



## NEC3 Term Service Contract (TSC3)

Between **ESKOM HOLDINGS LIMITED**  
(Reg No. 2002/015527/06)

and [Insert at award stage]  
(Reg No. \_\_\_\_\_ )

for **Provision of 24-hour Operation and monitoring of  
Sewage Treatment Plant (Thuthukani and Tutuka) at  
Tutuka Power Station**

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<b>Contents:</b>	<b>No of pages</b>
<b>Part C1 Agreements &amp; Contract Data</b>	<b>[•]</b>
<b>Part C2 Pricing Data</b>	<b>[•]</b>
<b>Part C3 Scope of Work</b>	<b>[•]</b>

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**CONTRACT No. [Insert at award stage]**

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## **PART C1: AGREEMENTS & CONTRACT DATA**

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<b>Contents:</b>	<b>No of pages</b>
<b>C1.1 Form of Offer and Acceptance</b>	<b>[•]</b>
[to be inserted from Returnable Documents at award stage]	
<b>C1.2a Contract Data provided by the <i>Employer</i></b>	<b>[•]</b>
<b>C1.2b Contract Data provided by the <i>Contractor</i></b>	<b>[•]</b>
[to be inserted from Returnable Documents at award stage]	
<b>C1.3 Proforma Guarantees</b>	<b>[•]</b>

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**Provision of 24-hour Operation and monitoring of Sewage Treatment Plant (Thuthukani and Tutuka) at Tutuka Power Station**

# C1.1 Form of Offer & Acceptance

**Offer**

The Employer, identified in the Acceptance signature block, has solicited offers to enter into a contract for the procurement of:

**Provision of 24-hour operation and monitoring of Sewage Treatment Plants (Thuthukani and Tutuka) at Tutuka Power Station**

The tenderer, identified in the Offer signature block, has examined the documents listed in the Tender Data and addenda thereto and by submitting this Offer has accepted the Conditions of Tender.

By the representative of the tenderer, deemed to be duly authorised, signing this part of this Form of Offer and Acceptance the tenderer offers to perform all of the obligations and liabilities of the *Contractor* under the contract including compliance with all its terms and conditions according to their true intent and meaning for an amount to be determined in accordance with the *conditions of contract* identified in the Contract Data.

Options A or C	The offered total of the Prices exclusive of VAT is	R [●]
Option E	The first forecast of the total Defined Cost plus the Fee exclusive of VAT is	R [●]
	Sub total	R [●]
	Value Added Tax @ 15%	R [●]
	The offered total of the amount due inclusive of VAT is <sup>1</sup>	R [●]
	(in words) [●]	

This Offer may be accepted by the Employer by signing the Acceptance part of this Form of Offer and Acceptance and returning one copy of this document including the Schedule of Deviations (if any) to the tenderer before the end of the period of validity stated in the Tender Data, or other period as agreed, whereupon the tenderer becomes the party named as the *Contractor* in the *conditions of contract* identified in the Contract Data.

Signature(s)

Name(s) \_\_\_\_\_

Capacity \_\_\_\_\_

**For the tenderer:**

\_\_\_\_\_  
(Insert name and address of organisation)

Name & signature of witness

Date

<sup>1</sup> This total is required by the *Employer* for budgeting purposes only. Actual amounts due will be assessed in terms of the *conditions of contract*.

## Provision of 24-hour Operation and monitoring of Sewage Treatment Plant (Thuthukani and Tutuka) at Tutuka Power Station

Tenderer's CIDB registration number:

### Acceptance

By signing this part of this Form of Offer and Acceptance, the Employer identified below accepts the tenderer's Offer. In consideration thereof, the Employer shall pay the Contractor the amount due in accordance with the *conditions of contract* identified in the Contract Data. Acceptance of the tenderer's Offer shall form an agreement between the Employer and the tenderer upon the terms and conditions contained in this agreement and in the contract that is the subject of this agreement.

The terms of the contract, are contained in:

- Part C1            Agreements and Contract Data, (which includes this Form of Offer and Acceptance)
- Part C2            Pricing Data
- Part C3            Scope of Work: Service Information

and drawings and documents (or parts thereof), which may be incorporated by reference into the above listed Parts.

Deviations from and amendments to the documents listed in the Tender Data and any addenda thereto listed in the Returnable Schedules as well as any changes to the terms of the Offer agreed by the tenderer and the Employer during this process of offer and acceptance, are contained in the Schedule of Deviations attached to and forming part of this Form of Offer and Acceptance. No amendments to or deviations from said documents are valid unless contained in this Schedule.

The tenderer shall within two weeks of receiving a completed copy of this agreement, including the Schedule of Deviations (if any), contact the Employer's agent (whose details are given in the Contract Data) to arrange the delivery of any securities, bonds, guarantees, proof of insurance and any other documentation to be provided in terms of the *conditions of contract* identified in the Contract Data at, or just after, the date this agreement comes into effect. Failure to fulfil any of these obligations in accordance with those terms shall constitute a repudiation of this agreement.

Notwithstanding anything contained herein, this agreement comes into effect on the date when the tenderer receives one fully completed original copy of this document, including the Schedule of Deviations (if any).

Signature(s)

Name(s) \_\_\_\_\_

Capacity \_\_\_\_\_

**for the  
Employer**

\_\_\_\_\_  
*(Insert name and address of organisation)*

Name &  
signature of  
witness

Date

Note: If a tenderer wishes to submit alternative tenders, use another copy of this Form of Offer and Acceptance.

**Provision of 24-hour Operation and monitoring of Sewage Treatment Plant (Thuthukani and Tutuka) at Tutuka Power Station**

**Schedule of Deviations to be completed by the *Employer* prior to contract award**

Note:

1. This part of the Offer & Acceptance would not be required if the contract has been developed by negotiation between the Parties and is not the result of a process of competitive tendering.
2. The extent of deviations from the tender documents issued by the Employer prior to the tender closing date is limited to those permitted in terms of the Conditions of Tender.
3. A tenderer's covering letter must not be included in the final contract document. Should any matter in such letter, which constitutes a deviation as aforesaid be the subject of agreement reached during the process of Offer and Acceptance, the outcome of such agreement shall be recorded here and the final draft of the contract documents shall be revised to incorporate the effect of it.

No.	Subject	Details
1	[•]	[•]
2	[•]	[•]
3	[•]	[•]
4	[•]	[•]
5	[•]	[•]
6	[•]	[•]
7	[•]	[•]

By the duly authorised representatives signing this Schedule of Deviations below, the Employer and the tenderer agree to and accept this Schedule of Deviations as the only deviations from and amendments to the documents listed in the Tender Data and any addenda thereto listed in the Tender Schedules, as well as any confirmation, clarification or changes to the terms of the Offer agreed by the tenderer and the Employer during this process of Offer and Acceptance.

It is expressly agreed that no other matter whether in writing, oral communication or implied during the period between the issue of the tender documents and the receipt by the tenderer of a completed signed copy of this Form shall have any meaning or effect in the contract between the parties arising from this Agreement.

**For the tenderer:**

**For the Employer**

Signature \_\_\_\_\_

\_\_\_\_\_

Name \_\_\_\_\_

\_\_\_\_\_

Capacity \_\_\_\_\_

\_\_\_\_\_

On behalf of \_\_\_\_\_  
*(Insert name and address of organisation)*

\_\_\_\_\_

Name & signature of witness \_\_\_\_\_



\_\_\_\_\_

Date \_\_\_\_\_

\_\_\_\_\_

## C1.2 TSC3 Contract Data

### Part one - Data provided by the *Employer*

Clause	Statement	Data
1	<b>General</b>	
	The <i>conditions of contract</i> are the core clauses and the clauses for main Option:	
		<b>A: Priced contract with price list</b> <b>W1: Dispute Resolution Procedure</b>
	dispute resolution Option and secondary Options	<b>W1: Dispute resolution procedure</b>
		<b>X1: Price adjustment for inflation</b> <b>X2: Changes in the Law</b> <b>X17: Low Services Damages</b> <b>X18: Limitation of Liability</b> <b>X19: Task Order</b> <b>X20: Key performance indicators</b> <b>Z: Additional conditions of contract</b>
	of the NEC3 Term Service Contract (June 2005) <sup>2</sup>	
10.1	The <i>Employer</i> is (name):	<b>Eskom Holdings Limited (reg no: 2002/015527/06), a juristic person incorporated in terms of the company laws of the Republic of South Africa</b>
	Address	<b>Registered office at Megawatt Park, Maxwell Drive, Sandton, Johannesburg</b>
	Tel No.	<b>[]</b>
	Fax No.	<b>[•]</b>
10.1	The <i>Service Manager</i> is (name):	<b>TBA</b>
	Address	<b>Tutuka Power Station</b>

<sup>2</sup> Available from Engineering Contract Strategies Tel 011 803 3008 Fax 011 803 3009

	Tel	TBA
	Fax	086 6669270
	e-mail	TBA
11.2(2)	The Affected Property is	<b>Tutuka Power Station</b>
11.2(13)	The <i>service</i> is	<b>Provision of 24 Hour operation and monitoring of Sewage Treatment Plants (Tutuka and Thuthukani) at Tutuka Power Station</b>
11.2(14)	The following matters will be included in the Risk Register	<ol style="list-style-type: none"> <li>1. SHE specification</li> <li>2. Tutuka baseline Risk assessment</li> </ol>
11.2(15)	The Service Information is in	<b>Part 3: Scope of Work and all documents and drawings to which it makes reference.</b>
12.2	The <i>law of the contract</i> is the law of	<b>the Republic of South Africa</b>
13.1	The <i>language of this contract</i> is	<b>English</b>
13.3	The <i>period for reply</i> is	<b>One week</b>
2	<b>The Contractor's main responsibilities</b>	(If the optional statement for this section is not used, no data will be required for this section)
21.1	The <i>Contractor</i> submits a first plan for acceptance within	<b>One week</b>
3	<b>Time</b>	
30.1	The <i>starting date</i> is.	
30.2	The service period is	<b>60 months</b>
30.3		<b>The employer, can terminate the contract at any given time with one months' notice to the contractor should the Municipality take over and render the sewage services to Thuthukani communities.</b>
4	<b>Testing and defects</b>	<b>No data is required for this section of the conditions of contract.</b>
5	<b>Payment</b>	
50.1	The <i>assessment interval</i> is	<b>End of each month</b>
51.1	The <i>currency of this contract</i> is the	<b>South African Rand</b>
51.2	The period within which payments are made is	<b>30 days.</b>
51.4	The <i>interest rate</i> is	<b>(i) zero percent above the publicly quoted prime rate of interest (calculated on a 605 day year) charged by from time to time by the Standard Bank of South Africa (as certified, in the event of any dispute, by any manager of such bank,</b>

whose appointment it shall not be necessary to prove) for amounts due in Rands and

(ii) the LIBOR rate applicable at the time for amounts due in other currencies. LIBOR is the 6 month London Interbank Offered Rate quoted under the caption "Money Rates" in The Wall Street Journal for the applicable currency or if no rate is quoted for the currency in question then the rate for United States Dollars, and if no such rate appears in The Wall Street Journal then the rate as quoted by the Reuters Monitor Money Rates Service (or such service as may replace the Reuters Monitor Money Rates Service) on the due date for the payment in question, adjusted *mutatis mutandis* every 6 months thereafter (and as certified, in the event of any dispute, by any manager employed in the foreign exchange department of The Standard Bank of South Africa Limited, whose appointment it shall not be necessary to prove.

6	<b>Compensation events</b>	Any work or task undertaken outside the agreed scope of work
7	<b>Use of Equipment Plant and Materials</b>	<b>Section 2.20</b> Due to the nature of the service, the contractor must provide their, transport which will be able to carry 10tons of weight, provide own monitoring equipment's.
8	<b>Risks and insurance</b>	
80.1	These are additional <i>Employer's</i> risks	<ol style="list-style-type: none"> <li>1. [●]Environmental contraventions</li> <li>2. [●]Compliance to Tutuka waste water use licence</li> <li>3. [●]Deviation and noncompliance to sampling, analysis and reporting procedure.</li> </ol>
83.1	The <i>Employer</i> provides these insurances from the Insurance Table	<b>as stated for "Format TSC3" available on <a href="http://www.eskom.co.za/live/content.php?Item_ID=9248">http://www.eskom.co.za/live/content.php?Item_ID=9248</a> (See Annexure A for basic guidance).</b>
83.1	The <i>Employer</i> provides these additional insurances	<b>as stated for "Format TSC3" available on <a href="http://www.eskom.co.za/live/content.php?Item_ID=9248">http://www.eskom.co.za/live/content.php?Item_ID=9248</a> (See Annexure A for basic guidance)</b>
83.1	The minimum amount of cover for insurance against loss and damage caused by the <i>Contractor</i> to the <i>Employer's</i> property is	<b>the amount of the deductibles relevant to the event described in the "Format TSC3" insurance policy available on <a href="http://www.eskom.co.za/live/content.php?Item_ID=9248">http://www.eskom.co.za/live/content.php?Item_ID=9248</a></b>
83.1	The minimum amount of cover for loss of or damage to Plant and Materials provided by the <i>Employer</i> is:	<b>the amount of the deductibles relevant to the event described in the "Format TSC3" insurance policy available on <a href="http://www.eskom.co.za/live/content.php?Item_ID=9248">http://www.eskom.co.za/live/content.php?Item_ID=9248</a></b>



9248

83.1	The minimum amount of cover for insurance in respect of loss of or damage to property (except the <i>Employer's</i> property, Plant and Materials and Equipment) and liability for bodily injury to or death of a person (not an employee of the <i>Contractor</i> ) arising from or in connection with the <i>Contractor's</i> Providing the Service for any one event is:	<b>whatever the <i>Contractor</i> deems necessary in addition to that provided by the <i>Employer</i>.</b>
83.1	The minimum limit of indemnity for insurance in respect of death of or bodily injury to employees of the <i>Contractor</i> arising out of and in the course of their employment in connection with this contract for any one event is:	<b>As prescribed by the Compensation for Occupational Injuries and Diseases Act No. 130 of 1993 and the <i>Contractor's</i> common law liability for people falling outside the scope of the Act with a limit of Indemnity of not less than R500 000 (Five hundred thousand Rands)..</b>

## 9 Termination

The contract between the awarded contractor and the employer, can terminated at any given time with one months' notice to the contractor should the Municipality take over the rendered services and render the sewage services to Thuthukani communities.

## 10 Data for main Option clause

<b>A</b>	<b>Priced contract with price list</b>	
20.5	The <i>Contractor</i> prepares forecasts of the final total of the Prices for the whole of the <i>service</i> at intervals no longer than	<b>Monthly</b>

## 11 Data for Option W1

W1.1	The <i>Adjudicator</i> is (Name)	<b>Either State the name of the person selected &amp; complete the contact details below Or, state the person selected from the Eskom Panel of Adjudicators listed in Annexure B to this Contract Data by the Party intending to refer a dispute to him.</b>
	Address	<b>[•]</b>
	Tel No.	<b>[•]</b>
	Fax No.	<b>[•]</b>
	e-mail	<b>[•]</b>
W1.2(3)	The <i>Adjudicator nominating body</i> is:	<b>the Chairman of the Joint Civils Division of the South African Institution of Civil Engineering.</b>

		(See <a href="http://www.jointcivils.co.za">www.jointcivils.co.za</a> ). Only when the dispute arises the adjudicator will be nominated from Annexure B.
W1.4(2)	The <i>tribunal</i> is:	arbitration
W1.4(5)	The <i>arbitration procedure</i> is	the latest edition of Rules for the Conduct of Arbitrations published by The Association of Arbitrators (Southern Africa) or its successor body.
	The place where arbitration is to be held is	[•] South Africa
	The person or organisation who will choose an arbitrator	
	- if the Parties cannot agree a choice or	the Chairman for the time being or his nominee
	- if the arbitration procedure does not state who selects an arbitrator, is	of the Association of Arbitrators (Southern Africa) or its successor body.

## 12 Data for secondary Option clauses

<b>X1</b>	<b>Price adjustment for inflation</b>	
X1.1	The <i>base date</i> for indices is	The anniversary date of the contract.
	The proportions used to calculate the Price Adjustment Factor are: <b>according to the SEIFSA index table</b>	
<b>X2</b>	<b>Changes in the law</b>	
<b>X13</b>	<b>Performance bond (Contractor to supply)</b>	
X13.1	The amount of the performance bond is	R [•]
<b>X17</b>	<b>Low service damages</b>	
<b>X18</b>	<b>Limitation of liability</b>	
<b>X19</b>	<b>Task Order</b>	
X19.5	The <i>Contractor</i> submits a Task Order programme to the <i>Service Manager</i> within	5 days of receiving the Task Order
<b>X20</b>	<b>Key Performance Indicators (not used when Option X12 applies)</b>	
X20.1	The <i>incentive schedule</i> for Key Performance Indicators is in	See Section 4.3.1
X20.2	A report of performance against each Key Performance Indicator is provided at intervals of	Monthly
<b>Z</b>	<b>The <i>additional conditions of contract</i> are</b>	Z1 to Z11 always apply.

## Z1 Cession delegation and assignment

Z1.1 The *Contractor* does not cede, delegate or assign any of its rights or obligations to any person

without the written consent of the *Employer*.

- Z1.2 Notwithstanding the above, the *Employer* may on written notice to the *Contractor* cede and delegate its rights and obligations under this contract to any of its subsidiaries or any of its present divisions or operations which may be converted into separate legal entities as a result of the restructuring of the Electricity Supply Industry and the Electricity Distribution Industry.

## **Z2 Joint ventures**

- Z2.1 If the *Contractor* constitutes a joint venture, consortium or other unincorporated grouping of two or more persons or organisations then these persons or organisations are deemed to be jointly and severally liable to the *Employer* for the performance of this contract.
- Z2.2 Unless already notified to the *Employer*, the persons or organisations notify the *Service Manager* within two weeks of the Contract Date of the key person who has the authority to bind the *Contractor* on their behalf.
- Z2.3 The *Contractor* does not substantially alter the composition of the joint venture, consortium or other unincorporated grouping of two or more persons without the consent of the *Employer* having been given to the *Contractor* in writing.

## **Z3 Change of Broad Based Black Economic Empowerment (B-BBEE) status**

- Z3.1 Where a change in the *Contractor's* legal status, ownership or any other change to his business composition or business dealings results in a change to the *Contractor's* B-BBEE status, the *Contractor* notifies the *Employer* within seven days of the change.
- Z3.2 The *Contractor* is required to submit an updated verification certificate and necessary supporting documentation confirming the change in his B-BBEE status to the *Service Manager* within thirty days of the notification or as otherwise instructed by the *Service Manager*.
- Z3.3 Where, as a result, the *Contractor's* B-BBEE status has decreased since the Contract Date the *Employer* may either re-negotiate this contract or alternatively, terminate the *Contractor's* obligation to Provide the Works.
- Z3.4 Failure by the *Contractor* to notify the *Employer* of a change in its B-BBEE status may constitute a reason for termination. If the *Employer* terminates in terms of this clause, the procedures on termination are P1, P2 and P4 as stated in clause 92, and the amount due is A1 and A3 as stated in clause 93.

## **Z4 Ethics**

- Z4.1 Any offer, payment, consideration, or benefit of any kind made by the *Contractor*, which constitutes or could be construed either directly or indirectly as an illegal or corrupt practice, as an inducement or reward for the award or in execution of this contract constitutes grounds for terminating the *Contractor's* obligation to Provide the Service or taking any other action as appropriate against the *Contractor* (including civil or criminal action).
- Z4.2 The *Employer* may terminate the *Contractor's* obligation to Provide the Service if the *Contractor* (or any member of the *Contractor* where the *Contractor* constitutes a joint venture, consortium or other unincorporated grouping of two or more persons or organisations) is found guilty by a competent court, administrative or regulatory body of participating in illegal or corrupt practices.

Such practices include making of offers, payments, considerations, or benefits of any kind or otherwise, whether in connection with any procurement process or contract with the *Employer* or other people or organisations and including in circumstances where the *Contractor* or any such member is removed from the an approved vendor data base of the *Employer* as a consequence of such practice.

Z4.3 Notwithstanding the provisions of core clause 90.2, the procedures on termination in terms of this clause are P1, P2 and P4 as stated in the core clause 92 and the amount due is A1 and A3 as stated in core clause 93.

## **Z5 Confidentiality**

Z5.1 The *Contractor* does not disclose or make any information arising from or in connection with this contract available to Others. This undertaking does not, however, apply to information which at the time of disclosure or thereafter, without default on the part of the *Contractor*, enters the public domain or to information which was already in the possession of the *Contractor* at the time of disclosure (evidenced by written records in existence at that time). Should the *Contractor* disclose information to Others in terms of clause 25.1, the *Contractor* ensures that the provisions of this clause are complied with by the recipient.

Z5.2 If the *Contractor* is uncertain about whether any such information is confidential, it is to be regarded as such until notified otherwise by the *Service Manager*.

Z5.3 In the event that the *Contractor* is, at any time, required by law to disclose any such information which is required to be kept confidential, the *Contractor*, to the extent permitted by law prior to disclosure, notifies the *Employer* so that an appropriate protection order and/or any other action can be taken if possible, prior to any disclosure. In the event that such protective order is not, or cannot, be obtained, then the *Contractor* may disclose that portion of the information which it is required to be disclosed by law and uses reasonable efforts to obtain assurances that confidential treatment will be afforded to the information so disclosed.

Z5.4 The taking of images (whether photographs, video footage or otherwise) of the Affected Property or any portion thereof, in the course of Providing the Service and after the end of the *service period*, requires the prior written consent of the *Service Manager*. All rights in and to all such images vests exclusively in the *Employer*.

Z5.5 The *Contractor* ensures that all his subcontractors abide by the undertakings in this clause.

## **Z6 Waiver and estoppel: Add to core clause 12.3:**

Z6.1 Any extension, concession, waiver or relaxation of any action stated in this contract by the Parties, the *Service Manager* or the *Adjudicator* does not constitute a waiver of rights, and does not give rise to an estoppel unless the Parties agree otherwise and confirm such agreement in writing.

## **Z7 Health, safety and the environment: Add to core clause 27.4**

Z7.1 The *Contractor* undertakes to take all reasonable precautions to maintain the health and safety of persons in and about the execution of the *service*. Without limitation the *Contractor*:

- accepts that the *Employer* may appoint him as the "Principal Contractor" (as defined and provided for under the Construction Regulations 2003 (promulgated under the Occupational Health & Safety Act 85 of 1993) ("the Construction Regulations") for the Affected Property;
- warrants that the total of the Prices as at the Contract Date includes a sufficient amount for proper compliance with the Construction Regulations, all applicable health & safety laws and regulations and the health and safety rules, guidelines and procedures provided for in this contract and generally for the proper maintenance of health & safety in and about the execution of the *service*; and
- undertakes, in and about the execution of the *service*, to comply with the Construction Regulations and with all applicable health & safety laws and regulations and rules, guidelines and procedures otherwise provided for under this contract and ensures that his Subcontractors, employees and others under the *Contractor's* direction and control, likewise observe and comply with the foregoing.
- Contractor shall provide all necessary PPE, annual medicals, immunisations ( e.g. Hepatitis

B) as per recommendation by medical practitioner and provide proof of compliance to the employer.

Z7.2 The *Contractor*, in and about the execution of the *service*, complies with all applicable environmental laws and regulations and rules, guidelines and procedures otherwise provided for under this contract and ensures that his Subcontractors, employees and others under the *Contractor's* direction and control, likewise observe and comply with the foregoing.

**Z8 Provision of a Tax Invoice and interest. Add to core clause 51**

Z8.1 Within one week of receiving a payment certificate from the *Service Manager* in terms of core clause 51.1, the *Contractor* provides the *Employer* with a tax invoice in accordance with the *Employer's* procedures stated in the Service Information, showing the amount due for payment equal to that stated in the payment certificate.

Z8.2 If the *Contractor* does not provide a tax invoice in the form and by the time required by this contract, the time by when the *Employer* is to make a payment is extended by a period equal in time to the delayed submission of the correct tax invoice. Interest due by the *Employer* in terms of core clause 51.2 is then calculated from the delayed date by when payment is to be made.

Z8.3 The *Contractor* (if registered in South Africa in terms of the companies Act) is required to comply with the requirements of the Value Added Tax Act, no 89 of 1991 (as amended) and to include the *Employer's* VAT number 4740101508 on each invoice he submits for payment.

**Z9 Notifying compensation events**

Z9.1 Delete from the last sentence in core clause 61.3, "unless the *Service Manager* should have notified the event to the *Contractor* but did not".

**Z10 Employer's limitation of liability**

Z10.1 The *Employer's* liability to the *Contractor* for the *Contractor's* indirect or consequential loss is limited to R0.00 (zero Rand)

Z10.2 The *Contractor's* entitlement under the indemnity in 82.1 is provided for in 60.1(12) and the *Employer's* liability under the indemnity is limited to compensation as provided for under the compensation events stated in this contract.

**Z11 Termination: Add to core clause 91.1, at the second main bullet point, fourth sub-bullet point, after the words "against it":**

Z11.1 or had a judicial management order granted against it.

## **Annexure A: Insurance provided by the Employer**

*These notes are provided as guidance to tendering contractors and the Contractor about the insurance provided by the Employer. Details of the insurance itself are available from the internet web link given below.*

1. Services provided in a TSC3 contract could include some element of construction or refurbishment as well as a continuous maintenance or operational service activity. If an event occurs which causes loss or damage, a claim could be made either against the *Employer's* "works" type policy which may be in place for the *Employer's* portion of the Affected Property concerned or against the *Employer's* assets policy which may be in place for the *Employer's* portion of the Affected Property concerned, or both.
2. The cover provided and the deductibles under the works policy are different to those under the assets policy. Each policy has a range of applicable deductibles depending on the location of the Affected Property and the nature of the insurable event.
3. The *Contractor* is required in terms of Contract Data for clause 83 to provide cover for the deductibles in the insurance provided by the *Employer*. This can be provided from his own resources on a 'self insured' basis or obtained by him from his own insurers. In order to assess the extent of this cover, tendering contractors and their brokers should consult the internet web link given below and scroll to '**Format TSC3**' to establish both the cover and the deductibles in relation to the *service* provided in terms of this contract.
4. Tendering contractors should note that cover provided by the *Employer* is only per the policies available on the internet web link listed below and may not be the cover required by the tendering contractor or as intended by each of the listed insurances in the left hand column of the Insurance Table in clause 83.2. In terms of clause 83.1 "the *Contractor* provides the insurances stated in the Insurance Table except any insurance which the *Employer* is to provide". Hence the *Contractor* provides insurance which the *Employer* does not provide and in cases where the *Employer* does provide insurance the *Contractor* insures for the difference between what the Insurance Table requires and what the *Employer* provides.
5. If Marine Insurance is required, the *Contractor* needs to obtain a copy of the latest edition of Eskom's Marine Policies Procedures found at internet website given below.
6. **Further information and full details of all Eskom provided policies and procedures may be obtained from:**

**[http://www.eskom.co.za/live/content.php?Item\\_ID=9248](http://www.eskom.co.za/live/content.php?Item_ID=9248)**

## Annexure B: The *Employer's* Panel of Adjudicators

The following persons listed in alphabetical order of their surname have indicated their willingness to be included in the Eskom Panel of Adjudicators. Their CV's may be obtained by using the contact details provided.

Name	Location	Contact details (phone & e mail)
Nigel ANDREWS	Gauteng	+27 11 860-6760 nigela@quoin.net
Andrew BAIRD	Gauteng	+27 11 803 3008 <a href="mailto:andrewbaird@ecsconsult.co.za">andrewbaird@ecsconsult.co.za</a>
Christopher BINNINGTON	Gauteng	+27 11 888-6141 <a href="mailto:cdb@bca.co.za">cdb@bca.co.za</a>
Peter HIGGINS	UK	+44 1293 873 868 peterhiggins@pdconsult.co.uk
Bruce LEECH	Gauteng	+27 11 290 4000 leech@counsel.co.za
Nigel NILEN	Gauteng	+27 11 465 6001; nilences@global.co.za
Robert St. LEGER	Cape Town	+27 21 794 7488 <a href="mailto:bobst@iafrica.com">bobst@iafrica.com</a>
Peter THURLOW	Gauteng	+27 11 787 6226 <a href="mailto:info@thurlowassoc.com">info@thurlowassoc.com</a>

Information about the Panel and appointment of the selected *Adjudicator* is in \_\_\_\_\_

## C1.2 Contract Data

### Part two - Data provided by the *Contractor*

**[Instructions to the contract compiler: (delete this notes before issue to tenderers with an enquiry)**

Whenever a cell is shaded in the left hand column it denotes this data is optional and would be required in relation to the option selected. In the event that the option is not required select and delete the whole row.]

**Notes to a tendering contractor:**

1. Please read both the both the NEC3 Term Service Contract (June 2005) and the relevant parts of its Guidance Notes (TSC3-GN)<sup>3</sup> in order to understand the implications of this Data which the tenderer is required to complete.
2. The number of the clause which requires the data is shown in the left hand column for each statement however other clauses may also use the same data
3. Where a form field like this [       ] appears, data is required to be inserted relevant to the option selected. Click on the form field **once** and type in the data. Otherwise complete by hand and in ink.

Completion of the data in full, according to Options chosen, is essential to create a complete contract.

Clause	Statement	Data
10.1	The <i>Contractor</i> is (Name):  Address  Tel No.  Fax No.	
11.2(8)	The <i>direct fee percentage</i> is	%
	The <i>subcontracted fee percentage</i> is	%
11.2(14)	The following matters will be included in the Risk Register	
11.2(15)	The Service Information for the <i>Contractor's</i> plan is in:	
21.1	The plan identified in the Contract Data is contained in:	
24.1	The key persons are:  1       Name:  Job:  Responsibilities:  Qualifications:  Experience:  2       Name:  Job	

<sup>3</sup> Available from Engineering Contract Strategies Tel 011 803 3008 Fax 011 803 3009



Responsibilities:

Qualifications:

Experience:

CV's (and further key person's data including CVs) are in .

<b>A</b>	<b>Priced contract with price list</b>
11.2(12)	The <i>price list</i> is in <b>Rates</b>
11.2(19)	The tendered total of the Prices is <b>R</b>
<b>C</b>	<b>Target contract with price list</b>
11.2(12)	The <i>price list</i> is in
11.2(20)	The tendered total of the Prices is <b>R</b>
<b>E</b>	<b>Cost reimbursable contract</b>
11.2(12)	The <i>price list</i> is in

## PART 2: PRICING DATA

### TSC3 Option

<b>Document reference</b>	<b>Title</b>	<b>No of pages</b>
C2.1	Pricing assumptions: Option A	2
C2.2	The <i>price list</i>	[•]

## C2.1 Pricing assumptions: Option A

### The conditions of contract

#### How work is priced and assessed for payment

Clause 11 in NEC3 Term Service Contract, June 2005 (TSC3) core clauses and Option A states:

<b>Identified and defined terms</b>	11	
	11.2	(12) The Price List is the <i>price list</i> unless later changed in accordance with this contract.
		(17) The Price for Services Provided to Date is the total of
		<ul style="list-style-type: none"><li>the Price for each lump sum item in the Price List which the <i>Contractor</i> has completed and</li><li>where a quantity is stated for an item in the Price List, an amount calculated by multiplying the quantity which the <i>Contractor</i> has completed by the rate.</li></ul>
		(19) The Prices are the amounts stated in the Price column of the Price List. Where a quantity is stated for an item in the Price List, the Price is calculated by multiplying the quantity by the rate.

This confirms that Option A is a priced contract where the Prices are derived from a list of items of service which can be priced as lump sums or as expected quantities of service multiplied by a rate or a mix of both.

#### Function of the Price List

Clause 54.1 in Option A states: "Information in the Price List is not Service Information". This confirms that instructions to do work or how it is to be done are not included in the Price List but in the Service Information. This is further confirmed by Clause 20.1 which states, "The *Contractor* Provides the Service in accordance with the Service Information". Hence the *Contractor* does **not** Provide the Service in accordance with the Price List. The Price List is only a pricing document.

#### Link to the *Contractor's* plan

Clause 21.4 states "The *Contractor* provides information which shows how each item description on the Price List relates to the operations on each plan which he submits for acceptance". Hence when compiling the *price list*, the tendering contractor needs to develop his first clause 21.2 plan in such a way that operations shown on it can be priced in the *price list* and result in a satisfactory cash flow in terms of clause 11.2(17).

#### Preparing the *price list*

It will be assumed that the tendering contractor has read Pages 14, 15 and 73 of the TSC3 Guidance Notes before preparing the *price list*. Items in the *price list* may have been inserted by the *Employer* and the tendering contractor should insert any additional items which he considers necessary. Whichever party provides the items in the *price list* the total of the Prices is assumed to be fully inclusive of everything necessary to Provide the Service as described at the time of entering into this contract.

1 As the *Contractor* has an obligation to correct Defects (core clause 42.1) and there is no compensation event for this unless the Defect was due to an *Employer's* risk, the lump sum Prices and rates must also include for the correction of Defects.

2 If the *Contractor* has decided not to identify a particular item in the *price list* at the time of tender the cost to the *Contractor* of doing the work must be included in, or spread across, the other Prices and rates in the *price list* in order to fulfil the obligation to complete the *service* for the tendered total of the Prices.

3 There is no adjustment to lump sum prices in the *price list* if the amount, or quantity, of work within that lump sum item of service later turns out to be different to that which the *Contractor* estimated at time of tender. The only basis for a change to the Prices is as a result of a compensation event. See Clause 60.1.

4 Hence the Prices and rates tendered by the *Contractor* in the *price list* are inclusive of everything necessary and incidental to Providing the Service in accordance with the Service Information, as it was at the time of tender, as well as correct any Defects not caused by an *Employer's* risk.

5 The *Contractor* does not have to allow in his Prices and rates for matters that may arise as a result of a compensation event. It should be noted that the list of compensation events includes those arising as a result of an *Employer's* risk event listed in core clause 80.1.

### **Format of the *price list***

(From page 73 of the TSC3 Guidance Notes)

Entries in the first four columns in the *price list* in section C2.2 are made either by the *Employer* or the tendering contractor.

If the *Contractor* is to be paid an amount for the item which is not adjusted if the quantity of work in the item changes, the tendering contractor enters the amount in the Price column only, the Unit, Expected Quantity and Rate columns being left blank.

If the *Contractor* is to be paid an amount for an item of work which is the rate for the work multiplied by the quantity completed, the tendering contractor enters the rate which is then multiplied by the Expected Quantity to produce the Price, which is also entered.

If the *Contractor* is to be paid a Price for an item proportional to the length of time for which a service is provided, a unit of time is stated in the Unit column and the expected length of time (as a quantity of the stated units of time) is stated in the Expected Quantity column.

## C2.2 the *price list*

<b>Operation on Plant According to scope of Work (Class C) Tutukani</b>	<b>Quantity (personnel)</b>	<b>UOM</b>	<b>Rate per Hour</b>
Process Controller Class II	4	Hrs	
Process Controller Class III	4	Hrs	
Supervisor Process Controller Class V	1	Hrs	
Safety Officer	1	Hrs	
Technician	1	Hrs	
<b>Operation on Plant According to scope of Work (Class C) Tutuka</b>		<b>UOM</b>	<b>Rate per Hour</b>
Process Controller Class II	4	Hrs	
Process Controller Class III	4	Hrs	
Supervisor Process Controller Class V	1	Hrs	
<b>Normal Overtime &amp; Saturday @ 1.5 per month Both Tutukani &amp; Tutuka</b>		<b>UOM</b>	<b>Rate per Hour</b>
Process Controller Class II	2	Hrs	
Process Controller Class III	2	Hrs	
Supervisor Process Controller Class V	1	Hrs	
Safety Officer	1	Hrs	
<b>Sunday/ PH OT @ 2 per month Both Tut</b>		<b>UOM</b>	<b>Rate per Hour</b>
Process Controller Class II	2	Hrs	
Process Controller Class III	2	Hrs	
Supervisor Process Controller Class V	1	Hrs	
Safety Officer	1	Hrs	
<b>Preliminary and General</b>		<b>UOM</b>	
Safety file		Once off	
Medicals		Annually	
PPE (overalls, safety shoes, goggles, hearing protection, gloves, rainsuits, torches, face shield, gumboots)	20	Annually	
Analytical plant equipment's, instruments rentals, Calibration of analytical equipment's and consumables		Monthly	
<b>Travelling</b>		<b>UOM</b>	
Travelling H-W-H Tutuka to Thuthukani		Per Km	
Transportation of Samples/equipment and Chemicals		Per Km	
Accommodation	20	Monthly	
External laboratory Services		Monthly	
Environmental Reports		Monthly	

**Total of the Prices for Part 1**

## PART 3: SCOPE OF WORK

<b>Document reference</b>	<b>Title</b>	<b>No of pages</b>
	This cover page	1
C3.1	<i>Employer's Service Information</i>	
C3.2	<i>Contractor's Service Information</i>	
	Total number of pages	

## C3.1: EMPLOYER’S SERVICE INFORMATION

### Contents

When the document is complete, insert a ‘Table of Contents’. To do this go to: Insert, → Reference, → Index and tables → Table of Contents. Three levels and the title (but not the subtitle) may be shown if the formats used in this template are retained.

Otherwise insert list of contents manually.

Part 3: Scope of Work	23
C3.1: Employer’s service Information	24
1 Description of the <i>service</i>	26
1.1 Executive overview .....	26
1.2 <i>Employer’s</i> requirements for the <i>service</i> .....	28
1.3 Interpretation and terminology .....	31
2 Management strategy and start up.	31
2.1 The <i>Contractor’s</i> plan for the <i>service</i> .....	31
2.2 Management meetings .....	31
2.3 <i>Contractor’s</i> management, supervision and key people .....	33
2.4 Provision of bonds and guarantees .....	33
2.5 Documentation control.....	33
2.6 Invoicing and payment.....	33
2.7 Contract change management .....	34
2.8 Records of Defined Cost to be kept by the <i>Contractor</i> .....	34
2.9 Insurance provided by the <i>Employer</i> .....	34
2.10 Training workshops and technology transfer.....	34
2.11 Design and supply of Equipment .....	34
2.12 Things provided at the end of the <i>service period</i> for the <i>Employer’s</i> use .....	34
2.12.1 Equipment	34
2.12.2 Information and other things	34
2.13 Management of work done by Task Order .....	34
3 Health and safety, the environment and quality assurance	35
3.1 Health and safety risk management .....	35
3.2 Environmental constraints and management .....	36
3.3 Quality assurance requirements .....	36
4 Procurement	37
4.1 People.....	37
4.1.1 Minimum requirements of people employed	37
4.1.2 BBEE and preferencing scheme	37
4.1.3 Accelerated Shared Growth Initiative – South Africa (ASGI-SA)	37
4.2 Subcontracting.....	37
4.2.1 Preferred subcontractors	37
4.2.2 Subcontract documentation, and assessment of subcontract tenders	37
4.2.3 Limitations on subcontracting	37
4.2.4 Attendance on subcontractors	37
4.3 Plant and Materials .....	37
4.3.1 Specifications	37
4.3.2 Correction of defects	<b>Error! Bookmark not defined.</b>
4.3.3 <i>Contractor’s</i> procurement of Plant and Materials	38
4.3.4 Tests and inspections before delivery	38
4.3.5 Plant & Materials provided “free issue” by the <i>Employer</i>	38
5 Working on the Affected Property	39
5.1 <i>Employer’s</i> site entry and security control, permits, and site regulations.....	39
5.2 People restrictions, hours of work, conduct and records.....	39
5.3 Health and safety facilities on the Affected Property .....	39



5.4	Environmental controls, fauna & flora.....	39
5.5	Cooperating with and obtaining acceptance of Others.....	39
5.6	Records of <i>Contractor's</i> Equipment.....	39
5.7	Equipment provided by the <i>Employer</i> .....	39
5.8	Site services and facilities.....	39
5.8.1	Provided by the <i>Employer</i>	39
5.8.2	Provided by the <i>Contractor</i>	39
5.9	Control of noise, dust, water and waste .....	40
5.10	Hook ups to existing works .....	40
5.11	Tests and inspections .....	40
5.11.1	Description of tests and inspections	40
5.11.2	Materials facilities and samples for tests and inspections	40
6	List of drawings	40
6.1	Drawings issued by the <i>Employer</i> .....	40

## 1 Description of the service

### 1.1 Executive overview

Tutuka Power Station Sewage Treatment Plant is a 1.8ML per day. The Raw Sewage from all different areas enters the Plant at the inlet work through screw-type strainer.

#### **Balancing Pond (Pre-aeration)**

The raw sewage is fed to a balancing pond, and then pumped into the aeration basin at a controlled rate.

Pre-aeration and flow balancing takes place in the Balancing Pond. Pre-aeration equipment comprises two submerged Turbine-type aerators, free standing on the bottom of the pond, which provide sufficient oxygenation to reduce the estimated BOD (Biochemical oxygen demand) load by approximately 30% and to maintain solids in suspension.

The pre-aerators are manually controlled from a control panel, situated next to the balancing pond. The hydraulic retention time of the balancing pond at peak flow is approximately 2 hours.

#### **Transfer pump Station**

The transfer pumps are used to transfer pre-aerated sewage from the Balancing Ponds to the Aeration Tank.

The pumps operate one duty/one standby on HAND/OFF/AUTO control in the local control panel. Float level switches will be pre-set to allow the duty pump to run between low and high settings. 2 x 380 V submersible pump, and a pumping rate of 34 l/sec.

#### **Screening**

A manually raked screen angled at 45° is installed in the inlet chamber to the aeration tank. The pumped sewage from the Transfer Pump Station is discharged just ahead of the screen.

Collected solid matter on the screen must be raked up on to the drainage tray, where drainage water is returned to the inlet channel. The screen must be raked at least once per shift.

Dewatered screenings should be removed for disposal by burying or burning and dried screenings should not be allowed to blow around the site area.

#### **Aeration Pond**

The two vertical surface turbine aerators provide the means to aerate the sewage and keep the contents of the aeration tank completely mixed at all times. The strong turbulence allows close contact of the raw sewage and the purifying bacteria.

The requirements in terms of O<sub>2</sub> are of three kinds, i.e. the oxygen necessary for the destruction of the BOD and the oxygen necessary for the life of the bacterial mass contained in the tank, and for oxidation of ammonia.

Actually, these requirements are theoretical, for it is necessary to take into consideration all the corrective factors in the transfer of the oxygen to the ambient medium. This result in an increase in the quantity of oxygen which must be supplied.

Dissolved oxygen level should be maintained at between 1, 0 and 2,0mg/l for optimum operation of the aeration system. This is normally done by making use of the aeration timing controls to match peak inflow periods.

The average hydraulic retention time at average dry weather flow is approximately 14 hours. The solids retention time at a mixed liquor suspended solids, concentration of 4000 mg/l is approx. 19 hours. The contents of the aeration tank are referred to as 'mixed liquor'

The aerators may be controlled manually or automatically by means of a 24-hour timer switch situated in the main control panel. The auto timer can be set for aerators to run independent of each other for any required period to within a half hour.

The running periods for the aerators can be set on auto timer control to coincide with peak flow periods.

The aerator immersion is set at +50 mm which is established by the difference between water level and the top of the aerator cone. This aeration immersion can be varied by raising or lowering the level of the outlet weir which is fitted with slotted fixing holes, thus providing a further means of controlling oxygen input. Following a lengthy period of aeration in the aeration basin the activated sludge liquor overflows into the settling tank/clarifier via an inlet pipe up the centre column of the clarifier.

### **Settlement Tank (Clarifier)**

Mixed liquor from the aeration tank passes over the control weir and into the clarifier through the centre column and out through inlet ports to the main settlement area of the tank. Settled sludge is scraped to the centre concentrating hopper in the floor of the tank by means of rotating scraper and is displaced through a pipe to the return sludge sump. The sludge discharge rate is variable by means of a series of discharge pipe rings fitted to the outlet end of the vertical sludge pipe. The rings which are self-locating will vary the height of the sludge pipe and will therefore vary the sludge draw off rate. The sludge discharge rate should be approximately 100% of the plant average dry weather flow rate (22l/sec.)

Sludge from the sludge sump is returned to the aeration pond by means of a submersible pump where it is used to maintain the necessary concentration. Excess sludge must be extracted at regular intervals approximately once a week during operation.

Surface floating matter is removed by the scum skimmer sweeping the scum to a scum outlet box, from where it is discharged to the return sludge sump by the automatic operation of a plug type valve operated by a striker bar on the rotating bridge every revolution of the tank.

Clear water overflows the serrated weir plate into the outside launder and is discharged through a short pipe to the chlorine contact tank. A baffle plate prevents surface matter overflow. Weir and baffle plates must be kept clean by regular scrubbing and washing.

From the chlorination tank, the clarified water flows to the maturation pond for final polishing and storage prior to discharge from the treatment plant.

### **Sludge Return**

Sludge and scum collected in the sludge sump is returned to the inlet end of the aeration tank by means of two solids handling submersible pumps, operating one duty and one on standby. Three mercury float level switches will be pre-set to allow the duty pump to run between low and high level settings.

The standby pump will only start if the duty pump fails, or if the high level switch is made. Pump change over should be done fixed duty periods to balance wear & tear on the pumps.

The discharge valves on both sludge return pumps must stay in the open position, so that pump changeover is effected only by switching pump duty from Pump 1 to Pump 2, or vice versa.

Two pumps will only be run simultaneously under emergency conditions as the plant is designed to cope with the delivery rate of one pump.

Should a pump clog with solid matter, quick clean out facilities by way of quick opening hand holes in the pump body are provided.

The pumps are self-priming and will only require hand priming should the pump be taken out of service for any reason and the pump body drained.

Each pump is fitted with non-return valve and gate valve, discharging the sludge through a manifold into the return sludge pipeline and from there back to the aeration tank.

Ideal operating range is between 35% and 45% sludge in the aeration tank. The mixed liquor suspended solids (MLSS) should be maintained at between 3 500 mg/l and 4 500 mg/l, corresponding to a sludge volume of 350 to 450 ml/l. should the sludge concentration be higher, recirculation to the aeration tank must be stopped and the sludge pumped to the drying beds.

This is done by:

Opening the valve to the selected sludge drying bed.

Opening the valve on the delivery pipeline to the sludge drying beds.

Closing the valve on the return sludge pipeline to the aeration tank.

When the drying bed has sufficient sludge discharge to it, the valve operation is reversed to allow normal sludge return back to the aeration tank.

#### **Sludge Drying Beds.**

Six sludge drying beds are available for dewatering waste sludge as necessary. Sludge is discharged to the selected drying bed by opening the inlet valve and allowing sludge to flow on to the drying bed to a depth of  $\pm 150$  mm.

Care should be taken to ensure that the concrete slab is in position to prevent wash away of sand media.

Water will drain through the sand and stone bed and gravitate back to the sludge sump.

The sludge held on the surface of the sand bed will dry out to a cake over a period of days, depending on weather conditions. The dried sludge layer is then removed by hand for disposal, ensuring that only a minimal amount of sand is removed with the sludge. After removal of the dried sludge the sand bed must be levelled ready for re use.

After an extended period of use it may be necessary to top up the sludge drying bed with sand

### **1.2 Employer's requirements for the service**

The scope of work covered in this contract is the operation, monitoring, and management of the sewage plants (Thuthukani and Tutuka) at Tutuka Power Station. The contractor shall provide split supervisory for each plant, labour (Process controllers) for each plant, Multiparameter photometer, Preform Jar test Sludge and volume index) and plant optimisation. The contractor must provide with monitoring equipment's and ensure that they are calibrated, verified, and maintained and per manufactures instruction. The contractor must perform routine plant checks and reporting of defects. Operation personnel of the plant must be in accordance with regulation 3630. The contractor must provide a Chemical Technician with a National diploma in Analytical Chemistry, Chemical Engineering and water care and a minimum 2 years' relevant experience. The Contractor must provide a safety officer with relevant Diploma.

**Prerequisites:**

- Experience in operation of sewage treatment works and in activated sludge and SBR.

**Scope of work for Thuthukani and Tutuka sewage plants**

- The term of this contract shall be for 5 years, subject to periodic assessment and interventions to be done by employers as specified below. The service provider must provide the following:
  - Operation, analysis, and optimisation of currently installed sewage treatment plant to meet all Tutuka water use license compliance for water discharge.
  - Contractor to ensure that we and troubleshoot the sewage treatment plants to ensure we achieve 95% in analytical and microbiological parameters as per Tutuka water use licence.
  - Improvement of current operational practises
  - Provide technical support and advice to employer on modifications or investigations concerning the sewage plants.
  - The contractor shall provide all PPE required for the operational of the sewage plants.
  - The contractor shall provide transport (LDV) for transportation of operational equipment's, chemicals that necessary to perform the operation.
  - Keep the register for every person visiting the plant.
  - Record the readings from the meters: Inflow and Outflow
  - Clean the area of the Macerator and empty the debris bin in hazardous bin.
  - Clean the Grit channel.
  - Keep the area underneath the sensor of the inflow meter always free of debris.
  - Always be alert that the Blowers are on and are in working order.
  - Always be alert that the Aerators are working and complete their check sheet accordingly.
  - Always be alert that Poly Aluminium chloride is dosed when Aerators are on load.
  - Check that the pumps from the Aeration Tank are working.
  - Check the rate of Poly aluminium chloride dosing (Jar test) and adjust accordingly to optimise the plant.
  - Check the Poly Aluminium chloride if it contains the chemical, refill when it is low.
  - Check the Clarifier surface; clean the foam with water from the hose pipe.
  - Clean the Clarifier weir with Granular HTH using hard broom.
  - Ensure the Clarifier Bridge is rotating.
  - Note the cleanliness of the water from the clarifier and if there is carry over.
  - Ensure that there is always Chlorine chips in the dispenser and dispenser is closed.
  - Check the water supply to the Chlorine chips is open and the flow is not interrupted.
  - Check the flow of sludge in the sludge pit.
  - Note the rate of flow and the thickness of the sludge in the sludge pit.
  - Note that the sub miscible pumps in the pit are working.
  - Check the sludge in the beds if it is dry.
  - Remove and clear drying beds that contain dry sludge and record it.
  - Drain sludge from Aeration tank when SVI is 400g/l.
  - Operate the draining valves together with the RAS valves during draining of sludge.
  - Take the samples according to the planned times label them clearly.
  - Keep the plant always clean.
  - Report anything unusual that is happening and note the time it happened.
  - Outsource samples weekly to an accredited laboratory for analysis as per Water Use License.

**Deliveries:**

- Submission of monthly report to the employer's system engineer and must include the following.
  1. Optimisation plan for both plants to achieve compliance of 95%
  2. List of defects for both plants on weekly basis to track progress.
  3. Daily update on plant progress
  4. Adherence to green drop programmes
  5. Provide trainings as per WWTP skills matrices.

- The contactor must employ a class **V** inspector to review the monthly report before they are submitted to the employer.
- The monthly report must be accompanied by proof of classification of the inspector (class V) and of a supervisor (class III).
- All monthly reports must be submitted to the employer not later than 5 days after each month end.
- The contractor supervisors to attend all plant related daily and monthly meetings.

### **Obligation of the contractor**

1. The plants (both Tutuka and Thuthukani sewage treatment) are class C and shall be operated in accordance with Tutuka Power Station Water Use License conditions, the operating manuals, all the related plant procedures, and Regulation 3630 requirements.
2. The process controllers shall be classified in accordance with Regulation 3630 and Green drop guidelines.
3. The number, duties, training, qualifications and compulsory medical examination of the persons employed at the sewage plants shall be in accordance with the requirements of the plant's registration certificate issued in accordance with Regulation 3630.
4. The chemical stock shall be maintained at the minimum of 50% at which it must be reported to the contract supervisor.
5. The contractor shall provide transportation to transport all required chemicals (Chlorine chip buckets and Poly aluminium chloride), operational equipment's that are necessary to fulfil the operational duties (**LDV**)

### **Plant inspections**

The following plant inspections should be carried out at least twice per shift, to ensure continuous and safe operation of plant.

**Note:** Plant condition should be logged, and all abnormalities and defects must be reported.

Inlet screens free of obstructions  
Balancing pond level  
Transfer pumps status  
Aeration pond level  
Aeration pond outlet screen free of obstructions  
Clarifier condition  
Clarifier bridge operational  
Sludge return pump status.  
Chlorination status  
Pond level (Maturation Pond)  
Chemicals levels

### **Staff**

- The plant shall be monitored 24 hours a day and seven days a week.
- Every staff member must sign the attendance register that would be kept at the Sewage treatment plant
- Submit daily completed check sheets compiled by the employer.
- The number, training, qualifications of all staff members employed at the sewage treatment works shall be in accordance with regulation 3630.
- The contractor must employ a Chemical technician with a National diploma in Chemistry/ Chemical engineering or Water care with a minimum of 2-year relevant experience (Class V)
- Contractor shall employ a safety officer to be responsible for both sewage plants.
- Class C (Thuthukani sewage treatment plant) type plant, number of operators to be present is as follows:
  - Site supervisor for each plant day shift only (1) – Class V Process controller/operator

- Operator per shift (4) – Class II operator/ process controller
  - Operator per shift (4) – Class III operator/ process controller
- Class C (Tutuka sewage treatment plant) type plant, number of operators to be present is as follows:
    - Site supervisor for each plant day shift only (1) – Class V Process controller/operator.
    - Operator per shift (4) – Class II operator/ process controller
    - Operator per shift (4) – Class III operator/ process controller
  - Persons employed at the treatment works shall be registered as per Regulation 3630 and Eskom must be provided with proof.
  - Employees shall be dedicated to the treatment works plant operation and plant optimisation.
  - **All operator's/process controllers shall be trained in' Green drop programme, wastewater treatment, Hazardous chemicals substances and a copy of their certificate must be submitted to Eskom. The certificate is only valid for one (1) year and must be renewed annually.**
  - All employees must be issued with required personal protective equipment (Respirator; Safety boots; Goggles; Overalls; Dust mask; Rain wear; Gloves; Gum boots) and a copy with all the issued PPE must be handed to Eskom on an annually basis.
  - **The staff working on the plant must be immunised as per safety and health requirements and proof of immunisation must be provided to Eskom.**
  - The staff must undergo medical screening annually by registered medical practitioner and copies of the medical screening must be sent to the Eskom (Tutuka Power Station) medical practitioner.
  - The Contractor shall submit a weekly plant report to the Eskom representative on the plant conditions.

### 1.3 Interpretation and terminology

None

## 2 Management strategy and start up.

### 2.1 The Contractor's plan for the service

In the TSC3 the *Contractor's* plan is his "design" for performing the *service* throughout the *service period*. Section 2 of the *conditions of contract* describes what the *Contractor* is to show in his plan both in the core clauses and some additional requirements in each of the main Options.

The extent of the *Contractor's* plan will depend on whether the *Contractor* is required to develop a plan in accordance with the *Employer's* broad outline of the *service* or whether the *Employer* has provided a plan for the *Contractor* to follow. Read the TSC3 Guidance Notes pages 21 and 22 for more information on the *Contractor's* plan.

Use this section to describe any particulars which must be taken into account by the *Contractor* in developing his plan as required by clause 21.2. For example, information about the order and timing or method of carrying out particular items of work.

List technical reporting and scheduling requirements which are to be incorporated into the *Contractor's* plan.

### 2.2 Management meetings

Regular meetings of a general nature will be convened and chaired by the *Contract Manager* as follows:

Title and purpose	Approximate time & interval	Location	Attendance by:
Departmental meetings	As per schedules	Tutuka chemical	Employer, Contractor,

Safety meetings Work Stoppage meetings		services	and Sewage plant supervisor Tech chemistry, plant Shift supervisor
Overall contract progress, plant optimisation feedback and presentation of the monthly report	Twice Monthly	Tutuka chemical services	Employer, Contractor, and Sewage plant Snr supervisor Tech chemistry
Thuthukani and Tutuka sewage plants defect progress report	Weekly	Tutuka Chemical Services	<i>Employer, Contractor and Sewage plant Snr supervisor Tech chemistry</i>
Plant Related Meetings (Plant Focus)	Daily (Monday – Friday)	Outside Plant Boardroom	<i>Employer various stakeholders and Sewage plant Supervisor</i>

All meetings shall be recorded using minutes or a register prepared and circulated by the person who convened the meeting. Such minutes or register shall not be used for the purpose of confirming actions or instructions under the contract as these shall be done separately by the person identified in the *conditions of contract* to carry out such actions or instructions.



## 2.3 Contractor's management, supervision and key people

Employer: Eskom  
Contract Manager: TBA  
Contract Supervisor: Snr supervisor Tech Environment Section (Chemical Services)  
Safety Officer: TBA

Supplier:

## 2.4 Provision of bonds and guarantees.

The form in which a bond or guarantee required by the *conditions of contract* (if any) is to be provided by the *Contractor* is given in Part 1 Agreements and Contract Data, document C1.3, Sureties.

The *Employer* may withhold payment of amounts due to the *Contractor* until the bond or guarantee required in terms of this contract has been received and accepted by the person notified to the *Contractor* by the *Service Manager* to receive and accept such bond or guarantee. Such withholding of payment due to the *Contractor* does not affect the *Employer's* right to termination stated in this contract.

## 2.5 Documentation control

All contractual communications will be in the form of properly compiled letters or forms attached to e-mails and not as a message in the e-mail itself.

Every document or report should have the 4600 number; Task order should have both 4600 and 4500 number and the invoice should have both 4600 and 4500 numbers.

The person representing the Employer at Tutuka Power Station will issue each Task Order to the Supplier. Each Task Order will be submitted at least one week prior to the starting date.

## 2.6 Invoicing and payment

The Z clauses make reference to invoicing procedures stated here in this Service Information.

The invoice must be sent to APS with details e.g. Contract number, Invoice number, VAT number and the Order number.

Breakdown with commensurate with price list is shown on each invoice.  
Only original invoices will be accepted.

Within one week of receiving a payment certificate from the *Service Manager* in terms of core clause 51.1, the *Contractor* provides the *Employer* with a tax invoice showing the amount due for payment equal to that stated in the *Service Manager's* payment certificate.

The *Contractor* shall address the tax invoice to:

Finance Department  
Eskom Holdings Limited  
Tutuka Power Station  
Private Bag  
Standerton  
2340

- Name and address of the *Contractor* and the *Service Manager*.
- The contract number and title.

- *Contractor's* VAT registration number;
- The *Employer's* VAT registration number 4740101508;
- Description of service provided for each item invoiced based on the Price List;
- Total amount invoiced excluding VAT, the VAT and the invoiced amount including VAT;
- (add other as required)

Add procedures for invoice submission and payment (e. g. electronic payment instructions)

## 2.7 Contract change management

Shall be communicated to all parties affected in writing if/when it occurs.

## 2.8 Records of Defined Cost to be kept by the *Contractor*

## 2.9 Insurance provided by the *Employer*

First read TSC3 Core Clause 86.1 and then add anything necessary for the management of insurance related issues such as a cross reference to where procedures for making claims can be found. Also provide contact details for persons capable of being able to answer any insurance related queries the *Contractor* may have, as well as to whom the information required by Marine Insurance (if any) may be addressed.

## 2.10 Training workshops and technology transfer

- The contractor must ensure training workshops for wastewater treatment to enhance the employees skills are done and competent as per regulation 3630, and provide proof of competence.

## 2.11 Design and supply of Equipment

- All dosing equipment and storage tanks as specified by this scope must be supplied and maintained by the *Employer* for the duration of the contract.
- After the contract has expired all equipment belonging to the *Contractor* must be removed from site, Tutuka Power Station, within a period of two weeks.

## 2.12 Things provided at the end of the *service period* for the *Employer's* use

### 2.12.1 Equipment

None

### 2.12.2 Information and other things

Contractor to supply a monthly report on the efficiency of the treatment program detailing all bacteriological quality (Planktonic and Sessile as specified in the scope of work under Technical and Specifications tables.

## 2.13 Management of work done by Task Order

Task order will be sent to the Supplier when service is due as per the contract prescribed schedule. The Supplier must respond by sending a program on the job and duration of the job.

### 3 Health and safety, the environment and quality assurance

#### 3.1 Health and safety risk management

In addition to the requirements of the laws governing health and safety, Eskom may have some additional requirements particular to the *service* and the Affected Property for this contract. The text below provides for these being attached as an Annexure to this Service Information. PLEASE ALSO READ CORE CLAUSE 27.4 TOGETHER WITH Z7 IN THE ADDITIONAL CONDITIONS OF CONTRACT TO MAKE SURE THAT WHATSOEVER IS INCLUDED IN THE ANNEXURE FOLLOWS ON FROM THOSE CLAUSES.

The Divisional/Regional Safety Risk Manager or his representative having jurisdiction over the *service* must provide the relevant safety, health and environmental (SHE) criteria for incorporation into this Service Information. The SHE specification / scope must be signed off by the Divisional/Regional Safety Risk Manager or his representative confirming that the applicable safety criteria have been taken into account.

The Commodity Manager / Buyer must refer the tender to the Divisional/Regional Safety Risk Manager or his representative in order to evaluate against enquiry-specific safety criteria.

The Divisional Safety Risk Managers who will be responsible for the allocation of resources to assist P&SCM with the above processes are as follows:

- Generation: Roley McIntyre
- Transmission: Tony Patterson
- Distribution: Alex Stramrood
- Enterprises: Jace Naidoo
- Corporate: Kerseri Pather

#### Tutuka Safety Requirements

##### A. Risks

Number	Hazard	Risks	Control
1	Noise (All over the plant)	NIHL	Ear Protection
2	Dust (Localised areas. Indicated by safety Signs)	Respiratory	Dust Musk
3.	Falling objects	Physical Injuries (WCS Death)	<ul style="list-style-type: none"> <li>• Hard hat</li> <li>• Good House keeping</li> </ul>
4	Tripping Hazard	Physical Injuries	Safety Shoes
5	Biological	Infections	<ul style="list-style-type: none"> <li>• Disposable Gloves</li> <li>• Musk</li> </ul>
6	Chemical	Chemical burn	<ul style="list-style-type: none"> <li>• Acid resistant overall</li> <li>• Safety Shoes</li> <li>• Gloves</li> </ul>

- The type of PPE needed for the project will be determined by the task risk assessment but taking into consideration the generic risk found at our plant.

##### B. Procedures and legislations:

1. Occupational health and safety act 85 of 1993 and Construction regulation
2. Lifesaving rules Procedure
3. Eskom Contractors Management procedure

##### C. Road Safety

- a. Speed limit: 40km/h
- b. By passing Speed humps not allowed

- c. Transporting People at the back of the bakkie not allowed
- d. Buckle up always.
- e. Park only at demarcated areas

**D. Sanitation**

- a. Toilets for both genders are available at the plant

**E. Emergency**

- a. The emergency number for Tutuka is Pax: 5400
- b. Proto team is available for any type of emergencies.
- c. Emergency alarms are tested every Friday 11H00

**F. Access**

- a. Before access can be granted the following must be met:
  - i. Safety file checked and approved.
  - ii. SHE Induction attended and up to date medical fitness certificate.

### 3.2 Environmental constraints and management

All spillages during delivery and dosing must be reported to the *Employer* immediately. The Contractor must respond to any chemical spillages which occurs in his/her absence within 24 hours of the incident. Where rehabilitation is needed the Contractor will be held responsible and will carry the cost.

### 3.3 Quality assurance requirements

- Quality assurance requirements as per QM-58 Supplier Contract Quality Requirements Specification
- The contractor must supply equipment's for plant monitoring as follows:
  1. Chlorine (Cl<sub>2</sub>) analysers (**for both plants**) for both free and total Chlorine in Parts per million and provide necessary reagents to perform the analysis.
  2. Portable Dissolved oxygen **analyser ppb-ppm level (for both plants)**
  3. Bench top pH (Hydrogen ion) and conductivity analyser (**for both plants**)
- The contractor must ensure calibration, verification, reliability, and maintenance of the equipment's for monitoring supplied for both plants.
- The samples must be collected by *Contractor* for onsite laboratory analysis and Outsourcing. These samples must be analysed by both *Employer* and *Contractor* for quality assurance and control. Both reports will be discussed during the monthly meetings.
- The contractor must employ an ISO 17025 accredited laboratory for all required analysis and provide proof of the accreditation.
- The contractor must do plant optimisation to ensure compliance to the Tutuka water use licence water quality requirements.
- The contractor must employ the competent laboratory that will supply results within and turnaround time of **5 days** for each set of analysed samples.
- The contractor must perform and comply to all required analysis as per Tutuka water use license.
- The Chemical Technician employed by the contractor must monitor analyse generated results e.g. (Chlorine, Turbidity, Sludge volume index, Dissolved oxygen and perform plant optimisation.
- The Chemical Technician employed by the contractor must review all check sheets.
- The Chemical Technician employed by the contractor must perform chemical dosing verifications for all chemicals dosed and adjust accordingly.

## 4 Procurement

### 4.1 People

#### 4.1.1 Minimum requirements of people employed.

- Process Controller Class II classified on green drop program with minimum of two years related working experience.
- Supervisor Process Controller Class V classified with National diploma in Chemistry/ Chemical engineering or Water care on green drop program with minimum of three years related working experience.
- Safety Officer with relevant qualification and minimum of two years relevant working experience.
- Chemical Technician with a National diploma in Chemistry/ Chemical engineering or Water with a minimum of two years relevant experience.

#### 4.1.2 BBBEE and preferencing scheme

The *Contractor* shall provide the verification certificate.

#### 4.1.3 Accelerated Shared Growth Initiative – South Africa (ASGI-SA)

### 4.2 Subcontracting

#### 4.2.1 Preferred subcontractors

#### 4.2.2 Subcontract documentation, and assessment of subcontract tenders

#### 4.2.3 Limitations on subcontracting

#### 4.2.4 Attendance on subcontractors

### 4.3 Plant and Materials

#### 4.3.1 Specifications

Specifications listed below are subject to change according to Eskom Corporate Standards. The *Contractor* must adjust his/her program accordingly to accommodate the specification. Eskom - Tutuka Power Station will communicate any changes of the specifications to the *Contractor*.

Table 1 bacteriological quality (planktonic)

PARAMETER	TARGET
Total aerobic bacteria	10 <sup>4</sup> CFU/ml
Total anaerobic bacteria	10 <sup>3</sup> CFU/ml
H <sub>2</sub> S producers	<50 CFU/ml
Chlorophyll A	<25 ug/kg

Table 2 Bacteriological quantity (sessile)

PARAMETER	TARGET
Total aerobic bacteria	<10 <sup>6</sup> CFU/ml
Total anaerobic bacteria	<10 <sup>5</sup> /CFU/ml
H <sub>2</sub> S producers	<100/CFU/ml

Table 3 Chemical Analysis

PARAMETER	TARGET
pH	6.0 – 9.0
Electrical Conductivity (mS/m)	28
Nitrate (mg/l)	0.5
Ammonia mg/l)	0.5
Chemical Oxygen Demand (mg/l)	18
Faecal Coliforms (counts/100ml)	<60
Orthophosphate (mg/l)	0.20
Chloride (mg/l)	18
Fluoride (mg/l)	0.3

**4.3.2 Contractor's procurement of Plant and Materials**

**4.3.3 Tests and inspections before delivery**

**4.3.4 Plant & Materials provided "free issue" by the Employer.**

## **5 Working on the Affected Property**

### **5.1 *Employer's* site entry and security control, permits, and site regulations.**

The Supplier must get Temporary Gate Pass for the duration of the Contract as soon as they attended Safety Induction.

### **5.2 People restrictions, hours of work, conduct and records**

Dosing and delivery must be done between 07h00 and 1600 Monday to Friday.

### **5.3 Health and safety facilities on the Affected Property**

If any Incident happens the *Contractor* must send the injured to the Medical Centre for Treatment and inform the Employer.

### **5.4 Environmental controls, fauna & flora**

All spillages during delivery and dosing must be reported to the *Employer* immediately. The Contractor must respond to any chemical spillages which occurs in his/her absence within 24 hours of the incident. Where rehabilitation is needed the Contractor will be held responsible and will carry the cost.

### **5.5 Cooperating with and obtaining acceptance of others**

### **5.6 Records of *Contractor's* Equipment**

### **5.7 Equipment provided by the *Employer***

### **5.8 Site services and facilities**

#### **5.8.1 Provided by the *Employer***

The *Employer* will arrange an access permit to Tutuka's site for the *Supplier's* personnel.  
The *Employer's* medical centre and facilities will be available for any minor and/ or major injuries to the *Supplier's* personnel, during execution of his/her duties.  
The *Supplier* will have access to the *Employer's* staff in order to provide service.

#### **5.8.2 Provided by the *Contractor***

- The *Supplier* must provide his/her employees with appropriate PPE for execution of his/her duties.
- The Supplier must provide reliable transport for employees.
- The supplier must provide reliable transport operational equipment and chemicals necessary for the day-to-day operation of both plants.

## 5.9 Control of noise, dust, water and waste

The *Supplier* must provide his/her employees with appropriate PPE for execution of his/her duties i.e. Hardhats, Ear protection, overalls, goggles, face shields, gloves and e.t.c.

## 5.10 Hook ups to existing works

## 5.11 Tests and inspections

### 5.11.1 Description of tests and inspections

- Samples must be taken report submitted to the *Employer* on weekly basis.
- Chlorine, Sludge volume index, Dissolved oxygen must be done as per Eskom's instruction requirements, and plant optimised accordingly.
- Jar test must be done twice a month for both (Thuthukani and Tutuka) sewage plants.

### 5.11.2 Materials facilities and samples for tests and inspections

- Contractor to provide external laboratory for analysis as per Tutuka water use license requirements.
- Contractor to provide all necessary testing equipment's and consumables as per operational equipment manual.

**Clause 3: In an event of when any instrumentation necessary for monitoring of the plants have failed or deemed out of commission, the contractor/supplier shall ensure that they are fixed and brought back to service within 7 working days.**

### 5.11.3 Procedures

The contractor must ensure the following instructions are understood and adhered to by the employees:

- Tutuka water use licence.
- Eskom incidents manage.
- Tutuka waste management Instruction
- All wastewater treatment plant instructions

## 6 List of drawings

### 6.1 Drawings issued by the *Employer*.

This is the list of drawings issued by the *Employer* at or before the Contract Date and which apply to this contract.

Drawing number	Revision	Title
None		