/or financing proposals.
- (c) The Respondent is required to give full particulars of the terms that will be applicable to its alternative offer(s) and the financial merits thereof will be evaluated and taken into consideration when the tender is adjudicated.

(d) The Respondent must, therefore, in the first instance, tender strictly in accordance with sub-clause 20.1(a) above. Failure to comply with sub-clause 20.1(a) above may preclude a tender from further consideration.

NOTE: The successful Respondent (the Supplier) shall, where applicable, be required to furnish a guarantee covering any advance payments.

20.2 Conditional Discount

Respondents offering prices which are subject to a conditional discount applicable for payment within a specific period are to note that the conditional period will be calculated as from the date of receipt by Transnet of the Supplier's month-end statement reflecting the relevant Tax Invoice(s) for payment purposes, provided the conditions of the order or contract have been fulfilled and the Tax Invoice is correct in all respects as referred to in the contract or order. Incomplete and/or incorrect Tax Invoices shall be returned and the conditional period will be recalculated from the date of receipt of the correct documents.

21. PLANS, DRAWINGS, DIAGRAMS, SPECIFICATIONS AND DOCUMENTS

Copyright in plans, drawings, diagrams, specifications and documents compiled by the Supplier for the purpose of contract work shall be governed by the terms and conditions detailed in clause 12 of Form US7 - Services (*Intellectual Property Rights*).

22. VISITS TO FOREIGN COUNTRIES

(a)

(b)

- 22.1 Respondents must furnish details in a covering letter if it is considered necessary that employees of Transnet should carry out inspection and/or review any operational Services at the premises of the successful Respondent (the Supplier) or its subcontractors overseas for the purpose of a product demonstration and/or final acceptance or for any other reason.
- 22.2 If the Respondent considers overseas visits to be necessary it must provide the following information in a covering letter in respect of each visit -

countries and places to be visited;

number of employees and disciplines involved;

- (c) number of man-days involved; and
- (d) motivation for the visit.
- 22.3 Transnet will make all arrangements with regard to booking of air journeys, hotel reservations, transport to and from airports, places of inspection or demonstration, etc. and all expenses will be for the account of Transnet.
- 22.4 Before a visit is undertaken, such as envisage in this clause 22, Transnet and the Supplier will agree in writing on the number of employees of Transnet that should undertake the visit and the number of man-days involved in the visit.

23. TENDERS BY FOREIGN RESPONDENTS OR ON THEIR BEHALF

- 23.1 Tenders submitted by foreign principals may be forwarded direct by the principals to the Secretary of the Acquisition Council or to a designated official of Transnet according to whichever officer is specified in the Tender Documents, or may be so forwarded on the principal's behalf by its South African representative and/or agent provided that written proof is submitted that such representative / agent has been duly authorised to act in that capacity by the principal. Failure to submit such authorisation by the representative / agent shall disqualify the tender.
- 23.2 When legally authorised to prepare and submit tenders on behalf of their principals not domiciled in the Republic of South Africa, representatives and/or agents must compile the tenders in the names of such principals and sign them on behalf of the latter.
- 23.3 South African representatives and/or agents of successful foreign Respondents must when so required enter into a formal contract in the name of their principals and must sign such contracts on behalf of the latter. In every such case a legal Power of Attorney from their principals must be furnished to Transnet by the South African representative and/or agents authorising them to enter into and sign such contracts.
 - (a) Such Powers of Attorney must comply with Government Notice No. 1160 of 27 June 1930 (and any amendments thereto) - "Rules of the Supreme Court of South Africa for the authentication of documents executed outside the Republic for use within the Republic."
 - (b) The Powers of Attorney must be signed by principals under the same title as used in the Tender Documents.
 - (c) On arrival within the Republic of South Africa these Powers of Attorney are to be completed in terms of Section 8(2) of the Stamp Duties Act No. 77 of 1968, or any amendment thereof.
 - (d) If a Power of Attorney held by the South African representative or agent includes matters of a general nature besides provision for the entering into and signing of contracts with Transnet, a notarially certified copy thereof should be furnished.
 - (e) The Power of Attorney must authorise the South African representative or agent to choose the *domicilium citandi et executandi* as provided for in clause 26 (*Addresses for Notices*) of the Standard Conditions of Contract, Form US7 - Services.
- 23.4 If payment is to be made in South Africa, the foreign Supplier (i.e. the principal, or its South African agents or representatives), must notify Transnet in writing whether -
 - (a) For payment by cheque –

- (i) cheques are to be drawn for payment to the credit of the foreign Supplier's account at a bank in South Africa, in which case the name and branch of such bank shall be furnished; or
- (ii) cheques are to be made out in favour of the foreign Supplier and forwarded to its South African agent or representative, in which case such agent or representative must be duly authorised to sign the receipt of the cheque and discharge it on behalf of its principal.
- (b) For payment by electronic funds transfer (EFT)
 - (i) funds are to be transferred to the credit of the foreign Supplier's account at a bank in South Africa, in which case the name and branch of such bank shall be furnished; or
 - (ii) funds are to be transferred to the credit of its South African agent or representative, in which case the name and branch of such bank shall be furnished
- 23.5 The attention of the Respondent is directed to clause 14 above (Securities) regarding the provision of security for the fulfilment of contracts and orders and the manner and form in which such security is to be furnished.

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Respondent's Signature



CAPITAL PROGRAM

SCOPE OF THE TENDER

RADIO COMMUNICATION SYSTEM IN RAIL TUNNELS

(NATAL MAINLINE)

		2		
Author:	Technical Officer	Thandeka Ganz	in	
	Capital Program (Telecoms)			
Reviewed:	Project Manager	Phehello Makoa		
	Capital Program (Telecoms)			
Approved:	Principal Engineer	Ditha Nkoga		
	Capital Program			
			Date:	01 December 2011



1. Introduction

Transnet Freight Rail (TFR) has a spread of tunnels in its rail network which has no radio communication. When the train driver and maintenance crew enter the tunnels, there is no radio communication that can be established with the "outside world". The absence of communication in the tunnels poses a safety risk; this project is therefore aimed at installing radio communication in rail tunnels in an effort to improve safety and worker activity during maintenance.

TFR has thus embarked on a project of installing radio communication in rail tunnels where it considers such installation necessary throughout the country.

A priority will be given to longer tunnels as outlined in the schedule of requirements. The nature of the tender will be treated as an "**AS AND WHEN**" tender for a period of two years. However, this will be done in the confines of the prevailing Supply Chain Services (SCS) governance rules.

2. Scope of the Tender

- 2.1. The successful bidder shall design, supply, install, test and commission a full radio communication system in the tunnels:
- 2.2. The work required shall include but not limited to:
 - 2.2.1. Design the system that will provide a clear and a strong signal better than -95dbm continuously, with minimal noise level throughout the entire length of the tunnel;
 - 2.2.2. Design and install the power reticulation network to support the requirements of the electronic equipment to be installed;
 - 2.2.3. Supply and install the Off Air Repeaters (OAR), Fibre, Leaky Coax, Power Supplies Units (PSU) and Amplifiers;
 - 2.2.4. Supply and install antennas, connectors and feeders for the system's functionality;
 - 2.2.5. Supply and install a poles or "self supporting" Lattice type mast where required;
 - 2.2.6. Drilling of holes on the tunnel walls to support the fibre and or the leaky coax;
 - 2.2.7. Install the eyebolts/ straining wire/ cable hangers where required;
 - 2.2.8. Manufacture and install the heavy duty steel doors for the enclosure of the main and auxiliary equipment in the alcoves;
- 2.3. The system shall be able to convey/ repeat four channels (1 control and 3 traffic channels) simultaneously in and out of the tunnels;
- 2.4. A 304 grade stainless steel shall be used;

- 2.5. The power design shall be signed off by a Professional Engineer registered with ECSA and shall be submitted to TFR for approval before any work can commence;
- 2.6. Tenderers shall submit a detailed design of their proposals and or solutions in words, diagrams and sketches to TFR for consideration both for Trunk and Open Channel;
- 2.7. The proposals shall be clear (fibre based/ leaky coax/ or a mixture of both) and all proposals shall contain detailed costing. Alternative proposals can also be submitted;
- 2.8. The proposals to be submitted shall be for (Open Channel and Trunk):
 - 2.8.1. Tunnels > 1km with full redundancy (long tunnels);
 - 2.8.2. Tunnels < 1km but > 200 m, with no redundancy (shorter tunnels);
- 2.9. The tunnel radio communication system offered shall be fully transparent and the transition shall be seamless between the "outside world" and the in-tunnel radio communication system;
- 2.10. All equipment and cables installed inside the tunnels shall be secured in order to deflect any protruding items that might damage the infrastructure. This protection must not interfere or weaken the radiated signal in the tunnels;
- 2.11. Equipment installed in the alcoves shall be properly secured with heavy duty metal door, to prevent theft of such equipment;
- 2.12. For narrow tunnels, all cables inside the tunnels shall be installed 300mm from the earthwire. Care must be exercised when working near or in close proximity to the Over Head Track Equipment (OHTE);
- 2.13. The successful contractor must ensure that the input and output impedance of all the amplifiers are matched and are within the required limits of 1:1.5;
- 2.14. The amplifiers shall have Automatic Gain Control (AGC) that will compensate for either a reduction or an increase in the signal level from the leaky coax cables;
- 2.15. Amplifiers shall be fitted with a protection mechanism to prevent any high voltage surges that may be induced from the OHTE that can cause damage to the equipment;
- 2.16. Tenderers are required to submit a comprehensive proposal for the full monitoring of the system to be installed. Equipment to be monitored is the OAR, Amplifiers, PSU, etc;
- 2.47. This the discretion of TFR to either award the contract in full or partially award or split the award or not award the contract;
- 2.18. TFR has the right to increase/ decrease the number of tunnels where radio communication is required. The prospective/ successful bidder/s can be approached to provide a quotation for other tunnels not included in this schedule of requirements where such work can be concluded within two years from the inception of the initial contract;
- 2.19. The winning bidder/s shall submit an Environmental Health and Safety Management plan to TFR for approval before the contract commences;
- 2.20. Bidders must be prepared to make a presentation on the content of their offers presented to TFR as part of the evaluation of their bids;

3. Schedule of Requirements

 Schedule of Requirements 3.1. Item 6 to 7 shall form part of the first long tunnel to be done. 3.2. Each tunnel shall have pricing for tems 1 to 5. Any assumptions made in terms of the pricing shall be accompanied by a detailed note of 	ne. umptions made in terms of the pricing shall be	e accompanied by a detailed note of
explanation. Items Required	Price Excl. VAT	Comments
1. Tunnel Communication System		
1.1. Main Equipment (complete unit)		
1.2. Power Reticulation Network		
1.3. Fibre/ Leaky Coax and & Installation		
1.3.1. Design		
1.3.2. Material		
1.3.3. Installation, Commissioning & Handover	C	
1.4. Power Supply Units		
1.5. Alcove Enclosures (steel doors)	5	
1.6. Holes/ eyebolts/ straining wire	2	
1.7. Amplifiers		
2. Lattice Mast (10m-15m where required)/ poles plus antennas		
3. Main Equipment (OAR's)	C	
4. System Commissioning & Sign off	5	
5. Tunnel Monitoring System		
6. Training Sets (x 3 complete sets)		
7. Repair Kits for Technicians (x 5 complete sets)		
8. Training for School of Rail and Technical personnel (x 30 people).		
Two complete training sessions shall be offered (JHB & Ladysmith).		

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4. List of Tunnels in the Natcor

4.1. Priority No.1: Natcor Tunnels (1 km – 5 km)

Tunnel Name	Mast Required	Power Reticulation	Length (km)	Redundancy
LOWLANDS (UP)	No	Yes	3.235	Yes
LOWLANDS (DOWN)	No	Yes	4.032	Yes
BOSCOBELLO (DOWN)	Yes	Yes	1.861	Yes
BOSCOBELLO (UP)	Yes	Yes	1.861	Yes
KRAAL-DOWN	No	Yes	1.462	Yes
KRAAL-UP	No	Yes	1.462	Yes
ASHBURTON TUN.4 (DN)	No	Yes	1.311	Yes
ASHBURTON TUN.4 (UP)	No	Yes	1.311	Yes
BEACON HILL (DOWN)	Yes	Yes	1.164	Yes
BEACON HILL (UP)	Yes	Yes	1.164	Yes
NEW BRERETON (DOWN)	Yes	Yes	1.036	Yes
NEW BRERETON (UP)	?	Yes	1.009	Yes
LAINGSNEK (DOWN)	Yes	Yes	1.030	Yes
LAINGSNEK (UP)	Yes	Yes	1.030	Yes
DELVILLE WOOD (DOWN)	No	Yes	0.914	Yes
DELVILLE WOOD (UP)	No	Yes 🔶	0.914	Yes
UMLAAS RD.TUN.1 (DN)	No	Yes	0.926	Yes
UMLAAS RD.TUN.1 (UP)	No	Yes	0.926	Yes
NSHONGWENI (DOWN)	Yes	Yes	0.941	Yes
NSHONGWENI (UP)	Yes	Yes	0.956	Yes

4.2. Priority No.2: Natcor Tunnels (0.5 km – 1km)

Tunnel Name	Mast Required	Power Reticulation	Length (km)	Redundancy
MOUNT PROSPECT (DN)	No	Yes	0.623	No
MOUNT PROSPECT (UP)	No	Yes	0.623	No
ASHBURTON TUN.3 (DN) 👞	Yes	Yes	0.644	No
ASHBURTON TUN.3 (UP)	Yes	Yes	0.644	No
UMBULWANA SOUTH (DN)	No	Yes	0.681	No
UMBULWANA SOUTH (UP)	No	Yes	0.681	No
ROSETTA (DOWN)	Yes	Yes	0.726	No
ROSETTA (UP)	Yes	Yes	0.726	No
PALMFORD-DOWN	No	Yes	0.728	No
PALMFORD-UP	No	Yes	0.728	No
PIETERS (DOWN)	No	Yes	0.842	No
PIETERS (UP)	No	Yes	0.842	No
PENTRICH TUN.5 (DN)	No	Yes	0.843	No
PENTRICH TUN.5 (UP)	No	Yes	0.843	No
BALFOUR-DOWN	No	Yes	0.869	No
BALFOUR-UP	No	Yes	0.869	No

4.3. Priority No.3: Natcor Tunnels (0.2 km – 0.5km)

MANZINE (DOWN)	No	Yes	0.400	No
MANZINE (UP)	No	Yes	0.400	No
CLIFFDALE (DOWN)	No	Yes	0.349	No
CLIFFDALE (UP)	No	Yes	0.349	No
KOPPIE ALLEEN-DOWN	Yes	Yes	0.310	No
KOPPIE ALLEEN-UP	Yes	Yes	0.310	No
WALLSEND (DN)	No	Yes	0.262	No
WALLSEND (UP)	No	Yes	0.262	No
ENERSDALE (DOWN)	Yes	Yes	0.259	No
ENERSDALE (UP)	Yes	Yes	0.259	Ng
TWEEDIE (DOWN)	Yes	Yes	0.252	No
TWEEDIE (UP)	Yes	Yes	0.252	No
LIDGETTON (DOWN)	Yes	Yes	0.243	No
LIDGETTON (UP)	Yes	Yes	0.243	No
DASSENHOEK (DOWN)	No	Yes	0.241	No
DASSENHOEK (DOWN) DASSENHOEK (UP)	No	Yes	0.241	No No
DASSENHOEK (UP)	No	Yes		
DASSENHOEK (UP)	No	Yes		
DASSENHOEK (UP)	No	Yes		
DASSENHOEK (UP)	No	Yes		
DASSENHOEK (UP)	No	Yes		
DASSENHOEK (UP)	No	Yes		
DASSENHOEK (UP)	No	Yes		
DASSENHOEK (UP)	No	Yes		
DASSENHOEK (UP)	No	Yes		



CAPITAL PROGRAM (TELECOMMUNICATIONS)

SPECIFICATION

MPT 1327 TRUNKED RADIO COMMUNICATION SYSTEM

IN RAIL TUNNELS OF SOUTH AFRICA

Circulation Restricted To:

Transnet Freight Rail Transnet and Relevant Third Parties Unrestricted

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i. DOCUMENT AUTHORISATION

FUNCTION	NAME	TITLE & DIVISION	SIGNATURE	DATE
Converted by:	Thandeka Ganzin	Technical Officer: Capital Program		
Updated by:	Phehello Makoa	Project Manager: Capital Program		\$
Authorised by:	Ditha Nkoga	Senior Manager: Capital Program		

ii. DISTRIBUTION

Once updated, a copy of the latest revision will be published in the document management system in use. E-mail to this effect will be sent to the relevant personnel or heads of department.

iii. DOCUMENT CHANGE HISTORY

ISSUE NUMBER	DATE ISSUED	ISSUED BY	HISTORY DESCRIPTION
		V	

iv. CHANGES SINCE LAST REVISION

CLAUSES	DESCRIPTION

v. ABBREVIATIONS, ACRONYMS AND DEFINITIONS

ABBREVIATIONS AND ACRONYMS	DESCRIPTION
BS	British Standard
dBm	Decibel milliwatt
ERP	Effective Radiated Power
ICASA	Independent Communication Authority of South
	Africa
ISO	International Standards Organisation
Km	Kilometre
Km/hour	Kilometre per hour
MPT1327	Analogue Trunk
PSU	Power Supply Unit
RTO	Radio Train Order
SABS	South African Bureau of Standards
тсо	Train Control Officer
w	Watt
	C V

DEFINITIONS	DESCRIPTION
Antenna link level	The level of the signal at the antenna.
Driver's cab	The cab in the front of the train allocated for
	the seat of the driver.
Portable Radio	Is a 4 watt hand held radio used by staff on
	foot.
Power supply 220 volt	The power supplied to the tunnels is not
	clean and can vary considerably.
Train Radio	A 20 watt radio installed, as a permanent
	fixture, in the driver's cab. The antenna of
	this radio is installed on the roof of the train,
	Either front left or front right.
Transnet	Holding company of Transnet Freight Rail
UHF radio network	This can be a conventional (open channel) or
	MPT1327 trunked radio network.
WORKS	Installation of Equipment.

vi. RELEVANT DOCUMENT

DOUMENT NO.	DESCRIPTION	LOCATION
ISO 9000	Quality Management Systems	External
BS 3939	Graphic Symbols for	External
	Electrical, Power,	
	Telecommunications and	
	Electronic Diagrams	
ISO 14000	Environmental Management	External
	System	
SABS 1069	Land Mobile Communication	External
	Equipment	
SCEH-59	Radio Repeater Stations	Document Control Centre
SCAG-53	PSU/Charger for a Radio	Document Control Centre
	Repeater Station	
SABS 03A	Protection of Dwelling	External
	Houses Against Lighting	
SABS 171	Surge Arrestors for Low	External
	Voltage Distribution Systems	
2		
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1. SCOPE

- 1.1. This specification covers the functional and equipment requirements of the radio coverage in South African Rail tunnels for integration to the existing MPT1327 Train Radio Communication Network.
 - 1.1.1. The required system would provide adequate radio network coverage within the tunnels as well as the tunnel portals, and as such make communication between the Train Driver and the Train Control Officer (TCO) possible.
 - 1.1.2. The system should preferably be designed for **REDUNDANCY** for tunnels longer than 1km, to ensure that communication is possible in the event of equipment failure.
 - 1.1.3. This specification pertains to the MPT1327 Trunked Network tunnels an "AS AND WHEN" basis for a period of two years.

1.2. Compliance

- 1.2.1. Tenderers shall submit their main offers in terms of this specification, and shall submit the clause by clause compliance to this specification.
- 1.2.2. Alternative offers will be considered at Transnet discretion, provided that such offers provide equivalent functionality to that specified in this document.
- 1.3. The works shall include the following (as detailed in the Schedule of Requirements) :
 - 1.3.1. Design, supply, install, test and commission the entire radio communication system.
 - **3.2.** Design, supply, install, test and commission the power reticulation network where required.
 - 1.3.3. Supply the tunnel management system which includes the remote monitoring and maintenance.

1.4. Contractors Responsibility

- 1.4.1. The contractor shall be responsible for -
 - 1.4.1.1. The supply, storage and transportation to site of all materials (whether explicitly mentioned or not) required for the successful completion of the works;

1.4.1.2. installation of all the equipment;

1.4.1.3. commissioning of all the equipment;

- 1.4.2. The contractor shall not be responsible for commissioning equipment that has not yet been installed at the time of final commissioning of the system. All such equipment plus associated installation materials shall be handed over to Transnet personnel and a receipt obtained at the conclusion of the contract.
- 1.4.3. The meaning and intent of this document is that a complete working system is required.
- 1.4.4. Tenderers must fully acquaint themselves with all the requirements of Transnet Freight Rail (TFR) before submitting any tender.
- 1.4.5. TFR must be consulted on all matters on which this specification is silent, or on which doubt exist.

2. FUNCTIONAL REQUIREMENTS

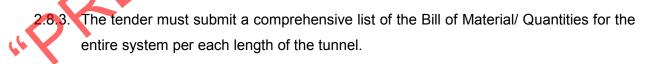
2.1. Coverage Requirements

- 2.1.1. The Effective Radiated Power (ERP) should not exceed 20 Watt (W) as specified by Independent Communications Authority of South Africa (ICASA).
- 2.1.2. The antenna link level should not exceed 1W at the transmitter and 8W ERP as specified by ICASA.
- 2.1.3. The minimum RF level required is -95 decibel milliwatt (dBm) throughout the length of the tunnels, as specified by TFR.
- 2.1.4. The Receiver Signal to Noise Ratio should be better than 60 dB squelch activated and 39 dB without squelch. The Transmitter Signal to Noise Ratio should be better than 34 dB, throughout the tunnel.
- 2.1.5. The audio on the radio should be 10 dB above ambient noise.
- 2.1.6. MPT1327 Trunking the equipment shall pick up the channels at the high sites in the area.

- 2.2. The equipment shall be integrated with the existing UHF radio network.
- 2.3. For tunnels longer that 1km, the system should feed from both sides of the tunnel and be of such a nature that there is no single point of failure that can render the system ineffective.
- 2.4. The system should be of such a nature that in the event of a power failure, it continues to operate from back-up power for a minimum of forty eight hours with a duty cycle of 80:20.
- 2.5. There shall be communications from inside the driver's cab of the locomotive to the TCO at all times, throughout the total distance of the tunnels including the crossings, the signals, the electrical substations and mini substations and relay rooms.
- 2.6. The driver must be able to communicate to his control centre while the train is in motion to a maximum speed of 60 km/ hour.
- 2.7. The communication medium must allow the driver to use the standard train radio and portable radios, which will be in use outside the cab but inside the tunnel and also outside the tunnel to communicate with the TCO.

2.8. Cable Specification and Requirements:

- 2.8.1. All cables that will be supplied inside the Tunnels must be fire resistant, fire retardant and shall not emit toxic fumes in the case of fire.
- 2.8.2. Where the supplied system may require a leaky feeder solution, the leaky feeder must be supplied with cable hangers that can easily be attached to a suspension wire. Other hanging modality if preferred should be specified in the solution.



- 2.8.4. Where a leaky coax is used to connect to the amplifiers, it shall have standard RF connectors for easy coupling and uncoupling when there is a fault to the cable or amplifiers and/ or when the tests are performed to the said equipment.
- 2.8.5. Where a leaky coax solution is offered, the cable shall be 50 Ohms.
- 2.9. Amplifiers shall be fitted with a protection mechanism to prevent any high voltage surges that may be induced from the OHTE that can cause damage to the equipment.

2.10. Amplifiers shall have Automatic Gain Control (AGC) that will compensate for either a reduction or an increase in the signal level from the leaky coax cable and this shall not in any way deteriorate the audio quality or signal level.

2.11. Instrumentation Requirements

- 2.11.1. The tenderer should supply as an optional item, a list of instrumentation with prices that will be required to maintain and configure the system.
- 2.12. Special care must be taken to prevent voltage induction from the overhead traction supplies
- 2.13. All power supply lines from the PSU must be in metal piping.
- 2.14. The power cabinet must have suitable 220 volt AC and DC trips to isolate and protect the input and outputs.

2.15. Alarm Monitoring and Control

- 2.15.1. The system shall provide for individual remote monitoring of all active amplifiers, channel modules and PSU components for correct operation.
- 2.15.2. Each of the items to be remotely monitored shall provide a status for remote indication and control from remote management terminals.
- 2.16. Where the supplied system may require that a leaky feeder or any other cable must be suspended from the roof of the tunnel, quotations must be provided on the following optional items:

.16.1 Stainless Steel Rope that will be of an adequate thickness to support the cable that must be suspended. The length of the stainless steel rope must match the length of the cable that must be suspended.

- 2.16.2. Stainless Steel Turn-buckles (rigging screws), Shackles, Thimbles and Wire Rope Clamps that will enable TFR to install the stainless steel rope in the tunnel on the existing infrastructure.
- 2.17. A 304 grade stainless steel must be used.
- 2.18. Tenderer to specify the training and warranty on the equipment

2.19. All cabinets that will be supplied for use in the tunnels must;

2.19.1. Be lockable and protected against vandalism.

2.19.2. Comply with at least IP55 specification.

- 2.20. System Architecture.
 - 2.20.1. The tenderer shall provide a detailed description with applicable diagrams of the physical and logical architecture of the solution offered.
 - 2.20.2. The tenderer shall provide full details of the scalability of the system using the equipment offered.

3. EQUIPMENT REQUIREMENTS

3.1. The equipment shall be suitable for continuous operation under the following conditions:

Ambient temperature:	-10 C to +55 C
Relative Humidity:	As high as 95%
Altitude:	0 to 2 000 metres above sea level
Air Pollution:	Heavily saline laden industrial and locomotives fumes,
	coal and wagon brake dust.

3.2. All components, including wiring, shall be manufactured and processed to ensure reliable operation under these conditions.

4. MAINTENANCE AND SERVICE

- 4.1. It is the policy of Transnet to do all routine maintenance, minor system modifications, fault location and workshop repair of all radio equipment.
- 4.2. the equipment will be maintained at two levels:
 - 4.2.1. Technicians (first line): Available at short notice, having had a basic training on the radio system, capable of basic fault diagnosis, and of rectifying faults by replacing of boards or modules.
 - 4.2.2. Radio workshop (second line): Specialists will be available at the radio workshop to carry out repairs on a 'repair and return' basis, and to provide specialised assistance as required.

- 4.3. To cater for sub-clauses 4.2.1 and 4.2.2, the major units of the system shall be constructed of equipment modules, each of which carries out a specific function within the system.
- 4.4. Tenderers shall give full particulars of the maintenance, spare parts and services facilities which will be available in South Africa. The names and addresses of the companies concerned must be furnished.
- 4.5. Tenderers shall state what provision will be made to ensure an adequate supply of locally available spare components, and must guarantee local availability of all spare components for a period of ten (10) years after the Works have been completed and taken over by Transnet. The tenderer must also specify the price adjustment model to be applied over this ten (10) year period.
- 4.6. Transnet will consider tenders from tenderers who merely act as agents for a product. Engineering support must be available and a reasonable turnaround time for repairs to cards or modules (better than 3 weeks) as well as efficient spares and maintenance services must be available. Tenderers shall state whether they are prepared to agree to an inspection of their maintenance premises by Transnet's engineering personnel.
- 4.7. All units in the system shall be provided with test points and/ or monitor indications. These will enable the fault detection procedures to be carried out.
- 4.8. Tenderers shall supply a list of spares recommended for maintenance for a period of 24 months. Itemised spares prices shall be provided.
- 4.9. The tenderer shall supply details of all routine maintenance operations, which will be necessary, with particular reference to time intervals and associated system down time.

5. TECHNICAL HANDBOOK AND CIRCUIT DIAGRAMS

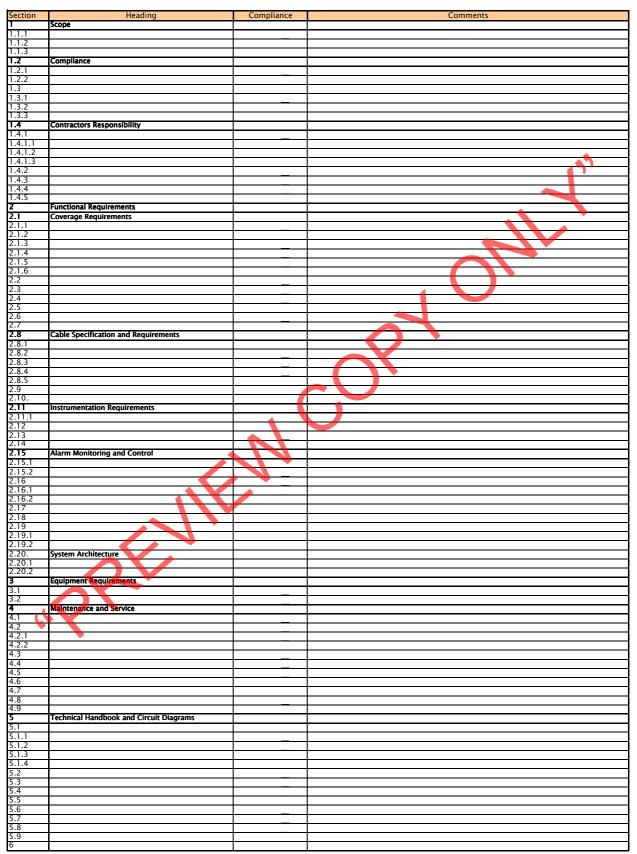
- 5.1. The successful tender must provide a technical handbook which covers the following:
 - 5.1.1. A detailed functional, operational and design of the system, this handbook must enable engineers to upgrade and extend the system if required.
 - 5.1.2. A workshop manual for second line maintenance. It must contain a detailed component specification and all details necessary to enable the test and repair of equipment to be undertaken.

- 5.1.3. A technician's manual to aid first line maintenance. It will describe the maintenance and fault finding procedures to be adopted on the equipment and shall also give a simple description of the operation and design of the equipment and contain charts detailing fault finding procedures.
- 5.1.4. A full schedule of all printed circuit boards and components thereon, component suppliers and catalogue numbers of all components shall be included the workshop manual.
- 5.2. The technical handbook shall be packed with the equipment.
- 5.3. Complete circuit diagrams, drawings, photographs of the equipment must be included. The photographs and drawings must clearly indicate components and module location in the equipment. All components numbers must be clearly indicated.
- 5.4. A list of parts shall be provided for each schematic drawing, giving the values of all components.
- 5.5. Detailed printed circuit board, wiring diagrams showing component numbers and the wiring itself must be provided.
- 5.6. Voltage levels, current values and test points, shall be clearly indicated on the circuit diagrams and printed circuit board layouts.
- 5.7. All symbols and notations used on drawings and circuit diagrams shall comply with the requirements of BS 3939, where symbols and notations do not comply with the this requirement, each drawing must be accompanied by a legend detailing BS 3939 equivalents.
- 5.8. No hand written notes may appear on the handbook everything must be in a printed form. This handbook must be printed in English and all pictures must be in colour, on quality paper.
- 5.9. Transnet reserves the right to reproduce in whole or in part, by any means whatsoever, any technical handbook or instruction manual supplied by the successful tender, any such reproductions will be for the sole use of Transnet.
- 5.10. The contractor must supply all documentation in digital format, preferably on CD ROM, of which 3 copies are required.

END OF SPECIFICATION

Compliance Sheet : Specification

FC – Fully Comply PC – Partially Comply DC – Do not Comply NA – Not Applicable



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