



रामागुण्डम फर्टिलाइजर्स एण्ड केमिकल्स लिमिटेड

## **Ramagundam Fertilizers & Chemicals Limited**

(A Joint venture company of NFL, EIL & FCIL)  
4th Floor, KRIBHCO Building, SECTOR-1,  
NOIDA – 201 301

**BIDS ARE INVITED  
FOR  
“CONTINUOUS OPERATION AND MONITORING OF  
COOLING WATER TREATMENT PROGRAM INCLUDING  
SUPPLY OF CHEMICALS”  
AT  
FERTILIZER CITY, RFCL PLANT, RAMAGUNDAM  
(TELANGANA)**

**e-TENDER No: RFCL - 54776**

**MARCH -2023**

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*Enclosures shall form part of NIT*

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**SPECIAL INSTRUCTIONS TO TENDERERS****1. 1.00 Mode of Tendering:**

Ramagundam Fertilizers and Chemicals Ltd. NEW DELHI (A Joint Venture of NFL, EIL, FCIL, HTAS, GAIL & Govt. of Telangana) has decided to float tender for "Cooling Water Treatment Programme and supply of Chemicals to RFCL Plant, Ramagundam", through e-tendering. The NIT will be posted on website <https://rfcl.abcprocure.com/EPROC/> from where the registered vendors will be able to download the tender documents for participation in the tender and submit their bids online. The tender submission, tender closing and opening will be done electronically and online. The NIT shall also be posted on company's homepage i.e., <https://rfcl.co.in./opentender.php>

RFCL has appointed **M/s. e-Procurement Technologies Ltd, Ahmedabad** as service provider for carrying out e-Procurement. Also, as per IT ACT 2000, use of digital signature certificate shall be mandatory for participating in e-tendering process.

It is presumed that accordingly, you can submit your bid and participate in this tender as per the requirements of the system. However, in case of any help/clarification, you may contact any one of the following:

**a) RAMAGUNDAM FERTILIZERS AND CHEMICALS LTD-**

<b>Sh. Shashi Prakash,</b> Sr. Manager (C&P) -I Ramagundam Fertilizers & Chemicals Ltd , 4 <sup>th</sup> Floor, Wing-A, Kribhco Bhawan, sector-1 Noida -201301 Contact No.-0120-2553614 e-mail: <a href="mailto:sprakash@rfcl.co.in">sprakash@rfcl.co.in</a>	<b>Sh. Sudhir Sharma,</b> Sr. Manager (C&P) -II Ramagundam Fertilizers & Chemicals Ltd 4 <sup>th</sup> Floor, Wing-A, Kribhco Bhawan, sector-1 Noida -201301 Contact No.-0120-2553615 e-mail: <a href="mailto:sudhirsharma@rfcl.co.in">sudhirsharma@rfcl.co.in</a>
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**b) M/s. E-Procurement Technologies**

1	Approval of Profile & DSC Verification	Help Desk	+91 - 63532 17080, +91-90990 90830	<b>info@abcprocure.com</b> <b>dsc@abcprocure.com</b>
2	e-Tender Submission	Help Desk	+91 9904406300 , +91 9510812960 , +91 9265562821 , +91 6354919566	<a href="mailto:support@abcprocure.com">support@abcprocure.com</a>
3	e-Auction related Queries	Help Desk	+91 - 98799 96111, 99044 07997, 95108 13415	
4	<b>Office Hours:</b> Monday to Friday - 10:00AM to 07:30PM (IST) 1st, 3rd and 5th Saturday - 10:00AM to 06:00PM (IST) 2nd and 4th Saturday – Holiday			

2. (a) Pre-Requisites for System using e-Procurement sites:

- Windows 7, 8, 10 professional
- A computer system with at least 1 GB RAM and Internet Connectivity.
- Internet Explorer 8.0, 9.0 and above or Mozilla Firefox 51 and above.
- Google Chrome Version 42 and above.
- Internet Connectivity with at least 2Mbps speed.
- Java Run Time Engine (JRE – 1.8.0) or higher.
- Microsoft Office 2003 with MS Word and MS Excel
- Adobe Acrobat Reader, PKI Installation Driver for Digital Signature.
- Bidders are strongly advised to refer Minimum System Requirement document uploaded on <https://rfcl.abcprocure.com> under download section prior registration and Participating in e-Tenders invited by RFCL.
- For Quick Bidder Manual, you can refer this link <https://youtu.be/-E5fiZVYnfg> for Tender Submission **OR** download “Bidder Manual” from <https://rfcl.abcprocure.com> website **OR** Contact us.

➤ Pre-Requisites for DSC Registration:

- The Vendor becomes a valid Vendor only after the registration of the DSC
- Vendors need to possess a valid DSC for participating in e-Tendering (class II/III DSC)
- Vendors need to procure DSC 24 hrs prior to DSC Registration.
- It can be procured from any of the Certifying Authority registered under CCA India.eg Sify, nCode, eMudra etc
- DSC can also be procured from the e-tendering service provider i.e. M/s Antares Systems Limited.
- Respective DSC Drivers needs to be installed.
- DSC needs to be physically inserted into the system.
- DSC should appear in the Browser.
- DSC of the Vendor will mapped with their User Id once they Login first time.

➤ Pre-Requisites for Login Credentials:

- For Login credentials, Vendor need to register/ Sign-up on the e-procurement portal by clicking on Sign Up link available at home page.
- Vendor shall safely keep their User ID and password, which will be issued by the service provider upon registration/ Sign-up.
- Vendors are advised to change the password immediately on receipt from the e-Procurement portal.
- Vendor shall not disclose their User ID as well as password and other material information relating to the bidding to any one and safeguard its secrecy.
- For registration on the e-tender site <https://rfcl.abcprocure.com> , one can be guided by the “Instructions to Vendors” available under the download section of the homepage of the website. As the first step, bidder shall have to click the “Register” link and fill in the requisite information in the “Bidder Registration Form”. Kindly remember your email id (which will also act as the login ID) and the password entered therein. Once you complete this process correctly, you shall get a system generated mail. Thereafter, login in to the portal using your credentials. When you log in for the first time, system will ask you to add your Digital Signature Certificate.
- Digital Signature Certificate Class 3 Signing + Encryption is mandatory to attach at the time of Registration and to log-in. Bidders should ensure that DSC is in the name of registered firm and person only.
- If attached DSC does not match with the registered profile then DSC will not be verified and profile will not be approved. Once you have added the Digital Signature Certificate, please inform the vendor administrator [info@abcprocure.com](mailto:info@abcprocure.com) , [dsc@abcprocure.com](mailto:dsc@abcprocure.com) , Contact no.: +91 - 63532 17080, +91-90990 90830 for approval. Once approved, bidders can login in to the system as and when required.

3. All the vendors participating in the online e-procurement have to abide by the process involved in the entire workflow of the e-procurement.
4. RFCL is not responsible for any mistake made by the vendor at the time of bidding process. In case any vendor submits an invalid bid due to any reason including typing mistake / human error, such invalid bid will be disqualified and such vendor shall not be allowed to further participate in that tender. The remaining process shall be completed considering the other valid bids.
5. For submitting price bid through e-Auction, the successful Pre-qualified Vendors will have to use a Class II/ III Digital Signature Certificate issued by any India CA approved by CCA of India as per IT Act 2000.
6. It is mandatory for the vendors to use the digital certificate in all their bidding Process.
7. It is the entire responsibility of the vendors to protect their own login id and Password and keep their digital certificate safe so that is not misused by any other person.

8. **Tender Schedule:**

The notice of issue of enquiry and detailed schedule for downloading the NIT documents, submission of bids, tender closing, tender opening, and subsequent clarification/amendment in schedule etc. shall be available on the above-mentioned website against this tender.

**Tender Schedule for "Cooling Water Treatment Programme" is:**

<i>Sr. No.</i>	<i>Tender Stage</i>	<i>Date &amp; Time</i>
1	Start Tender Document Download	<b>31.03.2023 at 10:00 hrs.</b>
2	End Tender Document Download	<b>10.04.2023 at 16:00 hrs.</b>
3	Due/ last date of submission Bids	<b>10.04.2023 at 16:30 hrs.</b>
4	Techno-commercial Bids Opening	<b>10.04.2023 at 16:45 hrs.</b>
5	Price Bid Opening	To be intimated

**Note:** After expiry of date & time for a particular activity as mentioned above, that particular activity cannot be done unless the schedule for the same is extended/ amended. Similarly, no activity can be done before start date & time specified for that particular activity unless the schedule for the same is preponed/amended.

9. The activity defined for vendors are Download of Tender document, Bids Preparation, Uploading of bids and Reverse Auction. Matching of Prices will be done manually.
10. During the Download sequence, the vendors who have been invited will be able to download the main tender document and the supporting documents.
11. **Tender Opening:**

The tenders will be opened electronically by us from our NOIDA office in the presence of representatives of Vendors who wish to attend the price bid opening. The submission of bids may however be done by vendors from their office or from place of their choice or they can visit our NEW DELHI office and use RFCL's facilities for preparation and submission of their bids. However, bids can't be submitted after the bid submission due date & time as per the schedule.

Price bid of all the vendors who are techno-commercially acceptable shall be opened electronically and such vendors shall be allowed to participate in the Reverse Auctioning.

12. RFCL takes no responsibility for delay, loss or non-receipt of EMD sent by post/courier.
13. RFCL reserves the right to reject or accept any tender without giving any reason.
14. The bids not accompanied with the requisite Earnest Money may not be opened.
15. **SYSTEM FAILURES AND REMEDIAL MEASURES THEREOF/COURSE OF ACTION TO BE FOLLOWED**

RFCL shall make all out efforts to rectify the problem(s) leading to system failure during the live tendering. However, in case the system could not be restored within the reasonable time period as deemed fit by RFCL, the following remedial measures shall be taken under such an eventuality:

1.	Tender is prepared and released but vendors are not able to submit their bids.	The due date of closing/opening shall be extended suitably.
2.	Bids have been submitted but the same cannot be opened by RFCL.	The due date of opening shall be extended suitably.
3.	Bids including price bid have been opened and reverse auctioning could not start.	Under such eventuality, the reverse auction event shall be rescheduled and the new schedule shall be informed to all the bidders who have participated in the tender & submitted their bids online.

16. **Name & Address of Consignee:**

DGM (PROD),  
Ramagundam Fertilizers And Chemicals Ltd, Fertilizer City, Ramagundam  
Distt- Pedapalli, Telangana

17. **Payment Mode:**

Payment shall be released by ECS (Electronic Clearing System) or EFT (Electronic Fund Transfer). Successful vendors shall provide the requisite details of their Account No., Name & Branch code of Bank, Acceptance/request for release of payment by ECS/EFT, along with their 'Bank mandate form and cancelled cheque', within 10 days of issue of LOI/PO to the Finance and C&P dept. of RFCL, Ramagundam Plant.

18. **GST Nos.**

Unit	GST NO.
Ramagundam, Telangana	36AAHCR2335P1ZY

19. The offers submitted by MSE, shall be considered in Accordance with Public Procurement Policy for MSEs of March 2012. The parties claiming benefits Under MSEs policy must enclose requisite valid Registration Certificate as per said policy along with their offer. Please also indicate whether the MSEs owned by SC/ST Entrepreneurs. If yes, please attach relevant certificate issued by authorities concerned. However, RFCL reserve the right to cancel the order (if any) and blacklist/debar a firm in case it is determined that the firm benefitted wrongly from the Public Procurement Policy. Few Highlights of the benefits proposed to MSMEs are as under:

- *There is an exemption from payment of earnest money to registered MSEs (Applicable only for Manufacturers and not to dealers).*
- *MSEs quoting price within price band L-1 + 15%, when L1 is from someone other than MSE, shall be allowed to supply at least 20% of tendered value at L-1 subject to lowering of price by MSEs to L-1.*

20. The rates should be quoted as per price bid given in the enquiry only. Quotation should be valid for a minimum period of 120 **days** from the date of opening of the tender (Technical bid) and should be on FOR **RFCL Ramagundam** (Telangana), **including transit insurance**. Transit Insurance shall be covered by supplier. The rates should be quoted both in figures and in words.
21. Your GST Registration No. and Permanent Account No., allotted by the concerned Department should be mentioned in the quotation positively.

Thanking You  
For & On Behalf of Ramagundam Fertilizers and Chemicals Limited

( Mr. Shashi Prakash)  
**Sr. Manager (Contracts & Procurement)**

**ELIGIBILITY CRITERIA:**

S. No.	Conditions	Documents required
1.	<p>Bidder should be either manufacturer of chemicals / Authorized dealer / supplier / service provider having successful experience of package cooling water treatment i.e., design of cooling water treatment, preparation of formulations, supply of chemicals, operation, monitoring and troubleshooting of treatment during the last Seven (7) years.</p> <p><b>Note:</b> "The last Seven (7) years shall be counted from last date of the preceding month in which tender has been Issued."</p>	<p>i) Bidder must submit the copy of valid industrial License issued by Statutory authority for being a manufacturer along with ISO certificate/ GST Registration certificate / Udyog Aadhaar / certificate issued by statutory authority / NSIC certificate or equivalent certificate.</p> <p>ii) In case the manufacturer wants to quote through their authorized dealer/distributor or their authorized dealer wants to quote separately then authorization certificate from the manufacturer is required in addition to (i) above. The Authorization certificate should be issued for specific tender/enquiry.</p> <p>iii) Authorization letter from the company on behalf of the person signing the document be provided with technical bid.</p> <p>iv) For Proprietorship firm - Name of the proprietor to be mentioned. Affidavit of proprietorship in original duly notarized (Latest).</p> <p>v) For partnership firms –Affidavit in originals duly notarized, confirming the current status of the firm along with names of the partners. Copy of partnership deed duly notarized (latest) to be submitted</p>
2.	<p>The bidder shall submit documentary evidence with respect to experience of having successfully <b>executed two (02) work orders of</b> "Continuous operation and monitoring of cooling water treatment management program including supply of chemicals with minimum cooling water circulation flow of 15000 M3/Hr in a cooling tower having multiple cells" in Chemical/Petrochemical/Fertilizer. Industry/Power/Cement Plants/Continuous Process Industry out of which one order must be executed in Ammonia &amp; Urea Fertilizer complex at two different sites.</p> <p>Work executed by the bidder during the last <b><u>SEVEN (7) years*</u></b> should be either of the following:</p> <p>The tenderer should have Completed Three similar works costing not less than Rs. 1.70</p>	<ul style="list-style-type: none"> <li>• Documentary evidence (Relevant P.O. and Copies of Invoices / Delivery Orders) along with successful Completion certificate should be enclosed.</li> <li>• The minimum term of operation for consideration of successful experience for each tower shall be one year.</li> </ul>



	<p>Crores (each order).</p> <p>(or)</p> <ul style="list-style-type: none"> <li>The tenderer should have Completed Two similar works costing not less than Rs. 2.13 Crores (each order).</li> </ul> <p>(or)</p> <ul style="list-style-type: none"> <li>The tenderer should have Completed One similar work costing not less than Rs. 3.40 Crores.</li> </ul> <p>Note: * "The last Seven (7) years shall be counted from last date of the preceding month in which tender has been Issued."</p>	
3	<p>The Average annual financial turnover during the last 3 years ending 31<sup>st</sup> March, 2022 should not be less than Rs 1.28 Crores.</p> <p><b>Note:</b></p> <ul style="list-style-type: none"> <li>In case financial year closing date is within 6 months of date of issue of enquiry and audited annual report of preceding financial year is not available, bidder has the option to submit the financial details of the three previous years immediately prior to the last financial year. Otherwise, it is compulsory to submit the financial details of the immediate three preceding financial years. (Example, in case, audited annual report of immediately preceding financial year (year ending 31<sup>st</sup> March) is not available and where enquiry issue date is up to 31<sup>st</sup> December, the financial details of the three previous years immediately prior to the last financial year may be submitted. However, in case the enquiry issue date is after 31<sup>st</sup> December, it is compulsory to submit the financial details of the immediate three preceding financial years only.</li> <li>In case bidder is having subsidiaries but only a single consolidated annual report is prepared as per prevailing law of land and audited which includes the financial details of their subsidiaries, consolidated audited annual report shall be considered for establishing the financial criteria subject to statutory auditor /chartered accountant of the bidder certifying that separate annual report of Bidder (without the financial data of subsidiaries) is not prepared and audited.</li> <li>Further, in case a bidder is a subsidiary company and separate annual report of the Bidder is not published, but only a consolidated annual report of the parent company is available, consolidated annual report shall be considered for establishing</li> </ul>	<p>Bidder shall submit financial standing through Audited* Balance Sheet/ Profit &amp; Loss Account for the last three financial years. (For 2019-20, 2020-21 &amp; 2021-22)</p> <p>* Where audited accounts are not mandatory as per law, bidder can submit financial standing duly certified by practicing Chartered Accountants (not being an employee or a director or not having any interest in the bidder's company).</p>

	the financial criteria subject to statutory auditor of Parent Company /Chartered accountant of the Bidder certifying that separate annual report of the Bidder is not prepared and audited.	
4.	The net worth of the bidders should be positive for the financial year ending 31.03.2022.	<p>A Copy of Audited* Balance Sheet should be submitted in support of your claim.</p> <p>* Where audited accounts are not mandatory as per law, bidder can submit financial standing duly certified by practicing Chartered Accountants (not being an employee or a director or not having any interest in the bidder's company).</p>
5.	<p>Bidder should have minimum working capital of <u>Rs 0.43 Crores</u> as per Audited Financial result of FY 2021-22.</p> <p>"Working capital should be current assets minus current liabilities.</p>	<p>Requisite document issued either from any Indian scheduled Bank (except co-operative bank and Gramin Bank) for availability of unutilized line of credit for at least of Rs 0.43 Crores.</p> <p>Or,</p> <p>Copy of audited balance sheet for the financial year ending 31.03.2022 should be submitted.</p>
6.	<p>I. Bidder Must not be <b>black listed</b> by any government department/public sector undertaking/co-operative Unit.</p> <p>II. Bidder Must not be <b>delisted / on Negative List</b> by any government department/public sector undertaking/co-operative Unit in the last two years, as on date of participating in the tender.</p> <p>III. Bidder must not be on the <b>Holiday list</b> of RFCL.</p>	<p>Self-certification(s) for both should be submitted on Party's letterhead for the same.</p>



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## **TENDER DOCUMENT**

NIT No. RFCL/C&P/CWT/2023/1 Dated 31-March-2023  
for Lining up of Contract for Cooling Water Treatment  
Programme at RFCL, Ramagundam (Telangana)

FOR  
COOLING WATER TREATMENT  
PROGRAMME

COMMERCIAL SECTION
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RAMAGUNDAM FERTILIZERS & CHEMICALS LTD  
RAMAGUNDAM (TELANGANA)

**MARCH -2023**

**Terms and Conditions of Notice Inviting Tender**  
**(COMMERCIAL SECTION)**

The Tender Enquiry particulars are:

- 1.0** (i) Tender No. : RFCL/C&P/CWT/2023/1 Dated: **31-MARCH-2023**
- (ii) Requirement : To formulate, specify and provide Non-Chromate Cooling Water Treatment Programme including supply of Chemicals for Cooling Towers as per Scope of Work specified in the Technical Section of the NIT.
- (iii) Quantity of offered Chemicals : To be specified by Vendor
- (iv) Type of Tender : TWO STAGE Bidding as per details given in Clause No.
- (v) Earnest Money Deposit : Rs.1.00 Lakh (Rupees One Lakh only) as per Clause No. 12.00 below
- (vi) Security-cum-Performance Deposit : 10 % of Total Order Value as per Clause No. 13.00 below
- (vii)** Tender Closing Date & Time : **10-04-2023, 16:30 Hrs.**
- (viii)** Tender Opening Date & Time : **10-04-2023, 16:45 Hrs.**  
*(Only Unpriced Techno-Commercial Bid shall be opened online on this date. Price bid opening date shall be intimated to the techno-commercially acceptable bidder, separately later on)*
- (ix) Tender Validity : Must be initially valid for 120 days from the date of opening of Unpriced Techno-Commercial Bid.
- (x) Delivery Period : As specified at clause No. 21
- (xi) Transit Insurance : By Supplier at his cost
- (xii) Site for uploading Tender Documents : Tenders shall be submitted electronically on our E-Tender Portal, <https://rfcl.abcprocure.com>
- (xiii) Address for sending the DD/BG :  
(Envelope will be superscripted with our Tender Ref. No. and Due date)
- |   |
|---|
| <p align="center"><b>Sr. Manager – C&amp;P</b>, RFCL<br/>4<sup>th</sup> Floor, KRIBHCO Building, SECTOR-1, NOIDA- 201301.</p> |
|---|
- (ii) In Technical Section C of Tender Document, the Scope of Supply and Responsibility of the Supplier have been defined along with the following, which tenderers must note: -
- Instructions to Bidder
  - Bid Evaluation
  - Guaranteed Overall Annual Cost
  - Vendor's Scope
  - RFCL's Scope
  - Contents of Offer
  - Availability of Chemicals without interruption

**2.00 Period of Contract**

The contract shall be effective from the date of issuance of Letter of Intent. However, initially the contract shall be valid for a period of One (1) Year from the date of start of treatment Programme. This shall be further extendable for a period of One (1) Year at the mutual consent of RFCL and the bidder.

**3.00 Staggered supply of Chemicals**

Supply of chemicals shall be in good quality containers as per agreed schedule without interruption as per Clause 4.7 of Section 'C'. All the used / empty containers shall be taken back by Vendor by making their own arrangement for lifting and transportation.

**4.00 Firmness of Prices**

Prices should be quoted as per Online Price Bid formats. Prices offered shall remain firm during the currency of the contract except variation of statutory levies against documentary evidence. Vendor should confirm the same specifically in the Offer.

**5.0 Payment Terms**

Payment(s) shall be processed in staggered manner during the currency of contract and on production of each Invoice(s) by supplier. The payment shall be made against each running bill as under:

- a) 80% within 30 days from the date of receipt and acceptance of material at our site through RTGS/NEFT Mode.
- b) Balance 20% after 60 days from date of receipt and acceptance of material at our site through RTGS/NEFT Mode and after adjusting any deductions / recoveries as per contract.

For this, Tenderers shall give the following in their offer:

- i. Bank Account Number of the Tenderer's firm
  - ii. Name and address of the Bank
  - iii. Branch Code
  - iv. IFSC Code
- c) At the commencement of the Contract, supply shall be made for 3 months' requirement along with one lot of pre-cleaning, passivation and contingency chemicals for each tower and payment shall be made as above.
  - d) Thereafter, against supply of monthly requirements, payment shall be restricted to 1/9<sup>th</sup> of the guaranteed overall annual cost in the milestone as above or cost of supplies whichever is lesser. However, during last month of the contract period, the spare inventory of regular chemicals as mentioned above shall not fall below one month's requirement.
  - e) Further, the pre-cleaning, passivation and contingency chemicals leftover at the end of the contract shall be taken back by the vendor and RFCL shall recover the corresponding amount from the vendor's running bill(s) / balance payment for which Credit Note shall be issued by the vendor.

**6.00 Transportation and Transit Insurance**

The responsibility of transportation of Cooling Water Chemicals along with accessories from Vendor's Works to RFCL Site shall be entirely of the vendor.

Supplier has to ensure that all statutory requirements are fulfilled which are needed for the transportation of Cooling Water Chemicals as per rules.

Transit Insurance shall be arranged by the Supplier at his own cost

**7.00** Any clarification on e-Tender procedures, tender specification, both technical and commercial, can be had from the office of Chief Manager – Materials any time during office hours before tender closing date and time, either personally or by email at [sprakash@rfcl.co.in](mailto:sprakash@rfcl.co.in).

**8.00** All information sought by RFCL during tender evaluation shall be provided within the time set out in the communication on the subject. Failure of tenderer to comply with requirements of RFCL within stipulated time shall entitle RFCL to proceed with the tenders on the basis of information available. No responsibility for postal delays shall rest on RFCL.

**9.00** RFCL shall reserve the right to postpone tender opening under intimation to the bidders without assigning any reason thereof.

**10.00 MSMED Declaration:**

In case the Bidder is as MICRO, SMALL Enterprise (MSEs) under 'The Micro, Small & Medium Enterprises Development Act, and/or Purchase Preference Policy-2012' promulgated by Government of India. Please indicate the relevant category in the Offer and upload/enclose a copy of the valid certificate issued by the concerned authorities as specified by the Ministry of MSME. It shall also be confirmed by the Bidder if the MSE is owned by SC/ST Entrepreneurs and in that case submit a copy of documentary proof issued by concerned authorities. Complete MSMED Act can be

viewed/downloaded from the Website <http://www.msme.gov.in>.

In case no information is given by you, it will be presumed that you are not covered by the MSMED Act and consequently not eligible to the benefits admissible under the Act.

However, Traders /Dealers /Distributors /Stockiest /Wholesaler are not entitled for availing benefits under MSME Act.

#### **11.00 Compensation for submission of tender**

The Bidder shall bear all the costs associated with the preparation and submission of the Bid and the RFCL in no case, be responsible or liable for these costs, regardless of the conduct or outcome of the bidding process.

#### **12.00 EARNEST MONEY DEPOSIT**

##### **12.1 Tenderers must submit Earnest Money Deposit of ₹. 1,00,000/- (Rupees One Lakh only) in the form of:**

- i) Crossed Demand Draft favoring RAMAGUNDAM Fertilizers & Chemicals Ltd. issued by any Scheduled/Nationalized Bank payable at NEW DELHI. (Details of DD No. & date, amount, bankers name etc. has to be submitted in relevant field/column of online module). DDs payable at other locations are not acceptable to us. Cheques will not be accepted in any case;

**OR**

- ii) Bank Guarantee in the RFCL's prescribed format from any Nationalized/ Scheduled Bank excluding Rural and Co-operative Banks. The Bank Guarantee shall be valid for a minimum period of 120 days and the Tenderer shall give an undertaking for extension of the validity of the BG in case the same is desired by RFCL. (Details of BG Number and the date, amount, Banker's Name etc. has to be submitted in relevant field/column of online module).

**OR**

Necessary earnest money will have to be deposited by the bidder electronically online through net banking enable bank account/DD/Bankers Cheque. Bidders are also advised to submit EMO of their bid, at least before the bid submission closing date as it requires time for processing of payment of EMD:

a) Beneficiary Name	:M/S. RAMAGUNDAM FERTILIZERS AND CHEMICALS LIMITED
b) Name of Bank	: STATE BANK OF INDIA,
c) Branch	: Commercial Branch, 70, The Great Eastern Centre, Nehru Place, New Delhi- 110 019.
d) Branch code	: 04298
e) IFSC No.	: SBIN0004298
f) Current Account	: 36530729001

- 12.2 EMD in physical form must be submitted directly to RFCL by the Tenderer, with an intimation to C&P dept. so as to reach us before opening of Tender. The details of EMD must be furnished along with the OnlineBid should be send to emails: [sprakash@rfcl.co.in](mailto:sprakash@rfcl.co.in).
- 12.3 Tenders without Earnest Money Deposit are liable to be rejected. In case of submission of EMD by DD or Bank Guarantee, it should be ensured by the vendor that the original DD/Bank Guarantee is received by RFCL before opening time of Techno-Commercial Bids for verification of the details of DD/ Bank Guarantee given online by the vendors.
- 12.4 Earnest Money shall be forfeited at the sole discretion of RFCL, in case tenderer after intimation from RFCL of the acceptance of his tender, either wholly or in part, refuses to accept the Purchase Order or changes any of the conditions of the tender or changes the rates and/or terms and conditions of the tender within validity period.
- 12.5 Earnest Money deposited by unsuccessful tenderers will be returned as early as possible after finalization of the tender.
- 12.6 Earnest Money of the successful tenderer shall be returned on submission of security deposit.
- 12.7 No interest will be paid on the Earnest Money Deposit of either the successful tenderer(s) or unsuccessful tenderer(s).
- 12.8 MSEs (Micro & Small Enterprises) are also exempted from submission of EMD in accordance with the provisions of PPP-2012. However, Traders /Dealers /Distributors /Stockiest /Wholesaler are not entitled for exemption of EMD.

**12.9 The bidders shall submit the following documents in support of claiming exemption of EMD:**

- 12.9.1 Documentary evidence that the bidder is a Micro or Small Enterprises registered with National Small Industries Corporation or MSEs who are having Udyog Aadhaar Memorandum or any other body specified by Ministry of Micro, Small and Medium Enterprises.
- 12.9.2 The above document submitted by the bidder shall be duly certified (in original) by Notary or the Statutory Auditor of the bidder.
- 12.9.3 If the bidder does not provide the appropriate document or any evidence to substantiate the above, then it will be presumed that they do not qualify for any preference admissible in the Public Procurement Policy, 2012.

**13.0 SECURITY-CUM-PERFORMANCE GUARANTEE**

Security Deposit-cum-Performance Guarantee equivalent to **10 %** of the Total Order (basic order price) Value shall be deposited / submitted by successful tenderer as stated in Clause No.1 (vi) above, for faithful performance of the contract terms and conditions, within 15 days from the date of issue of Order. The Order Value shall be Guaranteed Overall Annual Cost as per Clause No. 4.3 of Section C of Technical Section of the Tender Documents.

The Security Deposit-cum-Performance Guarantee can be furnished by either of following modes:

- i. Crossed Demand Draft payable at New Delhi
- ii. Bank Guarantees in RFCL's prescribed format from any Nationalized/Scheduled Indian Bank (excluding Rural and Co-operative Banks) having validity till completion of the contract period with further claim period of Three (3) Months.

The Security-cum-Performance Guarantee shall be retained by RFCL till successful completion of the contract plus three months.

In the event of termination of contract as per Clause No. 3.8 of Section-B, RFCL shall have the right to forfeit the entire amount of Security-cum-Performance Guarantee without assigning any reason, thereof.

The SD cum PBG amount will be 10 % of total guaranteed order value worked out as per Clause No. 4.3 of Section- 'C' of Annexure-IV.

The Security Deposit-cum-Performance Guarantee shall not bear any interest.

**14.0 Tenderer shall upload the following:**

14.1 Entire information sought under clause 4.6 of Section-C, Annexure-IV pertaining to "Contents of the Offer".

14.2 Scope & technical specifications of services and materials offered along with its quantities (without prices) as stated in your price bid & detailed literature and drawing if any etc.

14.3 All relevant documents pertaining to eligibility criteria.

14.4 One set of tender documents duly signed on each page as token of acceptance of RFCL's terms and conditions.

14.5 Earnest Money deposit of Rs.1.00 lakh (Rupees One Lakh only) by way of bank draft / EFT transfer or Bank Guarantee (Scanned copy).

Additional Documents/Information to be provided along with the bid:

- i. All relevant documents in support of its credentials for meeting the pre- qualification criteria.
- ii. Company Profile.
- iii. Location of Plants manufacturing Cooling Water Chemicals including R&D facilities.
- iv. An Undertaking that he shall submit Material Safety Data Sheets for all chemicals to be supplied at the time of bidding.
- v. List of Customers with a list of past and present orders executed/being executed for similar systems

**15.00 Destination for dispatch of Chemicals**

By Road : RFCL, Ramagundam (Telangana), Dist. Pedapally (Telangana)

**16.00** Consignee : Manager – Materials  
Ramagundam Fertilizers & Chemicals Ltd  
(A JV of NFL, EIL & FCIL) P.O: RFCL  
RAMAGUNDAM (TELANGANA) Dist.  
Pedapally, PIN-505210

**17.0** TRANSIT INSURANCE will be arranged by the Vendor at his own cost.

**18.0** **Prices**

Item-wise prices of Chemicals must be quoted online only as per following Price Break-up:

- Basic Price including P&F, Freight & Transit Insurance
- Applicable GST, if any

The supplies shall be made on F.O.R. RFCL Plant, Ramagundam basis.

**19.00** **Packing and Forwarding Charges**

These shall be included in the prices (which is on F.O.R. RFCL, Ramagundam basis) considering that all the used containers shall be taken back by you.

**20.00** **Taxes and Duties**

Taxes and Duties shall be payable extra on actuals. The rates as prevailing on the date of submitting tenders shall be specified.

**21.00** **Delivery**

Supplies of chemicals should be completed till RFCL, Ramagundam site within **15 days** of issuance of notification from RFCL site Engineer.

**22.00** **Clear Understanding**

When a tenderer submits his tender in response to this tender document, he will be deemed to have understood fully about requirements, terms and conditions. No claim from tenderer shall be entertained whatsoever on the plea that the tenderer did not have a clear idea on any particular point and/or a clause of the tender.

**23.00** **RFCL's right to accept any Bid and to reject any or all Bids**

Notwithstanding anything to the contrary contained herein, RFCL reserves the right to accept or reject any Bid and to annul the bidding process and reject all bids at any time prior to award of purchase order, without thereby incurring any liability to the affected bidder or bidders or of any obligation to inform the affected bidder or bidders of the grounds for RFCL's action.

**24.00** **Award of Contract**

Award of contract will be made at the sole and absolute discretion of Ramagundam Fertilizers & Chemicals Ltd, which shall not be disputed. The terms and conditions as embodied in the purchase order shall be final and shall supersede any other terms and conditions that might have been indicated in the tender submitted by the tenderers.

**25.00** Withdrawal of the quotation after its acceptance will entail forfeiture of earnest money, if any, and/or risk purchase/recovery by RFCL without prejudice to our rights of legal remedies.

**26.00** No escalation will be allowed due to any increase in duties/levies beyond stipulated delivery period.

**27.00** One person will be allowed to represent only one company during discussions/ negotiations with RFCL. If same person is representing different companies with authorization letter from more than one company, such person will be allowed to represent only the first company called for negotiations.

**28.00** The prospective tenderers having any common partners/Directors/Managing partners, etc. or having any other common criteria shall be considered as Sister/Group/Associate Company. In such cases, only one of them will be eligible for participating in the tender.

**Tenderers have to submit a declaration along with the Technical Bid declaring:-**

- (a) That no other Firm/Sister Concern/Associate belonging to the same group is participating/submitting offer against this tender.
- (b) That the bidders, their associates, sister concerns etc. have not been delisted/ blacklisted by any Institutional Agency/Government Department/Public Sector Undertakings.
- (c) It shall be certified by the tenderer that none of the RFCL employee is related to owners/directors. (In case any relative is working in RFCL, furnish details separately).
- (d) It shall be certified by the tenderer that none of RFCL's ex-employee is employed with them. (In case any ex-employee of RFCL is employed, furnish details separately).
- (e) It shall be certified by the tenderer that none of blood relation of the owners/directors is participating in this tender in the name of another firm.



## **29.00 Opening of Bids:**

Only Technical bids will be opened electronically on Technical Bid Opening Date. Price Bids of only those bidders will be opened electronically which are found to be technically and commercially substantially responsive.

## **30.0 Evaluation of Bids**

- 30.1 Bids shall be scrutinized in terms of the provisions of the bidding documents. Full compliance to the complete provisions of the Bidding Documents and its subsequent Amendment (s) / Clarification(s) / Addenda / Errata if any, issued by the RFCL will be checked first. In cases, 'No Deviation Certificate' duly signed and stamped is not found in Techno-Commercial bid, the bidder will be asked to submit the same before the price bid opening. Failure to comply with this requirement, the bid shall be rejected.
- 30.2 Shortfall documents: After technical bid opening and evaluation of received documents, shortfall documents, if required, shall be sought from the bidder. For this purpose, maximum 1 chance of limited duration shall be given. If the techno commercial acceptability of bidder is established upon verification of submitted documents with bids and shortfall documents if any, the case shall be considered for further processing. If the bidder has not submitted the required document within the mentioned time frame his bid would be analyzed based on the available documents and if found not in order as per requirement, would be out rightly rejected.
- 30.3 Technical and commercial bids shall be evaluated only for those bidders, whose EMD is found to be in order as per NIT requirement. EMD submitted by bidder will be reviewed against its value, validity and issuing bank as per NIT requirement. If the EMD is not found in order with respect to NIT requirement, the bids may be rejected.
- 30.4 The PRICE BID shall be opened only of those bidders whose bids are found to be technically and commercially substantially responsive.
- 30.5 The financial comparison for selection of Lowest (L-1) Bidder/ Contractor shall be done based on the total derived price and the arithmetical corrections/adjustment as mentioned above, and the total GST charges indicated by the bidder in the summary of work. Input Tax Credit of GST shall not be considered for evaluation.
- 30.6 The Owner will award the Contract to the successful Bidder who's Technical and Commercial bid has been determined to be substantially responsive and Price Bid to be the lowest evaluated Bid.
- 30.7 Final lowest will be derived as defined at clause No. 4.2, Section- 'C' of Annexure – IV.
- 30.8 GST shall be fully loaded in evaluation. All documents are to be verified by RFCL site Engineer-In-Charge before processing of payment.

## **31.00 Clarifications**

Any clarification on the procedure, tender specifications etc. (both technical and commercial) can be had from the office of Mr. Shashi Prakash, Sr. Manager (Contracts & Procurement) (Phone No. +91 9717731580) any time before tender closing date and time by email.

- 32.00 The supplier shall indemnify and legally protect RFCL and/or its employees against all claims, actions, proceedings, demands, costs, expenses, causes of action or suits arising out of incidental to and/or consequent upon the services provided by the seller under the contract or due to the failure of the seller in performance of his/its obligations under the contract.
- 33.00 The seller shall comply with all Central/State Laws as well as the rules, regulations, by-laws as may be in force, from time to time. Any failure on their count on the part of the seller and the consequence thereof shall be solely on account of the seller. Liability, if any, under this head shall be solely borne and paid for by the seller.
- 34.00 The tenderer shall indemnify RFCL with all statutory requirements and laws in performing the contract. The responsibility for action/safety or his employees while performing the contract by the tenderer shall be solely his.
- 35.00 The tenderer shall indemnify RFCL against any infringement of trademark or title to goods by him and shall be solely responsible for the goods offered for sale.
- 36.00 The Contractor shall be solely responsible for the compliance of various Labor laws as applicable in the State of TELANGANA as amended from time to time such as The Minimum Wages Act, 1948, The

Employee's Provident Fund & Miscellaneous Provisions Act, 1952, the Factories Act 1948, Workmen's Compensation Act etc., and any other Act formed by State/Central Government from time to time and relevant to the Contract for the manpower deployed by him at RFCL Site.

**37.00 Laws Governing Purchase Order**

The purchase order shall be governed by the Laws of Union of India for the time being in force.

**38.00 Secrecy**

Any information delivered or otherwise communicated by RFCL to supplier in connection with the contract shall be regarded as secret and confidential and shall not without the written consent of RFCL be published or disclosed to any third party or made use of by the supplier except for the purpose of implementing the contract.

**39.00 Subletting of Contract:**

The successful tenderer shall not sublet or assign the contract or any part of it without obtaining the written permission of RFCL in advance. In the event of the successful tenderer subletting or assigning the contract or any part thereof without such permission, RFCL shall be entitled to cancel the contract and to purchase the goods elsewhere and successful tenderer shall be liable to the National Fertilizers Ltd for any loss or damage which RFCL may sustain in consequence or arising out of such purchases. Even in case subletting is permitted, RFCL shall not recognize any contractual obligation with the person or party to whom subletting is permitted and shall look to the successful tenderer for satisfactory and due and proper fulfillment of the contract.

**40.00 Force Majeure:**

Neither party shall be liable for any claim on account of any loss, damage or compensation whatsoever arising out of any failure to carry out the terms of this contract where such failure is caused due to war, rebellion, mutiny, civil commutation, fire, riot, earthquake, draught, floods, crop failure, strike, major break down of the plant or Acts of God or due to any restraint or regulation of the State or Central Government or a Local Authority/ Authorities, provided a notice of such occurrence is given to the other party in writing within 10 days from the date of occurrence of the force majeure condition furnishing therewith- documentary evidence supporting the working of force majeure clause.

On cessation of the force majeure the party invoking force majeure shall inform the other party of the period for which force majeure to be affected.

**41.00 Disputes:**

In all cases of disputes, the decision of Ramagundam Fertilizers & Chemicals Ltd shall be final. Failing this, the matter will be referred to the Arbitration in accordance with the Indian Arbitration Act and amendments thereof.

**42.00 ARBITRATION**

For any disputes, efforts to be made to resolve with mutual discussion and in case the dispute persists, the arbitration proceedings shall be followed as per following provisions:

Except where otherwise provide in the contract all matters, questions, disputes or differences whatsoever, which shall at any time arise between the parties hereto, touching the construction, meaning , operation or effect of the contract, or out the matters relating to the contract or breach thereof, or the respective rights or liabilities of the parties, whether during or after completion of works or whether before or after termination shall after written notice by either party to the contract to be referred to CEO, RAMAGUNDAM FERTILIZERS AND CHEMICALS LTD for appointment of Arbitrator.

The Arbitration proceeding shall be governed by the Arbitration & Conciliation Act. 1996, The Arbitration & Conciliation (Amendment Act 2015) or any further statutory modification or re-enactment thereof and the rules made there under.

If the arbitrator, to whom matter is referred, vacates his / her office by any reason whatsoever then the next arbitrator so appointed by the authority referred above may start the proceedings from where his predecessor left or at any such stage, he may deem fit.

It is agreed by and between the parties that in case a reference is made to the Arbitrator or the Arbitral Tribunal for the purpose of resolving the disputes / differences arising out of the contract by and between the parties hereto, the Arbitrator or the Arbitral Tribunal shall not award interest on the awarded amount more than the rate of SBI RLLR rate applicable to RFCL on the date of award of contract.

**43.00 JURISDICTION**

All actions at law or suits arising out of or in connection with this contract or the subject matter thereof will be instituted in Pedapally district in the State of Telangana, India.

- 44.00** The prospective tenderers having any common partners/ Directors/managing Partners, etc. or having other common criteria shall be considered as Sister/Group/Associates Company. In such cases, only one of them will be eligible for participation in the tender. Tenderers has to submit a declaration along with the technical bid that:
- No other Firm/Sister concern/Associate belonging to the same group is participating /submitting this tender.
  - That the bidders, their associates, Sister Concern, etc. have not been black listed by any institutional agency/Govt. Dept./Public Sector Undertaking in the last two years.  
In case of concealment of any fact, if detected later on, such tenderers will be debarred from all future dealings with RFCL.
- 45.00** One person will be allowed to represent only one company during discussions/negotiations with RFCL. If same person is representing different companies with authorization letter from more than one company, such person will be allowed to represent only the first company called for negotiations.
- 46.00** Bidders should ensure that the tender documents /offer has been signed by appropriate/authorized representative of the Company. Withdrawal of offer/non-acceptance of orders placed based on the offers submitted by bidders on their letter head; will not be allowed on the ground that offer was not signed by authorized person.
- 47.00** The tenderer shall quote the price strictly as per the Proforma provided in NIT. The tenderer should quote one rate for specific quantity quoted by them. Tenders with quotations of different rate for different quantities shall be rejected without any further reference.
- 48.00** The bidder shall indicate the rates of GST applicable in their bid, for the quoted items indicating clearly the HSN code of item and applicable category of GST (i.e., whether IGST, CGST, SGST, UGST).  
A proper invoice in the form and manner prescribed under relevant section of GST Act shall be provided by the supplier along with the supplies.
- 49.00** If a tenderer resorts to any frivolous, malicious or baseless complaints/allegations with an intent to hamper or delay the tendering process or resorts to canvassing / rigging/influencing the tendering process, RFCL reserves the right to debar such tenderer from participation in the present / future tenders up to a period of 2 years.

**50.00 Integrity Pact.**

Bidders will sign the Integrity Pact as per enclosed format which is an integral part of the tender documents, falling, which the tenderer/bidder will stand disqualified from the tendering process and the bid of the bidder is rejected. Details regarding Integrity Pact can be viewed on our website: [www.rfcl.co.in](http://www.rfcl.co.in). As per ANNEXURE – IX.

The name & e-mails address of IEMs are as under:

i. Sh. Jagdish Prasad Meena, I.A.S (Retd)  
A-1/401, Bharat Apartments, Plot 8, Sector 18A, Dwarka  
New Delhi - 110078  
# 8802334455  
Email: meenajp@gmail.com

ii. Sh. Ashok Kumar Garg, ITS (Retd)  
E-13, Sector-55  
NOIDA – 201301  
# 9868211000  
Email: [akgarg1654@gmail.com](mailto:akgarg1654@gmail.com)

Kindly upload duly signed copy of Integrity pact along with other documents.

- 51.00** This NIT/Enquiry is also available on our website <https://rfcl.co.in/opentender.php> as well as on <https://rfcl.abcpurchase.com> for reference purposes.



रामागुण्डम फर्टिलाइजर्स एण्ड केमिकल्स लिमिटेड

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## COOLING WATER TREATMENT PROGRAMME

<b>TECHNICAL SECTION</b>
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RAMAGUNDAM FERTILIZERS & CHEMICALS LTD  
RAMAGUNDAM (TELANGANA)

**MARCH-2023**

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**(Technical Section)**

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## **1.0     Introduction:**

- 1.0 A Joint Venture (JV) company M/s Ramagundam Fertilizers and Chemicals Limited (RFCL) has been formed by three Promoters, M/s National Fertilizers Limited (NFL), M/s Engineers India Limited (EIL) and M/s Fertilizer Corporation of India Limited (FCIL). RFCL has appointed EIL as the EPCM consultant for the subject project. This is a new Gas based mega capacity Ammonia-Urea fertilizer complex mainly comprising of Ammonia Unit (2200 MTPD) (based on natural gas feed), Downstream Urea unit (3850 MTPD) & Associated Utilities and Off sites facilities.
- 1.1 The details of the cooling water system, water analysis is furnished in the Technical Specifications of NIT. These technical specifications shall form the basis for selection of Non-Chromate Zinc-Orthophosphate Cooling Water Treatment Programme.

**RAMAGUNDAM FERTILIZERS & CHEMICALS LTD, RAMAGUNDAM**  
**(TELANGANA)**

**Technical Section of Tender Document for Cooling Water Treatment Programme**

**SECTION-A**

**Technical specification of existing Cooling Tower System & Treatment Programme.**

**2.0 Details of the Cooling Water System:**

**2.1 Cooling Towers:**

RFCL Fertilizer complex consists of NG Steam Reforming based Ammonia Plant of capacity 2200 and Single stream Urea Plant of Capacity 3850 MTPD, Captive Power Plant integrated with Steam Generation Plant, Ammonia Storage facilities, Water Treatment Plants, Cooling Water system, Effluent Treatment plant, Bagging Plant etc.

	<b>Ammonia</b>	<b>Urea</b>
Make	Paharpur Cooling Towers	Paharpur Cooling Towers
No of Cells	7+1*	6 +1*
Type	Counter flow Induced Draught	Counter flow Induced Draught
Temp in/out Deg. C	44 / 34.5	44 / 34.5
Cooling Water circulation (Normal/Design) M3/Hr	23488/27000	20960/24000

\*Common spare for Ammonia and Urea Cooling tower

The basin of each cell of the cooling towers will have provision to isolate for maintenance. Riser to top of each cell from the CWR header will have isolation valves.

The common spare cell has the provision to be connected to either of Ammonia or Urea cooling towers. So, the total numbers of cooling tower cells are  $7+6+1 = 14$ .

**2.2 Filtration**

	<b>Ammonia</b>	<b>Urea</b>
Type of Filter	Side stream Filter	
Capacity (02 nos. of each)	270 M3/Hr	
Possible Extent of Filtration	2% of circulation flow	

**2.3 System Volume and Blow-down:**

Capacity of one cooling tower cell is 4000 M3/Hr

**Blow Down:**

Blow down for each cooling tower shall be based on design make up water characteristics and at hardness level of 800.

**Blowdown value and System Volume details are as under:**

	<b>Ammonia Cooling Tower</b>	<b>Urea Cooling Tower</b>
Circulation Rate, m <sup>3</sup> /hr	27000	24000
Hold up volume, m <sup>3</sup>	11000	9800
Evaporation loss, m <sup>3</sup> /hr	423	370
COC	4	4
Blowdown M3/Hr	114	91
Drift loss M3/Hr	27	24
DT across Tower	9.5 °C	9.5 °C

## 2.4 **Chlorination and Acid Dosing System:**

Following dosing system are available for the cooling water systems:

- (a) Sulphuric acid dosing system for maintaining pH of the circulating water system.
- (b) Chlorine dioxide shall be used as biocide. Initial dosing rate of ClO<sub>2</sub> shall be 2 mg/L based on hold up volume. Subsequent dosing rate is adjusted to maintain 0.2 to 0.4 mg/L of ClO<sub>2</sub> in the return header.
- (c) Chlorine dioxide shall be dosed by portable chlorine dioxide generator which shall be supplied by vender including pumps. RFCL has the provisions of sodium chlorite 25 % (NaClO<sub>2</sub>) storage tank and Hydrochloric acid (HCL) 30 % storage tanks each having the capacity of 44 M3, Size 3500 mm x 4500 mm cylindrical, vertical, Flat bottom, conical top tank made of FRVE (Fiber Glass Reinforced Vinyl Ester) operating at atmospheric pressure with Design Temp. of 60 Deg C.
- (d) Chemicals dosing through metering pumps supplied by the Party.

## 2.5 **Cooling Water Heat Exchangers and Operating Temperatures:**

### 2.5.1 **Ammonia Plants:**

Shell and tube heat exchangers with water mostly on tube side are in operation. The Material of construction is mainly carbon steel with the exception of Air Compressor inter coolers, surface condensers for steam turbines and water cooler in the synthesis loop where stainless-steel type 304 tubes are used. It may be noted that maximum temperature on process side is about 195 °C and cooling water outlet is 46 °C.

### 2.5.2 **Urea Plants:**

The material of construction is generally stainless steel in heat exchangers. The operating temperatures of various important heat exchangers in Ammonia & Urea Plants on the process and water side are listed in **Annexure (A) and (B)**.

## 2.6 **Make-Up water Characteristics:**

2.6.1 Make of water flow (Normal) for ACT: 553 M3/HR and for UCT: 389 M3/HR

2.6.2 The make-up water to the Cooling water system is treated Raw Water.

2.6.3 The make-up water and recirculating cooling water quality are as given in the following table:

	Make up water Range	Recirculating CW Normal (Range)	Design
Total Hardness as CaCO <sub>3</sub> ppm:	120 - 204	360 - 817	817.2
Calcium Hardness as CaCO <sub>3</sub> ppm:	65 - 85	195 - 340	340
Magnesium Hardness as CaCO <sub>3</sub> ppm:	50 - 119	150 - 476	476
Silica as SiO <sub>2</sub> (ppm):	12 - 20	36 - 80	80.0
Chloride as CaCO <sub>3</sub> (ppm):	40 - 52	120 - 208	208.0
M-alkalinity as CaCO <sub>3</sub> (ppm):	128 - 165	30 -100	120 (**)
pH:	7.3 - 8.3	6.8 - 8.0	7.5

(\*\*) M alkalinity find its own level depending upon pH maintained at 7.0-7.5. M alkalinity as CaCO<sub>3</sub> will be about 100 mg/l.

Laboratory analysis is indicative only. These parameters have seasonal variation. Make up water analysis for one year is furnished at Annexure – A

## 2.7 **Cooling Water Treatment Programme**

2.7.1 Both the cooling towers have common cooling water treatment facilities. Design of formulation & chemical dosing systems and side streams are based on the cooling water and make up water analysis

- Corrosion and Scale inhibitor (Zinc –phosphonate)
- Scale Dispersant
- Bio Dispersant
- Oxidizing Micro biocide
- Organ Sulphur based micro biocide (non-oxidizing biocide)
- ClO<sub>2</sub> precursor

Sulphuric Acid is dosed to maintain pH of recirculating water. Chlorination (Chlorine di-oxide) dosing is to be done to maintain desired free residual ClO<sub>2</sub> in Circulating water.

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**RAMAGUNDAM FERTILIZERS & CHEMICALS LTD, RAMAGUNDAM (TELANGANA)**

**Technical Section of Tender Document for Cooling Water Treatment Programme**

**SECTION – B**

**3.0 Technical Requirements for Proposed Cooling Water Treatment Programme**

**3.1 General Requirements for Cooling Water Treatment package:**

- a) RFCL requires vendors to provide non-Chromate, ortho-phosphate- Zinc, based cooling water treatment package for Ammonia and Urea Cooling Towers. The cooling water treatment shall comprise of Zinc as the cathodic inhibitor and stabilized ortho-phosphate as the anodic inhibitor combined as a single formulation. Individual chemicals as cathodic and anodic inhibitors in basic chemical form are not acceptable. The products offered should be field tested and proven and documentary evidence in its support.
- b) A dedicated scale inhibitor- cum-dispersant shall also be included in the Programme for dispersion of iron, general scale, and sludge and to take care of chances of scaling due to operation at high pH. Treatment should ensure no scaling in the heat exchangers. There should not be reduction in heat transfer capacity of heat exchangers, due to fouling or formation of deposits.
- c) Effective control of biological growth shall be provided by using suitable biocide, bio-dispersant together with chlorine dioxide or Na Br. Vendor should quote for 3 or more non-oxidizing biocides. Doses should correspond to MIC of the particular biocide.
- d) It is desirable to have continuous dosing of chemicals preferably by metering pumps for good control. For solid dosing, vendor should mention the method of dosing.
- e) Blow down should be suitable for discharge into the inland surface water drains which should be within the IS: 2490 (1981) and MINAS specifications. Chemicals and treatment Programme should meet this requirement without exception. The SRB limits in make-up water shall be **5 Nos. per 100 ml (normal) and 20 Nos. Per 100 ml (max.)**. Vendors should mention the water blow-down after each non-oxidizing biocide dosage at percent (%) of system volume and quantity. Excess blow down or make up if resorted to without valid reasons, RFCL reserves the right to recover the cost of excess water consumed along with cost of chemicals from the party.
- f) Treatment Programme should be capable of sustained operation under the prevailing conditions and should be able to tolerate, ingress of ammonia, urea dust and oil, etc. Details of contingency limits are indicated at **3.3** below.
- g) Changeover of cooling water treatment shall be on line i.e., without plant interruption. On line changeover chemicals, if required, shall be indicated separately but form a part of the contract as per Sr. no 2 of annexure-V.
- h) Chemicals shall be supplied in new HDPE containers. The containers must be properly sealed and also shall be labelled properly with name, brand name, batch no, expiry date etc. Each batch of chemicals should have test certificate that all the chemicals are bio-degradable (preferably within 24 hrs), environment friendly and do not fall under banned category issued by reputed testing lab in India accredited by national accreditation board for testing and calibration laboratories (NABL). That all the chemicals are biodegradable preferably within 24 hours. Environment friendly and do not fall under banned category.
- i) Total quantity of chemicals, to be supplied by the Vendor, should be adequate for 365 days operation of the plant in a year.
- j) The offers should be realistic. Under quoting or offering lower doses of chemicals than required, wherever minimum doses (as per clause 3.2.3 of Annexure-IV) are specified will call for rejection. During the tenure of the treatment, if corrosion rates are within permissible limits, vendor shall optimize the use of chemicals in consultation with Engineer-in-charge without compromising on the water quality and guaranteed parameters.
- k) Vendors are advised to visit plant site and submit proposal only after extensive plant survey, ascertaining quality of makeup, circulating water, blow down, equipment metallurgy etc. Vendor shall assess the requirement of usage of each chemical and will quote appropriate dosages to meet the guarantees. Vendor is free to quote chemicals over and above the chemicals specified in the price bid to meet the guarantees.
- l) Vendor shall provide analytical method of analysis along with active content & their value in bulk chemicals. Reagents and instruments required for analyzing the active content of bulk chemicals will be supplied by party on returnable basis. **If these methods are not submitted by the vendors, price bids of such bidders will not be opened.**

RFCL has the right to check the analysis of the lot of the bulk chemicals received on random basis at any time during the term of contract, in its own lab or from a reputed lab outside accredited by NABL. In case it found that active ingredient is lower with respect to minimum of the value specified by vendor, deduction from the delivered cost on pro-rata basis, shall be done for said total chemical supplied in that lot.

In addition to above, cost of testing if done from lab other than RFCL's own laboratory, shall be borne by vendor for such case. However, in case the test results are within specified limits, cost of testing shall be borne by RFCL. No credit shall be given to vendor for supplying chemical having higher than quoted active ingredient. **Vendor shall specify names of at least three such labs, accredited by NABL, where analysis of active ingredient of its chemicals can be got done by RFCL. Vendor shall submit confirmations/undertaking of these laboratories mentioning the capability to carry out the analysis as per the analytical methods submitted by you.**

Corrosion Inhibitor	% of Total phosphate as PO4
	% Of Zinc as Zn
Dispersant:	% of Organo-phosphonate
	Sequestration value mg/ml (minimum)
Bio dispersant	% Active ingredient & physical property
NaClO2	% active content
Non- Oxidizing Biocide	as described in clause 3.2.3 (iv)

- m) Vendor shall carry out daily water analysis to monitor the necessary treatment package. RFCL has the right to check the analysis. Lab facilities shall be provided to the vendor for the above analysis. However, for analysis of chlorine dioxide and Zinc, spectrophotometer shall be provided by the vendor. All reagents for testing/analysis in the scope of vendor.
- n) Corrosion coupon will be assessed jointly by RFCL and vendor, as mentioned at clause no 3.7 of Section-B.
- o) Microbiological analysis will be carried out by RFCL in the presence of Vendors' representative, as mentioned at clause no 3.7.2 of section-B.

### 3.2 **CW Treatment Scheme**

#### 3.2.1 **pH Control**

Treatment program should be designed in such a way that the pH of circulating water in return header is kept within 6.8-8.0. pH in circulating water shall not be allowed to go below 6.5 at any time. Vendor shall maintain the same with his treatment. During exigencies when pH goes higher than specified values, pH can be maintained by dosing concentrated Sulphuric acid. When pH goes below the specified value vendor shall be permitted to control pH by dosing Soda Ash, if so required. pH reduction can take place under following conditions.

- i) Microbiological activities.
  - ii) Ingress of acidic gases/ leakage in heat exchangers.
- a) pH reduction due to microbiological activity should be avoided. In case of such occurrence, reasons for such an occurrence shall be established to the satisfaction of RFCL and corrective action must be taken immediately for which vendor shall use biocide.

If pH reduction is due to other reasons, the contractor may be allowed by RFCL to use Soda Ash. Bidder shall intimate the quantities of Soda Ash to be consumed for each cooling tower separately in techno-commercial bid. Price of Soda Ash shall be indicated in the price bid.

- b) In case of pH reduction due to ingress of acidic gases, soda ash dosing shall be permitted for pH correction which will be in RFCL's account. Such dosing shall be decided by mutual consent in writing prior to start of dosing.

Soda ash required for dosing under all conditions shall be arranged by bidder. Soda ash supplied shall be of 95- 99 % content of Na2CO3 (by wt.)

#### 3.2.2 **Corrosion Inhibitor and Anti-scaling Dispersant:**

The treatment Programme should be capable of maintaining corrosion rate less than 3 mpy on MS unpassivated sand blasted corrosion coupons manufactured as per ASTM, to be supplied by RFCL and shall be installed in return header every month in each cooling tower. Corrosion racks

and necessary fittings to be provided by vendor.

One additional rack shall be available as common spare (standby) for all towers. The corrosion coupons shall be sealed by RFCL and party's representative will be associated with such sealing. All keys shall be kept with plant authorities.

Party should give percent (%) composition of total phosphate & Zinc in their corrosion inhibitor. **Normal of 6-9 ppm of total inorganic phosphate and 1 ppm of zinc** is preferred to be maintained by regular chemical dosing at all times. Bid evaluation shall be done based upon the quoted quantity and active content in the formulation by the vendor.

- a) The scale inhibitor cum dispersant shall take care of scaling due to operation at high pH and high temperature. Procedure for analysis of dispersant in circulating cooling water is essential along with the technical bid. To take care of the adverse effects of higher pH during monsoon season, doses of dispersant are to be maintained on sufficiently higher side to avoid scale formation in heat exchangers including critical heat exchangers where cooling water is on shell side with low velocity. **The dispersant offered should be proven and supporting documents for the same to be provided.**
- b) In case of some critical exchangers or leaky exchangers, a need may arise for localized (satellite) dosing of dispersant. The Vendor should be ready with necessary arrangements for the same. Doses of dispersant should be selected accordingly.
- c) **Dispersant Test:** Recommended dispersant should give **min. 95 % of  $\text{Ca}_3(\text{PO}_4)_2$  inhibition test at 50 % of the recommended dose level under test condition** which are pH 8, Ortho  $\text{PO}_4$ : 8 ppm, temperature  $70^\circ\text{C}$  and Ca hardness 500 ppm as  $\text{CaCO}_3$  in presence of total iron of 1 mg/ lit in cooling water system. RFCL reserves the right to test the dispersant.

### 3.2.3 **Micro Biological Control:**

- i. Chlorine dioxide shall be dozed with a chlorine dioxide generator to maintain a free residual chlorine level of 0.2 ppm in return header of each cooling tower.
- ii. At least three non-oxidizing biocides out of the following suggestive biocides are to be recommended by the vendor so as to achieve the guaranteed figure as per Clause No. 3.07. Minimum active content of biocide and ppm dose based on hold up volume for effective bio control shall be as follows: -

S. No.	Biocide type	Minimum % active content	Minimum ppm dose based on hold up
1	Quaternary Ammonium compounds (QUAT)	40	25
2	Carbamate based	45	30
3	Isothiazoline based	1.4	30
4	Methylene bis thiocyanate (MBT) based	9	25
5	Dichlorophene based	40	30

Minimum dosing frequency of non-oxidizing biocide **will be once in two weeks per tower and a minimum of 26 doses per year per tower**, preferably with sequential dosing. Changes in the biocides, if any, will be reviewed after actual application and monitoring of the system.

- iii. Party shall submit procedure for analyzing active ingredients of all the offered biocides. If offered biocide active contents and/or dose are less than the above, RFCL reserves the right to reject the bid technically or modify the dose to arrive at aforesaid minimum requirement and load the additional quantity. If offered concentration/dose is more than specified above, then offered quantity shall be considered for evaluation. Vendors can also quote biocides other than listed above. However, vendor shall submit adequate proof that the offered non-oxidizing biocide with indicated active ingredient and dosage has been used successfully for at least 2 years in other Ammonia/Urea cooling towers, backed up by user certificate.

Effectiveness of biocide at quoted levels can be independently verified by RFCL through certified laboratories. If dosage level is found inadequate, then quantity can be

enhanced by RFCL, cost of which will be borne by vendor. Result of test will be binding on the party.

- iv. A dedicated bio-dispersant shall be dosed on continuous basis to keep the system free from bio-film formation. **Minimum dosage of 3.0 ppm of bio dispersant** in circulating water is to be maintained.

### 3.2.4 **Operating Parameters:**

In addition to details specified above, the vendor should also consider the following, while designing the treatment.

- a) Holding time index / large system volume and limitation in blow down rate. COC is preferred to be in the range of 3 - 4. However, vendor shall assess the requirement based upon actual operating data available with the Unit.
- b) Water quality as specified at **2.6**
- c) High temperatures in the CW heat exchangers (both on process and CW sides)
- d) Material of construction of heat exchangers as given at **Annexure –B**
- e) Nitrifying bacteria, preferably <25 counts/ml on monthly basis.

Vendor will provide following circulating water parameters to be measured on daily basis:

Parameter	Unit	Normal	Maximum*
pH			
Free residual chlorine ppm as Cl <sub>2</sub>			-
Chlorine Dioxide (ClO <sub>2</sub> )			
Oxygen reduction potential (ORP)			
Turbidity			
Total hardness as CaCO <sub>3</sub>			
Calcium hardness as CaCO <sub>3</sub>			
Zinc ppm			
Ortho phosphate as PO <sub>4</sub> (ppm)			
Total Phosphate ppm PO <sub>4</sub>			
Scale Dispersant ppm			
Silica as SiO <sub>2</sub>			
Bio dispersant			
Chloride as Cl			
Cycle of Concentration			
M alkalinity as CaCO <sub>3</sub>			
Iron content			

Maximum value shall be applicable based on the quality of make-up water as mutually agreed before starting the treatment. It is desired that normal control limits should not be crossed. In case of exceeding the normal limits, necessary information shall be conveyed to Production In-charge and corrective action taken immediately.

### 3.3 **Contingency Treatment:**

- 3.3.1 The vendor shall have a contingency treatment Programme to take care of the effect of various contaminants: The limits contaminants in CW Circulating water shall be as follows.

Contaminants	Ammonia CT PPM (Max)	Urea CT PPM (Max)
Ammonia	40	40
Urea	10	10
Oil	10	10

- 3.3.2 Contingency shall be decided at the time of its occurrence by mutual consent in writing by RFCL. Same shall be approved by Unit In-charge prior to the start of contingency treatment. A contingency shall be declared if disturbed condition persists for 48 hrs (forty-eight hours). The bidder should indicate the details of chemicals to be used along with quantity for meeting each contingency for each tower separately. This treatment shall remain effective for 72 hours.

Loading of quotations against contingencies shall be made based on the number of

contingencies as stipulated below:

	Ammonia CT	Urea CT
Oil	1	1
Ammonia	1	3
Urea	0	0

In case, the contingency like leakage of cooling water from underground header etc., is not controlled within a reasonable time and RFCL decides to continue with it in order to avoid plant interruption, then the modalities of using additional chemicals shall be discussed and agreed mutually. The continuation of contingency as well as additional expenditure on this account shall require prior approval of the Unit In-charge.

#### 3.4 **Alternative chemicals for water treatment**

The contractor may sometimes find it necessary to change one or two chemicals during the treatment based on his experience regarding efficacy of the chemical in use. Since the contractor shall be in a better position to know regarding nature of make-up water, circulating water and effectiveness of the treatment, after carrying out the treatment for some time, allowing use of alternative chemicals is considered in the interest of achieving better results.

For this purpose, vendor shall specify all such alternative chemicals but at the rates quoted for chemicals now been replaced with alternate chemicals to achieve better results. Any chemical not in bidding list, if needed to achieved the guaranteed parameters as per clause no. 3.7 of section B, can be supplied by vendor with prior approval of unit in charge but without any cost implications on RFCL **However, the overall guaranteed cost shall remain the same.**

#### 3.5 **Mobilization Period & stabilization period:**

Mobilization period for starting the treatment shall be one month maximum from the award of contract. However, Contract period for the purpose of calculation of the number of days shall be with effect from the actual date of start of treatment Programme, which is to be verified by RFCL site Engineer-in-Charge.

Stabilization period shall be one month (max.) from the start-up of the Cooling Water Treatment.

#### 3.6 **Monitoring:**

##### 3.6.1 **Monitoring Tools:**

Vendor should be equipped with gadgets for monitoring the health of the cooling water system, including simulation capabilities for trouble-shooting. Gadgets for studying fouling factor, heat flux etc. on line shall be required. Vendors should clearly mention the details of the monitoring instruments which will be supplied free of cost with the package for use at site on returnable basis.

**Following online / other monitoring instruments are to be provided for each tower from the Vendors:**

- a) Bio-fouling monitors (with differential pressure gauge)
- b) Online Deposit monitors
- c) Corrosion racks with necessary fittings and screws compatible with corrosion coupon
- d) Analytical kit for field testing (with reagents replenishment)
- e) Corrotrator facility for instantaneous corrosion rate (Minimum twice in month during normal operation)
- f) ORP monitor
- g) Dosing system including metering pumps and replacement of spares as and when required. Vendor shall keep necessary spare dosing and monitoring system and spares parts at site so that chemical dosing system and monitoring system can be kept in service uninterrupted. If the vendor fails to maintain the system in healthy condition, the same will be attended by RFCL at the cost and risk of the vendor. To ensure precise addition of chemicals on continuous basis, the dosing system shall comprise all the parts/pumps /equipments/pipelines/valves to ensure the dosing of different chemicals from dosing tank right up to the basin and any other equipment required to achieve the dosing on continuous and uniform basis
- h) PC based Software and hardware for trend check

i) Any other instrument for simulation and diagnostic study.

3.6.2 Vendor should have access to a full-fledged R & D facility of his own. The party should have properly trained team for troubleshooting of the problems associated with this cooling water treatment.

**3.6.3 Monitoring Services:**

Vendor should carry out:

- a) Continuous monitoring and supervision by his specialist(s) during pre-cleaning & passivation initially and also on day-to-day basis, during normal operation.
- b) Reporting to plant personnel & submission of daily analysis report to Plant In-charge by 4.00 pm every day. Involve RFCL personnel in the operation and control of the treatment.
- c) Submission of monthly report on water quality and monthly consumption of chemicals.
- d) Reports with detailed analysis and corrective actions for excess consumption of normal and / or contingency chemicals, if any.
- e) Troubleshooting as and when required through vendor's resident expert.
- f) Training of RFCL personnel periodically w.r.t cooling water treatment developments.

3.6.4 Vendor should depute a supervisor-cum-Chemist at their cost for troubleshooting and analysis to take care of the on-going cooling water treatment. The qualification & experience in fertilizers industry cooling water treatment of the supervisors should be submitted along with the technical bid.

3.6.5 Dosing of all chemicals (regular as well as contingency) shall be the total responsibility of the Vendor. It is the duty of vendor to decide optimum dosage of chemicals in consultation with RFCL Engineer-in-Charge to take care of the smooth operation of Plant.

**3.7 Essentials/Performance Guarantees:**

Vendor will furnish the guarantees for the performance of their C.W. treatment Programme. Written procedure shall be submitted for analysis and ascertaining the guarantees, which shall be approved by RFCL.

**3.7.1 Corrosion Rate:**

The corrosion rate as measured on sand blasted MS Unpassivated Test Coupons (C 1010/ UNSG-10100) as per IS 8188-1999 procedure separately for each tower should not exceed 3.0 mpy (measured in return header).

- a) Analysis shall be reported as a rational number up to one decimal place after rounding off as per procedure laid down in IS: 2-1960.
- b) The test coupon shall be removed normally after duration of 30 days. However, in case of any exigencies, the time limit may vary by plus/ minus 5 days after approval of Unit In-charge.
- c) In case cooling water circulation is stopped for more than 8 hours, the test coupons shall be rejected.

**3.7.2 Micro Biological Count:**

Bidder shall guarantee cooling water system free of undesirable biological growth (to be measured every week) throughout the period of operation.

- Total bacterial count (TBC) should not exceed 1 Lac/ml on fortnightly basis
- Sulphate Reducing Bacteria (SRB) should not exceed 100/100 ml on fortnightly basis.

3.7.3 **Iron in circulating water** < 1.0 ppm on fortnightly average of iron analyzed on daily basis.

3.7.4 There should not be any tube leakage or fouling of heat exchangers due to inadequacy in the C.W. treatment which may result in stoppage of plant. Inspections during planned shutdowns should reveal that heat exchangers and cooling water system is in good condition without serious corrosion, pitting, scaling or fouling failing which recoveries, if any from their PBG may be made from the bidder as decided by RFCL management.

### **3.8 Penalties and termination**

In case, the conditions, mentioned under the 'Guarantees', are not met, the following penalties shall be levied on a yearly basis.

#### **3.8.1 Corrosion Rate:**

- a) If the guaranteed corrosion rate for any of the Cooling Tower exceeds 3 mpy, Rs. 30,000/- (Rupees Twenty-five Thousand) per tower per failure, shall be deducted from the balance payment and or from the running bill of party for each of such failure.
- b) In addition to above deduction, if the failure occurs consecutively in following month for same tower, 20% of the SD cum PBG on prorata basis (Total SD CUM PBG amount x number of towers where failure occurred / total number of towers being treated) will be forfeited and vendor shall be given 30 days from occurrence, to rectify the same.
- c) If failure occurs third time consecutively in same tower balance amount of SD cum PBG, as defined in Clause 3.8.7, shall be forfeited and contract is liable to be terminated.

3.8.2 If any of the three parameters, (TBC, SRB and Fe), individually exceeds the limits in any one tower mentioned above during the term of the contract, (excluding stabilization period mentioned at 3.5 of Annexure-IV), vendor shall be allowed to modify treatment at his cost.

However, if any one or more of the parameters remain out in a consecutive/s reading anytime during the term of the contract Rs. 12,000/- (Rupees Ten Thousand) per tower per parameter shall be deducted.

3.8.3 RFCL shall have the right to terminate the contract, in case of any eventual unsatisfactory performance due to which plant has to be stopped, notwithstanding various provisions of the contract.

3.8.4 In case due to unsatisfactory performance of the contract, termination clause becomes operative, a termination notice of 15 days (minimum) to 3 months at the sole discretion of RFCL, shall be given to the vendor. The contract shall be terminated after expiry of the notice period. During the notice period, all terms and conditions as applicable in the contract shall apply.

3.8.5 The total liability of the vendor during one year term of contract on account of failure to meet guarantees of corrosion rate, SRB, TBC, Fe under 3.8.1 and 3.8.2 will be limited to SD cum PBG amount, as per clause 3.8.7, plus penal amount deducted under clause 3.8.1 (a).

3.8.6 The SD cum PBG amount will be 10 % of total guaranteed order value worked out as per clause 4.3, Section-'C' of Annexure-IV.

3.8.7 In case termination clause becomes operative, forfeiture of SD CUM PBG shall be as follows, in addition to liabilities under clause 3.08.1(a).

- a) If termination clause is operated within first six months of the start of treatment, total amount of SD-cum-PBG submitted (i.e., for all towers on annual basis) shall be forfeited.
- b) If termination clause is operated between seventh to ninth month of the start of the treatment, total amount equivalent to 75% of the SD cum PBG submitted (i.e., for all towers on annual basis) shall be forfeited.
- c) If termination clause is operated between the tenth to twelfth month from the start of the treatment, total amount equivalent to 50% of the SD-cum-PBG amount (i.e., for all towers on annual basis) shall be forfeited.

It is further clarified that in case any deduction has been made earlier against higher corrosion rate from SD-cum-PBG according to 3.08.1(b) or as penal amount against higher SRB, TBC, FE as per clause 3.08.2, same shall be refunded/ adjusted against the above forfeiture amount of SD-cum-PBG amount.

3.8.8 In case a regular contract is terminated on unsatisfactory performance, the vendor shall be put on holiday for one year for RFCL Ramagundam (Telangana).

**RAMAGUNDAM FERTILIZERS & CHEMICALS LTD, RAMAGUNDAM (TELANGANA)**

**Technical Section of Tender Document for Cooling Water Treatment Programme**

**SECTION-C**

**4.00 Instruction to Bidders for bidding documents**

**4.1.1 Technical Quote**

- a) Bidder shall quote for Ammonia and Urea Cooling Water treatment in respect of control parameters of circulating water, chemical dosing rate, chemical consumption, Unit rates etc.
- b) Bidder shall indicate the maximum consumption of each regular chemical to be supplied by him, for each cooling tower per month. Maximum payable/guaranteed contract amount shall be calculated for all towers taken together, on yearly consumption based on 365 days of regular operation of cooling towers as more specifically detailed at Clause 4.3.
- e) Bidder shall also mention tower-wise maximum consumption of Sulphuric Acid.
- d) After shutdown and draining of Cooling Tower, the requirement of Pre-cleaning/ Bio-cleaning and passivation chemicals as well as one extra charge required due to refilling of cooling tower, should be indicated separately as per point No-4 of 'Price Bid Format'.
- e) Contingency chemicals and their quantities for contingency, as foreseen by Bidder (Ref para 3.3) for each cooling tower, shall be indicated separately. Same shall be included in evaluation of bid.
- f) In case of any additional shutdown during the year which has resulted in draining of the water from the cooling tower (s), the additional initial fill, pre-cleaning/bio-cleaning and passivation chemicals including biocide and bio dispersant whichever required, shall be allowed after approval of competent authority.
- g) Chemical consumption shall be calculated on the basis of Cycle of Concentration (C.O.C), blow down quantity as mentioned in 'details of existing cooling water system' in Section-A. Bidder shall furnish calculations for the same.
- h) Contract shall initially be for one-year duration which on successful execution may be extended for another one year.

**4.2 Bid Evaluation**

Following shall be considered for the purpose of bid evaluation only:

- For the purpose of evaluation, cost of all towers shall be clubbed together on an annual basis.
- Cost of Chemicals for regular treatment based on bidders' quotation in terms of quantity and unit rates shall be considered for 365 days of operation in a year.
- Cost of chemicals required for change over from existing treatment to new treatment as specified at Sl. No-2 of Price Bid format.
- Cost of Pre-cleaning/Bio-cleaning and passivation chemicals as well as one charge required due to refilling of cooling tower, after shutdown and draining of Cooling Tower
- Cost of Contingency chemicals based on quantities indicated by bidder for each contingency and for number of contingencies as listed at clause No 3.3, Section-B of Annexure-IV for each cooling tower.
- Equivalent cost of Sulphuric Acid to be supplied by RFCL, based on maximum quantities indicated by bidder for 365 days.

It is, however, clarified that guaranteed overall annual cost shall be calculated as detailed at 4.3 below.



#### 4.3 **Guaranteed Overall Annual Cost**

- a) Vendor shall guarantee the overall annual cost of treatment chemicals which shall be worked out as follows. However, payment shall be released based on actual consumption of chemicals limited to overall guaranteed cost.
- b) **Guaranteed Overall Annual Cost shall be worked out as follows:**
- ➔ The cost shall be clubbed for all the towers on annual basis.
  - ➔ Landed Cost of chemicals for regular treatment based on bidders' quotation in terms of quantity and unit rates shall be considered for 365 days of operation in a year. In case there is a variation in actual operating days, adjustment shall be made on prorata basis for either side. Any excess consumption above the adjusted quoted value shall be, to the vendor's account.
  - ➔ The quantity of Sulphuric Acid which is supplied to the vendors as free issue material by RFCL shall be clubbed for both Ammonia and Urea towers. Any additional quantity consumed over and above the quoted quantity shall be to the bidder's account and shall be recovered from vendor's pending payment / running bills. These shall be included in the guaranteed overall annual cost.
  - ➔ Any extra chemicals, required for change over from existing treatment to new treatment shall be mentioned separately. These shall be included in Guaranteed annual cost. Payment against these chemicals shall be made on the basis of actual consumption.
  - ➔ Pre-cleaning/Bio-cleaning and passivation chemicals as well as one charge for refilling of cooling tower after shutdown, should be indicated separately and shall be paid additionally, on actual consumptions. These shall not be included in Guaranteed annual cost.
  - ➔ The contingency chemicals as quoted by the bidders shall be included in Guaranteed overall annual cost. Payment against these chemicals shall be made on the basis of actual consumption, limited to quoted value.
  - ➔ **Payment against all chemicals shall be made on actuals but limited to total quoted quantity**
- c) Any chemicals, other than Sulphuric Acid shall not be supplied by RFCL. The chemicals like Soda Ash etc. (if required) shall be in the scope of the Contractor.
- d) **Guaranteed cost comprises** of = Quoted landed rates including GST of SI. Nos (1+2+6+7+8+10) of Price Bid Format.

#### 4.4 **Vendor's Scope**

**Vendor's scope of work, supply and services shall be as described below:**

1. Design of suitable cooling water treatment Programme to meet the system requirement and technical specifications.
2. Supply of chemicals for initial change over, normal operations, contingencies and extra charge for refilling of cooling tower after shutdown.
3. To provide and maintain dosing system inclusive of metering pumps for chemical dosing, including the pumps for chemicals for pH control; special instruments for monitoring the treatment Programme; Corrosion rack, bio-fouling monitors and scale monitors etc. free of cost to RFCL, on returnable basis.
4. Supervision by Vendor's specialist(s) during initial commissioning, change over and stabilization of treatment package followed by round the clock regular supervision during normal operations. Vendor specialist shall be well qualified and experienced. Vendor shall obtain approval of bio data of his specialists from RFCL prior to his appointment at site.
5. Training of RFCL personnel in the operation and monitoring of cooling water treatment.
6. Spectrophotometer for analyzing Chlorine dioxide along with reagent to be provided by vendor, which shall be taken back after completion of contract.
7. Sodium Chlorite – NaClO<sub>2</sub> (25 %) and HCL (30 %) for generation of ClO<sub>2</sub>. **Storage and Handling facilities are available at site.**

The scope of work includes but not limited to the following:

- a) Carrying out the daily water analysis to monitor the necessary Cooling tower Cooling water chemical treatment package. RFCL has the right to check the analysis. Lab facilities shall be provided to you for the above analysis. However, for analysis of Chlorine dioxide and Zinc, spectrophotometer shall be provided by you. All reagents for testing/analysis are in your scope.
- b) Complete monitoring of Cooling water programme and also for keeping the complete system in proper working condition by regular maintenance. Your service engineer should be stationed permanently at RFCL, Ramagundam.
- c) Providing complete technical programme support and training to RFCL personnel involved in the Cooling water Treatment operation and monitoring of work.
- d) Microbial analysis shall be carried out by RFCL in the presence of your representative.
- e) Daily Monitoring, Supervision and Troubleshooting of treatment Programme.
- f) Corrosion coupon will be assessed jointly by RFCL and the Site in charge of Contractor.
- g) Submitting regular service reports
- h) Suggesting remedial measures for any upset in the treatment with back up support in implementation of the same. For this bidder shall depute their application Engineer(s) at RFCL, Ramagundam on permanent basis and provide services of vendor specialist whenever required.
- i) RFCL has the right to check the analysis of the lot of bulk chemicals received on random basis (minimum four times in a year), in its own laboratory or from a reputed laboratory outside. In case any active ingredient is found lower with respect to the minimum of specified value by the contractor, deduction from the delivered cost on pro-rata basis, shall be done for the said total chemical supplied in that lot. In addition to above, cost of testing if done from lab other than RFCL's own laboratory shall be borne by the vendor for such case. However, in case the test results are within specified limits, cost of testing shall be borne by RFCL. No credit shall be given to vendor for supplying chemical having higher than quoted active ingredient. In this regard clause No. 3.1 (I) of Section B of Technical section of Tender documents may be referred. Any Transportation of chemicals from stores to cooling tower nearby dosing site is in the scope of vendor. **For additional scope of work details refer Clause 4.4 of technical section C.**

#### **4.5 Owners Scope**

**RFCL's scope of supply and responsibilities shall include the following: -**

1. Sulphuric Acid (98% concentration) shall be made available in the storage tanks near the Cooling Tower.
2. In general, RFCL shall not supply any additional chemical other than Sulphuric Acid. However, in case RFCL agrees on emergency basis as a special case, the said chemical(s) shall be supplied by RFCL on chargeable basis with additional 25% charges including taxes and duties.
3. Power connections shall be provided to all the equipment/instruments for dosing operations and monitoring.
4. Laboratory assistance, to the extent available, shall be provided.
5. RFCL shall make available test coupons manufactured as per ASTM specifications.
6. RFCL shall operate the system under guidance of Vendor's specialist
7. Accommodation to site engineers of vendor shall be furnished subject to the availability and on chargeable basis as decided by RFCL.

#### **4.6 Contents of Offer**

**4.6.1 Bidder shall furnish details of the treatment Programme including the following: -**

- a) Description of Programme
- b) Chemicals used, giving name, code number and function i.e., passivating agent, anti-scaling, dispersant, bio-dispersant, biocide and any other specific chemicals along with active matter, concentration and percentage kill of biocides

- c) Dosing rates, monthly consumption as well as yearly consumption of chemicals for each Cooling Tower. This shall include the quantity of Sulphuric acid, as well as soda ash (if required). These shall be supported by design calculations.
- 4.6.2 The treatment program for each cooling tower should be separately indicated for (a) Pre-cleaning and passivation, (b) Normal Treatment, (c) Contingency treatment for each contingency tower wise.
- Vendor shall submit complete procedure and time required for the change-over of the new treatment.
- 4.6.3 Detailed description of the philosophy and working of the automatic feed monitoring and dosing system (wherever applicable).
- 4.6.4 Source of supply of the chemicals, including quality control system.
- 4.6.5 Details regarding similar experience in implementing cooling water treatment programs. These shall include name, location and details of the plant, specification of treatment system, period of operation, analysis / inspection report.
- 4.6.6 Data sheets containing product specifications, special precautions for handling the chemicals, disposal of empty containers, remedial measures to be taken in case of spillage and ingress into human body etc. shall be furnished.
- 4.6.7 The chemicals shall be supplied in good quality containers. Vendor shall take back all the used containers.
- 4.6.8 The chemicals that shall be left over after the contract is closed shall normally be taken back by the vendor. However, in case, it is desired by RFCL, then full/part of the left-over chemicals shall be retained by RFCL.
- 4.7 Availability of chemicals without interruption**
- Bidder shall guarantee supply of chemicals as per agreed schedule without interruption. Normal schedule of supplies shall be every three months, such that the site inventory level does not fall below 2 month's requirements. Additional one month's chemicals are considered during transit. However, during last month of the contract period, the spare inventory of regular chemicals as mentioned above shall not fall below one month's requirement. Further, the pre-cleaning, passivation and contingency chemicals leftover at the end of the contract shall be taken back by the vendor and RFCL shall recover the corresponding amount from the vendor, if already paid for.

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# Annexure-A Make up water Analysis

STATISTICAL ANALYSIS OF WATER QUALITY DATA FOR RANAJIJIWADI PETROLEUMS AND CHEMICALS LIMITED																
Drinking Water Analysis Method (Makeup water)																
Date & Time	pH	Conductivity (µS/cm)	Turbidity (NTU)	T Alkalinity (mg/L)	T Hardness (mg/L)	Ca Hardness (mg/L)	Mg Hardness (mg/L)	Chloride (mg/L)	Phosphate (mg/L)	Reactive SiO2 (mg/L)	Total Iron (mg/L)	Sulphate (mg/L)	Nitrate (mg/L)	TDS (mg/L)	Dissolved Iron (mg/L)	Remarks
04/03/2020 09:50	8.04	423.00	2.44	108.00	144.00	80.00	64.00	69.58	<0.1					240.00		
04/03/2020 09:50	8.04	381.00	0.20	108.00	144.00	80.00	64.00	69.58	<0.1					228.00		
08/03/2020 09:45	7.60	333.00	1.48	104.00	140.00	80.00	60.00	64.90	<0.1					215.00		
10/03/2020 09:50	7.62	300.00	1.48	104.00	136.00	80.00	56.00	64.90	<0.1					202.00		
11/03/2020 09:50	7.70	418.00	1.19	104.00	168.00	80.00	88.00	64.90	<0.1					252.00		
12/03/2020 09:45	7.50	305.00	0.75	104.00	144.00	80.00	64.00	64.90	<0.1					183.00		
13/03/2020 09:45	7.50	307.00	0.75	108.00	152.00	80.00	72.00	56.80	<0.1					164.00		
15/03/2020 09:15	7.58	282.00	0.93	116.00	144.00	72.00	72.00	50.60						169.00		
16/03/2020 09:15	7.60	303.00	1.61	116.00	144.00	68.00	76.00	60.26						162.00		
17/03/2020 10:40	7.67	304.00	1.06	112.00	148.00	76.00	72.00	54.00	<0.10					189.00		
18/03/2020 09:50	7.95	315.00	3.97	104.00	144.00	80.00	64.00	53.00	<0.10					211.00		
18/03/2020 11:30	7.94	331.00	2.10	112.00	138.00	72.00	66.00	53.00	<0.10					233.00		
18/03/2020 11:30	7.89	334.00	2.11	108.00	136.00	72.00	64.00	53.00	<0.10					236.00		
22/03/2020 09:50	7.59	374.00	1.02	112.00	136.00	76.00	60.00	52.00						230.00		
28/03/2020 11:30	7.50	380.00	0.98	108.00	151.00	71.00	80.00	52.00						243.00		
28/03/2020 11:10	7.70	406.00	3.04	112.00	135.00	72.00	63.00	45.00	<0.10					242.00		
04/03/2020 09:40	7.70	404.00	2.66	132.00	141.00	72.00	69.00	38.00						240.00		
16/03/2020 10:30	8.41	400.00	0.83	140.00	143.00	88.00	55.00	45.00						243.00		
18/03/2020 11:30	8.48	407.00	0.66	140.00	139.00	76.00	63.00	45.00						240.00		
23/03/2020 14:55	8.66	422.00	2.81	156.00	143.00	72.00	71.00	42.00	<0.10	20.61	0.12	49.96		244.00		
23/03/2020 16:00	8.53	412.00	0.28	140.00	140.00	56.00	84.00	48.00	0.12	19.24	0.12	48.38		248.00		
18/03/2020 16:00	8.32	411.00	0.12	140.00	140.00	56.00	84.00	44.00	0.12	21.24	0.12					
20/04/2020 11:00	8.28	380.00	0.16	108.00	136.00	64.00	72.00	44.00	<0.10	26.71	0.10					
23/04/2020 16:10	8.22	403.00	0.27	132.00	136.00	64.00	72.00	44.00	<0.10	26.71	0.10					
20/04/2020 11:00	8.40	456.00	0.76	156.00	156.00	84.00	72.00	54.00	<0.10	22.78	<0.1	56.51		278.00		
03/04/2020 11:15	7.13	469.00	0.54	128.00	140.00	66.00	74.00	50.00	<0.1	23.96	<0.1	56.51		278.00		
10/04/2020 10:30	7.34	446.00	0.62	128.00	140.00	66.00	74.00	41.50	<0.1	23.96	<0.1	56.51		278.00		
17/04/2020 12:30	8.52	464.00	0.68	128.00	148.00	62.00	86.00	63.00	0.07	27.50	<0.1	63.05	1.95	251.00		
24/04/2020 09:30	7.57	520.00	0.07	147.00	148.00	62.00	86.00	74.00	<0.10	26.18	<0.1	63.05	1.95	251.00		
28/04/2020 12:30	6.98	418.00	0.05	108.00	152.00	52.00	100.00	81.72	<0.10	29.14	<0.1	54.63	1.22	251.00		
05/04/2020 12:30	6.45	464.00	0.16	106.00	155.72	73.77	81.97	87.12	0.07	27.88	<0.1	55.96	1.17	278.00		
13/04/2020 12:30	6.73	414.00	0.05	109.92	151.64	73.77	77.87	91.18	0.07	27.88	<0.1	44.45	1.19	256.00		
20/04/2020 12:30	7.58	495.00	3.32	95.00	152.72	61.72	91.00	87.22	0.58	27.49	<0.1	36.39		230.00		
02/04/2020 12:30	7.62	473.00	1.50	100.00	124.00	58.94	65.26	80.50	<0.10	22.55	<0.1	59.43		230.00		
09/04/2020 10:00	7.36	503.00	0.40	104.00	126.00	63.00	63.00	70.00	<0.10	21.70	<0.1	59.43		230.00		
09/04/2020 09:00	7.50	446.00	0.60	112.00	130.00	69.00	61.00	69.00	<0.10	21.06	<0.1	41.14		220.00		
12/04/2020 07:00	7.42	448.00	0.20	100.00	126.00	63.00	63.00	68.52	<0.10	15.55	<0.1	32.08		220.00		
12/04/2020 12:30	7.50	440.00	0.20	116.00	122.00	69.00	53.00	52.54	<0.10	19.96	<0.1	30.58		220.00		
17/04/2020 10:00	7.65	440.00	0.20	112.00	126.00	59.00	67.00	57.48	1.01	16.03	<0.1	45.00		210.00		
19/04/2020 10:00	7.66	455.00	0.34	104.48	121.40	59.67	61.73	57.48	<0.10	13.60	<0.1	52.27		210.00		
23/04/2020 10:00	7.12	441.00	0.20	116.00	126.00	63.00	63.00	51.12	<0.10	13.60	<0.1	45.00		210.00		
23/04/2020 10:00	7.66	455.00	2.20	120.00	126.00	63.00	63.00	52.54	<0.10	13.60	<0.1	45.00		210.00		
27/04/2020 07:00	7.62	452.00	1.10	112.00	122.00	59.00	59.00	51.12	<0.10	16.20	<0.10	36.50		200.00		
28/04/2020 10:00	7.62	418.00	0.20	116.00	114.00	59.00	55.56	60.46	0.13	19.64	<0.10	23.46	1.79	251.00		
30/04/2020 09:00	7.42	418.00	0.48	87.62	114.00	49.48	65.00	57.00	<0.1	18.44	<0.1	46.46		200.00		
30/04/2020 09:00	7.42	402.00	0.90	112.00	114.00	59.00	55.00	57.00	<0.1	19.44	<0.1	46.46		210.00		
18/10/2020 10:00	7.63	436.00	0.90	116.00	122.00	63.00	59.00	52.00	<0.1	15.67	<0.1	46.46		200.00		
24/10/2020 10:15	7.63	436.00	1.10	116.00	122.00	63.00	59.00	52.00	<0.1	15.67	<0.1	46.46		200.00		
28/10/2020 09:10	7.66	436.00	0.50	106.89	112.81	55.38	57.43	48.03	<0.1	25.50	<0.1	42.03	1.32	200.00		
28/10/2020 09:10	7.47	421.00	0.50	106.89	112.81	55.38	57.43	48.03	<0.1	16.50	<0.1	45.45	1.35	249.00		
02/11/2020 08:00	7.56	425.00	0.80	112.00	118.00	57.00	61.00	52.00	<0.1	24.55	<0.1	45.45	1.35	249.00		
04/11/2020 08:00	7.25	419.00	0.16	103.31	114.86	49.22	66.64	52.94	0.36	24.55	<0.1	45.45	1.35	249.00		
11/11/2020 08:00	7.62	434.00	0.15	129.14	136.37	67.94	67.43	46.07	<0.1	23.12	<0.1	45.11	1.50	259.00		
14/11/2020 08:00	7.58	431.00	0.15	103.31	114.86	49.22	66.64	52.94	0.36	24.55	<0.1	45.45	1.35	249.00		
25/11/2020 08:00	7.10	468.00	0.90	128.00	128.00	64.00	64.00	51.00	NA	23.86	<0.1	45.11	1.50	259.00		
28/11/2020	7.33	440.00	0.11	107.00	123.07	65.64	57.43	46.59	<0.1	25.14	<0.1	45.45	1.49	283.80		
03/12/2020 08:30	7.33	440.00	0.11	107.00	123.07	65.64	57.43	46.59	<0.1	25.14	<0.1	45.45	1.49	283.80		
16/12/2020 08:30	7.57	500.00	0.19	135.58	145.64	75.69	55.69	44.71	0.13	17.87	<0.1	54.14	1.58	313.00		
20/12/2020 08:30	7.48	522.00	0.22	137.49	145.00	76.00	69.00	44.65	0.21	20.82	<0.1	51.00	1.39	281.00		
10/03/2021 11:30	7.48	522.00	0.22	137.49	145.00	76.00	69.00	44.65	0.21	20.82	<0.1	51.00	1.39	281.00		
15/03/2021 11:00	7.50	520.00	0.14	138.10	152.00	78.00	74.00	46.54	0.13	19.05	<0.1	42.58	1.19	315.00		
			45						NO	8.24	0.14		NO		0.08	

16-02-2021 @ 11:00	7.07	527.00	1.90	142.50	140.70	63.50	77.10	59.97	<0.1	20.00	0.11	64.79	-	318.00	-	UF OIL
17-02-2021 @ 22:30	7.46	515.00	0.18	133.71	159.70	79.85	79.85	50.63	0.13	18.46	<0.1	52.56	0.99	309.00	-	UF OIL
24-02-2021 @ 23:00	7.54	504.00	0.14	134.01	154.26	83.48	70.78	46.62	0.13	19.44	<0.1	51.66	1.33	302.00	-	UF OIL
03-03-2021 @ 23:00	7.60	495.00	0.12	143.41	157.89	79.85	79.85	41.47	0.16	20.43	<0.1	46.47	1.15	297.00	-	UF OIL
10-03-2021 @ 23:00	7.90	515.00	0.65	143.40	156.10	81.70	74.40	46.60	0.13	24.40	<0.1	42.60	1.07	310.00	-	UF OIL
17-03-2021 @ 12:15	8.00	485.00	0.14	124.60	145.18	70.78	74.40	54.37	<0.10	19.25	<0.1	44.78	1.18	311.00	-	UF OIL
17-03-2021 @ 22:30	7.19	519.00	0.14	124.60	145.18	70.78	74.40	54.37	<0.10	19.25	<0.1	44.78	1.18	311.00	-	UF OIL
17-03-2021 @ 09:00	7.66	516.00	1.34	153.00	152.00	85.00	71.00	41.70	-	-	-	-	-	-	-	UF OIL
24-03-2021 @ 22:30	7.84	513.00	0.04	136.36	152.00	73.26	81.20	45.63	-	-	-	-	-	-	-	UF OIL
05-04-21	8.20	537.00	0.40	180.00	100.00	48.00	48.00	31.20	-	-	-	-	-	-	-	UF OIL
16-04-21	8.50	543.00	0.30	180.00	96.00	48.00	48.00	28.40	-	-	-	-	-	-	-	UF OIL
21-04-21	8.04	574.00	0.50	180.00	84.00	40.00	44.00	44.00	-	-	-	-	-	-	-	UF OIL
27-04-2021 @ 07:00	8.04	574.00	0.40	152.00	156.00	76.00	80.00	44.60	0.17	23.19	<0.1	117.40	-	260.00	-	UF OIL
28-04-2021 @ 23:01	8.49	574.00	0.11	152.17	148.74	68.34	80.40	37.72	<0.10	23.94	<0.10	113.20	-	260.00	-	UF OIL
05-05-2021 @ 22:30	8.43	552.00	0.08	162.05	150.75	68.34	82.41	41.59	<0.10	24.62	<0.10	122.80	-	270.00	0.05	UF OIL
13-05-2021	8.60	555.60	0.60	172.00	142.00	68.00	72.00	28.40	-	-	-	-	-	270.00	0.17	UF OIL
06-05-2021	8.20	595.00	0.50	176.00	174.00	64.00	64.00	40.00	-	-	-	-	-	270.00	0.13	UF OIL
15-05-2021	8.48	545.00	0.33	158.10	138.70	70.35	78.39	41.59	<0.1	12.04	-	-	-	270.00	0.13	UF OIL
19-05-2021	8.51	520.00	0.21	144.26	138.70	70.35	78.39	41.59	<0.1	12.04	-	-	-	270.00	0.13	UF OIL
02-06-2021 @ 22:30	8.21	525.00	0.25	156.12	151.84	69.67	80.40	40.63	re3	23.26	re3	-	-	312.00	-	UF OIL
09-06-2021 @ 23:00	8.49	506.00	0.13	154.14	149.59	69.67	81.97	40.62	<0.1	25.03	<0.1	46.76	-	315.00	-	UF OIL
16-06-2021 @ 23:00	8.48	503.00	0.23	150.19	149.59	69.67	81.97	40.62	<0.1	23.67	<0.1	39.49	-	304.00	-	UF OIL
23-06-2021 @ 23:00	8.11	576.00	0.47	158.09	153.69	69.67	84.02	40.62	<0.1	24.21	<0.1	37.72	-	302.00	-	UF OIL
30-06-2021 @ 23:00	8.00	534.00	0.09	154.14	153.69	69.67	84.02	40.62	<0.1	23.94	<0.1	33.40	-	310.00	-	UF OIL
14-07-2021 @ 23:00	8.18	494.00	0.21	146.48	141.39	67.62	73.77	42.88	<0.1	19.72	<0.1	34.62	1.10	321.00	-	UF OIL
21-7-2021 @ 11:00	8.06	379.00	0.13	128.45	118.65	73.77	45.08	26.92	<0.1	16.56	<0.1	29.44	0.89	296.00	-	UF OIL
28-07-2021 @ 23:00	8.36	361.00	0.38	101.41	97.56	61.00	53.00	34.31	<0.1	13.73	<0.1	25.38	-	227.00	-	UF OIL
	7.23	361.00	0.23	81.13	97.56	60.88	36.58	38.21	<0.1	13.51	<0.1	23.12	0.83	217.00	-	UF OIL



## Annexure- B

### LIST OF HEAT EXCHANGERS

S. No.	TAG No.	Description	Cooling water flow in	MOC of the tube
<b>AMMONIA PLANT</b>				
1	E 308	Process Gas Cooler	Tube	SS316L
2	E 303	Lean Solution Cooler	Tube	CS
3	E 306	CO2 Product Cooler	Tube	SS316L
4	E 312	Final Cooler	Tube	CS
5	E 504	Water Cooler	Tube	CS
6	E 510 A/B	Ammonia Condenser	Tube	CS
7	E 554	Ammonia Recovery Cooler	Tube	CS
8	E 552	Ammonia recovery OH condenser	Tube	CS
9	E 602	Strip Condensate Cooler	Tube	SS316L
10	E 701	Blowdown Cooler	Tube	CS
11	E 710	P 701 A CONDENSOR	Tube	CS
12	E-701A GC	P 701 A Gland Steam condenser	Tube	CS
13	E 711	P 701 B CONDENSOR	Tube	CS
14	E-701B GC	P 701B Gland Steam condenser	Tube	CS
15	P-701 A/B/C LOC	HP BFW pump	Tube	CS
16	E 221	STARTUP N2 COOLER	Tube	CS
17	E 223	STARTUP H2 COOLER	Tube	CS
18	E 225	H2 COMPRESSOR LO COOLER	Tube	CS
19	E 226	H2 COMPRESSOR PACKING FLUID COOLER	Tube	CS
20	E403 A/B	SGC Condenser	Tube	CS
21	E-473	SGC ejector condenser	Tube	CS
22	E-472	SGC Gland condenser	Tube	CS
23	E 431 A/B	Syngas Comp. IS Cooler 1	Tube	CS
24	E 432 A/B	Syngas Comp. IS Cooler 2	Tube	CS
25	E 433 A/B	Syngas Comp. IS Cooler 3	Tube	CS
26	E 434	Syngas Comp. IS Cooler 4	Tube	CS
27	E471A/B	Syngas Comp LOC	Tube	CS
28	E402 A/B	PAC Condenser	Tube	CS
29	E-463	PAC ejector Steam condenser	Tube	CS
30	E-462	PAC Gland Steam condenser	Tube	CS
31	E 421 A/B	PAC ISC 1	Tube	SS316L
32	E 422 A/B	PAC ISC 2	Tube	SS316L
33	E 423	PAC ISC 3	Tube	SS316L
34	E461 A/B	PAC Comp LOC	Tube	CS
35	E 411	NG Comp. ISC HE 1	Tube	CS
36	E-451 A/B	NG Comp LOC	Tube	CS
37	E 441	Ammonia Ref. Comp ISC-1	Tube	CS
38	E 482	ARC Gland condenser	Tube	CS

39	E-481 A/B	ARC Comp LOC	Tube	CS
40	TX 201A LOC HE 1	FUEL GAS EXPANDER	Tube	CS
41	TX 201A LOC HE 2	FUEL GAS EXPANDER	Tube	CS
42	TX 201B LOC HE 1	FUEL GAS EXPANDER	Tube	CS
43	TX 201B LOC HE 2	FUEL GAS EXPANDER	Tube	CS
44	P-215 A/B LOC	Condensate pump for 100 E 215/ 100 E 216	Tube	CS
45	P-302 A/B LOC	Lean solution pump	Tube	CS
46	P-304 A/B LOC	OH condensate pump	Tube	CS
47	P-305 A/B LOC	Process condensate pump no. 1	Tube	CS
48	P-311 A/B LOC	Process condensate pump no. 2	Tube	CS
49	P-501 A/B LOC	Ammonia product pump	Tube	CS
50	P-504 A/B LOC	Ammonia drain pump	Tube	CS
51	P-552 A/B LOC	LP circulation pump	Tube	CS
52	P-553 A/B LOC	Ammonia recovery reflux pump	Tube	CS
53	MK201A/B	ID Fan bearings	Tube	CS
54	MK202A/B	FD Fan bearings	Tube	CS
<b>CAPTIVE POWER PLANT</b>				
1	HP BFW A pump LOC A/B	HP BFW A pump LOC	Tube	CS
2	HP BFW A pump Hydraulic coupling LOC A/B	HP BFW A pump Hydraulic coupling LOC	Tube	CS
3	HP BFW B pump LOC A/B	HP BFW B pump LOC	Tube	CS
4	HP BFW B pump Hydraulic coupling LOC A/B	HP BFW B pump Hydraulic coupling LOC	Tube	CS
5	HP BFW C pump LOC A/B	HP BFW C pump LOC	Tube	CS
6	HP BFW C pump Hydraulic coupling LOC A/B	HP BFW C pump Hydraulic coupling LOC	Tube	CS
8	MK 8601A/B	UB FD	Tube	CS
9	GT Cooler A	GT Cooler	Tube	CS
10	GT Cooler B	GT Cooler	Tube	CS
<b>UREA PLANT</b>				
1	200 E-1008	LP Condenser	Tube	SS316L
2	200 E-1009	Ammonia Condenser	Tube	SS304L
3	200 E-1010	Flushing Condensate Cooler	Tube	SS304L
4	200 E-1011	MP Ammonia Absorber Cooler	Shell	CS
5	200 E-1019 A/B	1st Stage Intercooler	Tube	SS304L
6	200 E-1020	2nd Stage Intercooler	Tube	SS304L
8	200 E-1021	3rd Stage Intercooler	Tube	SS304L
9	200 E-1022	Steam Condensate Cooler	Tube	SS304L
10	200 E-1023	Final Process Condensate Cooler	Tube	SS304L
11	200 E-1024	Steam Turbine Surface Condenser	Tube	CS
12	200 E-1027 A/B	Closed Circuit Cooling Water Cooler	Tube	SS304L
13	200 E-1071	Turbine Ejector Condenser	Tube	CS

14	200 E-1072	Vacuum Condenser	Tube	CS
15	200 E-1073	Vacuum Condenser	Tube	CS
16	200 E-1074	Vacuum Condenser	Tube	CS
17	200 E-1075	Vacuum Condenser	Tube	CS
18	200 E-1076	Vacuum Condenser	Tube	CS



**ANNEXURE-V****FORMAT FOR PRICE BID - (COOLING TOWERS)**

(FOR CALCULATING LANDED PRICE SEE NOTES BELOW)

\*Basic Rate = Consists of all charges including Freight, Insurance, taxes and duties, if any)

**1. Regular Treatment Chemicals: \*\*\* REQUIRED FOR 365 DAYS**

Description of material	Basic Rate* Rs/Kg (A <sub>1</sub> )	GST %, if any (B <sub>1</sub> )	Landed price in Rs/Kg (E <sub>1</sub> =A <sub>1</sub> xB <sub>1</sub> +A <sub>1</sub> )	Ammonia Cooling Tower	Urea Cooling Tower	Total quantity (Kg) (C <sub>1</sub> + D <sub>1</sub> ) = (F <sub>1</sub> )	Total Value (Rs.) (F <sub>1</sub> x E <sub>1</sub> ) = (G <sub>1</sub> )
				Quantity/Year (Kg.) based on 365 days (C <sub>1</sub> )	Quantity/Year (Kg.) based on 365 days (D <sub>1</sub> )		

**2. Online Change Over (at the start of treatment prior to commencement of stabilization period)****\*\*ONE TIME REQUIREMENT ONLY**

Description of material	Basic Rate* Rs/Kg (A <sub>2</sub> )	GST %, if any (B <sub>2</sub> )	Landed price in Rs/Kg (E <sub>2</sub> =A <sub>2</sub> xB <sub>2</sub> +A <sub>2</sub> )	Ammonia Cooling Tower	Urea Cooling Tower	Total quantity (Kg) (C <sub>2</sub> + D <sub>2</sub> ) = (F <sub>2</sub> )	Total Value (Rs) (F <sub>2</sub> x E <sub>2</sub> ) = (G <sub>2</sub> )
				Quantity (Kg) (C <sub>2</sub> )	Quantity (Kg) (D <sub>2</sub> )		

**3. Initial Fill (if required refilling) after Shutdown- \*\*ONE TIME REQUIREMENT ONLY**

Description of material	Basic Rate* Rs/Kg (A <sub>3</sub> )	GST %, if any (B <sub>3</sub> )	Landed price in Rs/Kg (E <sub>3</sub> =A <sub>3</sub> xB <sub>3</sub> +A <sub>3</sub> )	Ammonia Cooling Tower	Urea Cooling Tower	Total quantity (Kg) (C <sub>3</sub> + D <sub>3</sub> ) = (F <sub>3</sub> )	Total Value (Rs) (F <sub>3</sub> x E <sub>3</sub> ) = (G <sub>3</sub> )
				Quantity for one charge (Kg) (C <sub>3</sub> )	Quantity for one charge (Kg) (D <sub>3</sub> )		

**4. Pre-cleaning/Bio cleaning after Shutdown: \*\*ONE TIME REQUIREMENT ONLY**

Description of material	Basic Rate* Rs/Kg (A <sub>4</sub> )	GST %, if any (B <sub>4</sub> )	Landed price in Rs/Kg (E <sub>4</sub> =A <sub>4</sub> xB <sub>4</sub> +A <sub>4</sub> )	Ammonia Cooling Tower	Urea Cooling Tower	Total quantity (Kg) (C <sub>4</sub> + D <sub>4</sub> ) = (F <sub>4</sub> )	Total Value (Rs) (F <sub>4</sub> x E <sub>4</sub> ) = (G <sub>4</sub> )
				Quantity for one charge (Kg) (C <sub>4</sub> )	Quantity for one charge (Kg) (D <sub>4</sub> )		

**5. Passivation after Shutdown: \*\*ONE TIME REQUIREMENT ONLY**

Description of material	Basic Rate* Rs/Kg (A5)	GST %, if any (B5)	Landed price in Rs/Kg (E <sub>5</sub> =A <sub>5</sub> XB <sub>5</sub> +A <sub>5</sub> )	Ammonia Cooling Tower	Urea Cooling Tower	Total quantity (Kg) (C <sub>5</sub> +D <sub>5</sub> ) = (F <sub>5</sub> )	Total Value (Rs) (F <sub>5</sub> x E <sub>5</sub> ) = (G <sub>5</sub> )
				Quantity for one charge (Kg) (C5)	Quantity for one charge (Kg) (D5)		

**6. Contingency Chemicals for Oil: \*\*ONE TIME REQUIREMENT ONLY**

Description of material	Basic Rate* Rs/Kg (A <sub>6</sub> )	GST %, if any (B <sub>6</sub> )	Landed price in Rs/Kg (E <sub>6</sub> =A <sub>6</sub> XB <sub>6</sub> +A <sub>6</sub> )	Ammonia Cooling Tower	Urea Cooling Tower	Total quantity (Kg) (C <sub>6</sub> +D <sub>6</sub> ) = (F <sub>6</sub> )	Total Value (Rs) (F <sub>6</sub> x E <sub>6</sub> ) = (G <sub>6</sub> )
				Quantity (Kg) for one charge (C <sub>6</sub> )	Quantity (Kg) for one charge (D <sub>6</sub> )		

**7. Contingency Chemicals for Ammonia: \*\*ONE TIME REQUIREMENT ONLY**

Description of material	Basic Rate* Rs. Per Kg. (A <sub>7</sub> )	GST %, if any (B <sub>7</sub> )	Landed price in Rs/Kg (E <sub>7</sub> =A <sub>7</sub> XB <sub>7</sub> +A <sub>7</sub> )	Ammonia Cooling Tower	Urea Cooling Tower		Total quantity (Kg) (C <sub>7</sub> +F <sub>7</sub> ) = (G <sub>7</sub> )	Total Value (Rs) (G <sub>7</sub> x E <sub>7</sub> ) = (H <sub>7</sub> )
				Quantity (Kg) for one charge per one year (C <sub>7</sub> )	Quantity (Kg) for one charge per one year (D <sub>7</sub> )	Quantity (Kg) for Three charge per one year (D <sub>7</sub> ) x 3 = F <sub>7</sub>		

**8. Free issue chemicals to be supplied by RFCL. \*\* \*REQUIRED FOR 365 DAYS**

Description of material	Current prices per KG including GST (In Rs) As on 04.03.2023 at RFCL, Ramagundam	Ammonia Cooling Tower	Urea Cooling Tower	Total quantity (Kg) (B <sub>8</sub> +C <sub>8</sub> ) = (D <sub>8</sub> )	Value (Rs) (D <sub>8</sub> x A <sub>8</sub> ) = (E <sub>8</sub> )
		Quantity for one year (Kg.) based on 365 days (B <sub>8</sub> )	Quantity for one year (Kg.) based on 365 days (C <sub>8</sub> )		
Sulphuric Acid	Rs 10.00 PKG + Applicable GST= A8				

**9. Alternative Chemicals (As Per Para 3.4 of Section B of Technical Section)**

**\*\*\* REQUIRED FOR 365 DAYS**

CHEMICAL	BASIC PRICE *Rs. /Kg.	Landed price in Rs. /Kg.	GST %, if any

**10. Soda Ash (w.r.t Para 3.2.1 Of Section B of Technical Section) \*\*\* REQUIRED FOR 365 DAYS**

CHEMICAL	Basic Rate* Rs. Per Kg. (A <sub>10</sub> )	GST %, if any (B <sub>10</sub> )	Landed price in Rs/Kg. (E <sub>10</sub> =A <sub>10</sub> XB <sub>10</sub> +A <sub>10</sub> )	Ammonia Cooling Tower	Urea Cooling Tower	Total quantity (Kg) (C <sub>10</sub> +D <sub>10</sub> ) =(F <sub>10</sub> )	Total Value (Rs) (F <sub>10</sub> x E <sub>10</sub> ) =(G <sub>10</sub> )
				Quantity (Kg) to be charged (C <sub>10</sub> )	Quantity (Kg) to be charged (D <sub>10</sub> )		
Soda Ash							

**GRAND TOTAL, Rs = Total landed cost of Sl. No. (1+2 +3+4+5+6+7+8+10)**

**NOTE:**

- No other cost shall be admissible other than stated above.
- Transit Insurance shall be arranged by the supplier at their cost.
- P&F charges must be included in basic price.**
- Man power deputation charges, Packing & Forwarding, Transportation charges, loading & unloading of chemicals and Equipment rent is to be clubbed with cost of chemicals.
- Vendor should intimate following considered for arriving "LANDED PRICE"
  - The "LANDED PRICE" for above price bid format must be calculated as per following on RFCL Stores basis:**  
**LANDED PRICE (Rs. /KG) = Total landed cost of Sl. No. (1+2 +3+4+5+6+7+8+10).**
- Any chemical not attracting GST must be clearly confirmed & accordingly landed price for said chemical must be calculated without (GST) in the price bid format.
- TDS will be deducted as per prevailing Govt. rules, if applicable.
- The quoted rates shall be firm and valid during the currency of contract.
- Prices for Sulphuric acid shall be as per prevailing market prices as on 23.03.2023 at Ramagundam, Telangana. Evaluation shall be done based on these prices. However, in case of any excess consumption of Sulphuric acid shall be charged as per clause no. 4.3 (b).

**NO DEVIATION CERTIFICATE**

1. With reference to your Bid reference No. \_\_\_\_\_ Dated\_\_\_\_\_ for  
"Lining up of Contract for Cooling water Treatment Programme and supply of Chemicals at  
RFCL, Ramagundam", we hereby confirm that we comply with all terms, conditions and  
specifications of the Bidding Documents read in conjunction with Amendments(s) /  
Clarification(s) /Addenda / Errata (if any) issued by the Owner prior to opening of Techno –  
Commercial Bids and the same has been taken into consideration while making our Techno –  
Commercial Bid & Price Bid and **wedeclare that we have not taken any deviation /  
exceptions in this regards.**
2. We further confirm that any deviation variation or additional conditions etc or any mention,  
contrary to the Bidding Documents and its Amendments (s) / Clarification(s)/ Addenda / Errata  
(if any) as mentioned at 1.0 above found anywhere in our Techno – Commercial Bid and / or  
price Bid, implicit or explicit, shall stand unconditionally withdrawn, without any cost implication  
whatsoever to the Owner, failing which the Bid Security shall be forfeited.

For and on behalf of

**Stamp & Signature**

**Name**

**Designation**

**Date**

**BID SECURITY FORM**

**Draft of Bank Guarantee for Bid Security Deposit (i.e., Earnest Money Deposit)**

IN CONSIDERATION OF Ramagundam Fertilizers and Chemical Limited (RFCL), HAVING ITS REGISTERED OFFICE AT SCOPE COMPLEX, CORE-III, 7 INSTITUTIONAL AREA, LODHI ROAD, NEW DELHI-110003 (HEREINAFTER CALLED RFCL WHICH EXPRESSION SHALL UNLESS REPUGNANT TO THE SUBJECT OR CONTEXT INCLUDES ITS SUCCESSORS AND ASSIGNS) HAVING AGREED TO EXEMPT \_\_\_\_\_ (HEREINAFTER CALLED THE, THE SAID TENDERER(S)' WHICH EXPRESSION SHALL UNLESS REPUGNANT TO THE SUBJECT OR CONTEXT INCLUDES HIS SUCCESSORS AND ASSIGNS) FROM THE DEMAND UNDER THE TERMS AND CONDITIONS OF TENDER NO \_\_\_\_\_ FOR \_\_\_\_\_ HEREINAFTER CALLED "THE SAID TENDERER" OF SUCH BID SECURITY DEPOSIT FOR THE DUE FULFILMENT BY THE SAID TENDERER(S) OF THE TERMS AND CONDITIONS CONTAINED IN THE SAID TENDER \_\_\_\_\_ FOR \_\_\_\_\_ ON PRODUCTION OF \_\_\_\_\_ BANK \_\_\_\_\_ GUARANTEE \_\_\_\_\_ FOR \_\_\_\_\_ RS. \_\_\_\_\_ (RUPEES /USD \_\_\_\_\_ ONLY).

1. WE \_\_\_\_\_ BANK HEREINAFTER REFERRED TO AS 'THE BANK' DO HEREBY UNDERTAKE TO PAY TO RFCL AN AMOUNT NOT EXCEEDING RS. \_\_\_\_\_ (RUPEES \_\_\_\_\_ ONLY) AGAINST ANY LOSS OR DAMAGE CAUSED TO OR SUFFERED BY 'RFCL' REASON OF ANY BREACH BY THE SAID TENDERER(S) OF ANY OF THE TERMS AND CONDITIONS CONTAINED IN THE SAID TENDER (THE DECISION OF THE COMPANY AS TO ANY SUCH BREACH HAVING BEEN COMMITTED AND LOSS SUFFERED SHALL BE BINDING ON US.

2. WE \_\_\_\_\_ BANK DO HEREBY UNDERTAKE TO PAY THE AMOUNTS DUE AND PAYABLE UNDER THIS GUARANTEE WITHOUT ANY DEMUR MERELY OR A DEMAND FROM 'RFCL' STATING THAT THE AMOUNT CLAIMED IS DUE BY WAY OF LOSS OR DAMAGE CAUSED TO OR WOULD CAUSE TO OR SUFFERED BY 'RFCL' BY REASON OF ANY BREACH BY THE SAID TENDERER(S) OF ANY OF THE TERMS OR CONDITIONS CONTAINED IN THE SAID TENDER OR BY REASON OF THE SAID TENDERER'S FAILURE TO KEEP THE TENDER OPEN. ANY SUCH DEMAND MADE ON THE BANK SHALL BE CONCLUSIVE AS REGARDS THE AMOUNT DUE AND PAYABLE BY THE BANK UNDER THIS GUARANTEE. HOWEVER, OUR LIABILITY UNDER THIS GUARANTEE SHALL BE RESTRICTED TO AN AMOUNT NOT EXCEEDING \_\_\_\_\_ (RS. \_\_\_\_\_ ONLY).

3. WE \_\_\_\_\_ BANK FURTHER AGREE THAT THE TEE HEREIN CONTAINED SHALL REMAIN IN FULL FORCE AND EFFECT DURING THE PERIOD THAT WOULD BE TAKEN FOR THE FINALISATION OF THE SAID TENDER AND THAT IT SHALL CONTINUE TO BE ENFORCEABLE TILL THE SAID TENDER IS FINALLY DECIDED AND ORDER PLACED ON THE SUCCESSFUL TENDERER AND/ OR TILL ALL THE DUES OF RFCL UNDER/OR BY VIRTUE OF THE SAID TENDER HAVE BEEN FULLY PAID AND ITS CLAIMS SATISFIED OR DISCHARGED OR TILL A DULY AUTHORISED OFFICER OF RFCL CERTIFIED THAT THE TERMS AND CONDITIONS OF THE SAID TENDER HAVE BEEN FULLY AND PROPERLY CARRIED OUT BY THE SAID TENDERER(S) AND ACCORDINGLY DISCHARGES THE GUARANTEE. UNLESS A DEMAND OR CLAIM UNDER THIS GUARANTEE IS MADE ON US IN WRITING ON OR BEFORE THE \_\_\_\_\_ TO INCLUDE 3 MONTHS CLAIM OVER AND ABOVE THE PERIOD MENTIONED IN THE PARAGRAPH FOR THE VALIDITY OF THE BANK GUARANTEE IN THE TENDER WE SHALL BE DISCHARGED FROM ALL LIABILITY UNDER THIS GUARANTEE THEREAFTER.

4. WE \_\_\_\_\_ BANK, LASTLY UNDERTAKE NOT TO REVOKE THIS GUARANTEE DURING ITS CURRENCY EXCEPT WITH THE PREVIOUS CONSENT OF 'RFCL' IN WRITING. DATED \_\_\_\_\_ DAY OF \_\_\_\_\_ 20

CORPORATE SEAL

FOR BANK.

**Bank Guarantee for Security Deposit Format**

(To be prepared on Stamp paper issued in the name of Bank)

This BANK GUARANTEE No. \_\_\_\_\_ made this day  
of \_\_\_\_\_ between  
\_\_\_\_\_ a bank

incorporated and having its registered office at \_\_\_\_\_  
(hereinafter called BANK) which expression shall unless repugnant to the context or  
contrary to the meaning thereof include its successors and assigns on the one part and  
RAMAGUNDAM FERTILIZERS & CHEMICALS LTD, a Company registered in India under  
Companies Act, 1956 and having its registered office at SCOPE COMPLEX, CORE-III, 7  
INSTITUTIONAL AREA, LODHI ROAD, NEW DELHI-110003, India to the context or contrary to  
the meaning thereof include its successors and assigns on the other part.

WHEREAS in pursuance to the agreement dated \_\_\_\_\_ (hereinafter  
called CONTRACT) entered into between RAMAGUNDAM FERTILIZERS & CHEMICALS  
LTD (hereinafter called OWNER and  
\_\_\_\_\_ a Company incorporated in  
\_\_\_\_\_ (hereinafter called CONTRACTOR) which expression shall  
unless repugnant to the context or contrary to the meaning thereof include its  
successors and assigns, for supply of

\_\_\_\_\_ as envisaged in the Contract, Contractor has to  
submit a SECURITY DEPOSIT for Rs. \_\_\_\_\_.

CONTRACTOR accordingly agrees to furnish the Bank Guarantee for Security Deposit  
as hereinafter contained towards fulfillment of all of its obligations under the contract.

NOW THIS DEED WITNESSES AS FOLLOWS:

1. In pursuance of the Contract, the Bank hereby guarantees as a direct responsibility  
to OWNER that the BANK is holding the amount of  
Rs. \_\_\_\_\_ at Owner's disposal and hereby  
promises and shall be bound to pay to OWNER, forthwith at Owner's written notice  
stating that the contractor has failed to fulfil its obligations under the contract for  
reasons for which contractor is liable and without any protest or demur and without  
recourse to contractor and without asking for any reasons as to whether the amount if  
lawfully asked for by Owner or not, the entire amount or the portion thereof as  
mentioned by Owner in the notice. The decision of the Owner as to whether the terms  
and conditions of this BANK GUARANTEE FOR SECURITY DEPOSIT have been observed  
or not shall be final and binding on the BANK. In any case, however the Bank's  
responsibility under this BANK GUARANTEE FOR SECURITY DEPOSIT is limited to Rs.  
\_\_\_\_\_.

2. This BANK GUARANTEE FOR SECURITY DEPOSIT shall be valid for an initial period of  
\_\_\_\_\_ months from the date of this Bank Guarantee  
No. \_\_\_\_\_ dated \_\_\_\_\_ given by the Bank to Owner become  
effective. Upon issuance of Commissioning / Erection / Completion certificate  
according to terms of contract on expiry of \_\_\_\_\_ months after the  
issuance of the above-mentioned certificate of commissioning / erection / completion  
certificate, the BANK GUARANTEE FOR SECURITY DEPOSIT shall become null and void.

3. This BANK GUARANTEE FOR SECURITY DEPOSIT shall be in addition to and shall not  
affect or be affected by any other security now or hereafter held by Owner on account  
of money hereby intended to secure and Owner at its discretion and without any  
further consent from the Bank, and without affecting its rights against the Bank, may

compound with, give time or other indulgence to or make any other arrangement with Contractor and nothing done or omitted to be done by Owner in pursuance of any authority or permission contained in this guarantee, shall effect discharge of the liability of the Bank.

4. UNLESS PREVIOUSLY CANCELLED BY THE OWNER, this Bank Guarantee for Security Deposit will remain in force initially up to \_\_\_\_\_ months from the effective date of Bank Guarantee No. \_\_\_\_\_ dated \_\_\_\_\_ given by the Bank to the Owner and subject to provisions of paragraph 2 above will stand automatically cancelled on the expiry of the said period. Unless demand or claim under this Bank Guarantee is made on Bank in writing within three months from the date of expiry of this Bank Guarantee, all the rights of Owner against the Bank shall be forfeited and Bank shall be relieved and discharged from all the liabilities hereunder.

5. Any notice by way of request, demand or otherwise hereunder may be sent by post to the Bank, addressed as aforesaid, and if sent by post, it shall be deemed to have been given at the time when it would be delivered in due course of post, and in proving such notice, when given by post, it shall be sufficient to prove that the envelope containing the notice was posted and a certificate, signed by an officer of the owners, to the effect that the envelope was so posted, shall be conclusive.

6. The BANK GUARANTEE FOR SECURITY DEPOSIT is to be returned to the Bank after its expiry in terms of Paragraph 4 above.

7. The Bank declares that it has the power to issue this guarantee and the undersigned have full power to do so.

Dated \_\_\_\_\_ this \_\_\_\_\_ day of \_\_\_\_\_.

(Indicate the name of the Bank with stamp)

**INTEGRITY PACT**

Integrity Pact (IP) is a tool developed by Transparency International (TI) to help governments, businesses and civil society, which are prepared to fight corruption in the field of public contracting and procurement.

Ramagundam Fertilizers and Chemicals Limited (RFCL), as one of its endeavours to maintain and foster most ethical and corruption free business environment, have decided to adopt the Integrity Pact, to ensure that all activities and transactions between the Company (RFCL) and its Counterparties (Bidders, Contractors, Vendors, Suppliers, Service Providers/Consultants etc.) are handled in a fair and transparent manner, completely free of corruption.

Integrity Pact is aimed at reducing corrupt practices during procurement and contracts through an agreement between the Principal (RFCL) and Counterparties. The agreement seeks commitment from the persons/officials of both the parties not to demand or accept any bribe or gift. Only those vendors/bidders who enter into such an integrity pact with the buyer qualify to participate in the bidding process.

Integrity Pact is implemented through Independent External Monitor(s) who ensure that concerned parties comply with their respective obligations under the Integrity Pact. One Independent External Monitor (IEM) nominated in consultation with Central Vigilance Commission (CVC) shall monitor the activities. Any NIT/RFQ/tender related complaint, for NIT/RFQ/tenders covered under Integrity Pact having value of Rs.1 (one) crore and above, may be addressed to the Independent External Monitor (IEM) as per details given below :

Sh. Jagdish Prasad Meena, I.A.S (Retd)  
A-1/401, Bharat Apartments,  
Plot 8, Sector 18A, Dwarka  
New Delhi - 110078  
# 8802334455  
Email: [meenajp@gmail.com](mailto:meenajp@gmail.com)

Sh. Ashok Kumar Garg, ITS (Retd)  
E-13, Sector-55  
NOIDA – 201301  
# 9868211000  
Email: [akgarg1654@gmail.com](mailto:akgarg1654@gmail.com)



## **Integrity Pact**

**(To be submitted along with technical bid/tender documents. To be signed by the bidder and RFCL)**

Ramagundam Fertilizers and Chemicals Limited (RFCL) hereinafter referred to as "The Principal".

AND

\_\_\_\_\_hereinafter  
referred to as "The Bidder/Contractor"

### **PREAMBLE**

The Principal intends to award, under laid down organizational procedures, contract for

\_\_\_\_\_  
(Bid Document No./RFQ No.: .....)  
The Principal values full compliance with all relevant laws of the land, rules, regulations, economic use of and of fairness/transparency in its relations with its Bidder.

In order to achieve these goals, the Principal will appoint an Independent External Monitor (IEM), who will monitor the tender process and the execution of the contract for compliance with the principles mentioned above.

### **Section 1 – Commitments of the Principal.**

1. The Principal commits itself to take all measures necessary to prevent corruption and to observe the following principles: -
  - a) No employee of the Principal, personally or through family members, will in connection with the tender for, or the execution of a contract, demand, take a promise for or accept, for self or third person, any material or immaterial benefit which the personal is not legally entitled to.
  - b) The Principal will during the tender process treat all Bidder(s) with equity and reason. The Principal will in particular, before and during the tender process, provide to all Bidder(s) the same information and will not provide to any Bidder(s) confidential/additional information through which the Bidder(s) could obtain an advantage in relation to the process or the contract execution.
  - c) The Principal will exclude from the process all known prejudiced persons.
2. If the Principal obtains information on the conduct of any of its employees which is a criminal offence under the IPC/PC Act, or if there be a substantive suspicion in this regard, the Principal will inform the Chief Vigilance Officer and in addition can initiate disciplinary actions.

### **Section 2 – Commitments of the Bidder(s)/Contractor(s)**

1. The Bidder(s)/Contractor(s) commit himself to take all measures necessary to prevent corruption. He commits himself to observe the following principles during his participation in the tender process and during the contract execution.
  - a. The Bidder(s)/contractor(s) will not, directly or through any other persons or firm, offer promise or give to any of the Principal's employees involved in the tender process or the execution of the contract or to any third person any material or other benefit which he/she is not legally entitled to, in order to obtain in exchange any advantage or during the execution of the contract.

- b. The Bidder(s)/Contractor(s) will not enter with other Bidders into any undisclosed agreement or understanding, whether formal or informal. This applies in particular to prices, specifications, certifications, subsidiary contracts, submission or non submission of bids or any other actions to restrict competitiveness or to introduce cartelization in the bidding process.
  - c. The Bidder(s)/Contractor(s) will not commit any offence under the relevant IPC/PC Act; further the Bidder(s)/Contractors will not use improperly, for purposes of competition or personal gain, or pass on to others, any information or documents provided by the Principal as part of the business relationship, regarding plans, technical proposals and business details, including information contained or transmitted electronically.
  - d. The Bidder(s)/Contractor(s) of foreign origin shall disclose the name and address of the Agents/representatives in India, if any. Similarly, the bidder(s)/contractor(s) of Indian Nationality shall furnish the name and address of the foreign principals, if any. All the payments made to the India agent/representative have to be in Indian Rupees only.
  - e. The Bidder(s)/Contractor(s) will, when presenting his bid, disclose any and all payments he has made, is committed to or intends to make to agents, brokers or any other intermediaries in connection with the award of the contract.
2. The Bidder(s)/Contractor(s) will not instigate third persons to commit offences outlined above or be an accessory to such offences.

### **Section 3: Disqualification from tender process and exclusion from future contract**

If the Bidder(s)/Contractor(s), before award or during execution has committed a transgression through a violation of Section 2 above or in any other form such as to put his reliability or credibility in question, the Principal is entitled to disqualify the Bidder(s)/Contractor(s) from the tender process or to terminate the contract, if already signed, for such reasons.

### **Section 4 : Compensation for Damages**

1. If the Principal has disqualified the Bidder(s) from the tender process prior to the award according to Section 3, the Principal is entitled to demand and recover the damages equivalent to Earnest Money Deposit/Bid Security.
2. If the Principal has terminated the contract according to Section3, or if the Principal is entitled to terminate the contract according to Section3, the Principal shall be entitled to demand and recover from the Contractor liquidated damages of the Contract value or the amount equivalent to Performance Bank Guarantee.

### **Section 5 : Previous Transgression**

1. The Bidder declares that no previous transgressions occurred in the last three years with any other company in any country conforming to the TII's anti-corruption approach or with any other public sector enterprise in India that could justify his exclusion from the tender process.
2. If the bidder makes incorrect statement on this subject, he can be disqualified from the tender process and appropriate action can be taken including termination of the contract, if already awarded, for such reason.

### **Section 6 : Equal treatment of all Bidders/Contractors/Sub-contractors.**

1. The Principal will enter into agreements with the identical conditions as this one with all bidders, contractors and sub-contractors.

2. The Principal will disqualify from the tender process all bidders who do not sign this Pact or violate its provisions.

**Section 7: Criminal charges against violation Bidder(s)/Contractor(s)/Sub-contractors(s).**

If the Principal obtains knowledge of conduct of a Bidder(s)/ Contractor(s) which constitutes corruption, or if the Principal has substantive suspicion in this regard, the Principal will inform the same to the Chief Vigilance Officer.

**Section 8 : Independent External Monitor/Monitors**

1. The Principal appoints competent and credible Independent External Monitor for this Pact. The task of the Monitor is to review independently and objectively, whether and to what extent the parties comply with the obligations under this agreement.
2. The Monitor is not subject to instructions by the representatives of the parties and performs his functions neutrally and independently. It will be obligatory for him to treat the information and documents of bidders /contractors as confidential. He reports to the Chairman & Managing Director, RFCL.
3. The Bidder(s)/Contractor(s) accepts that the Monitor has the right to access without restriction to all project documentation of the Principal including that provided by the Contractor. The Contractor will also grant the Monitor, upon his request and demonstration of a valid interest, unrestricted and unconditional access to his project documentation. The same is applicable to Subcontractors. The Monitor is under contractual obligation to treat the information and documents of the Bidder(s)/Contractor(s)/Subcontractor(s) with confidentiality.
4. The Principal will provide to the Monitor sufficient information about all meetings among the parties related to the Project provided such meetings could have an impact on the contractual relations between the Principal and the Contractor. The parties offer to the Monitor the option to participate in such meetings.
5. As soon as the Monitor notices, or believes to notice, a violation of this agreement, he will so inform the Management of the Principal and request the Management to discontinue or take corrective action, or to take other relevant action. The monitor can in this regard submit non-binding recommendations. Beyond this, the Monitor has no right to demand from the parties that they act in a specific manner, refrain from action or tolerate action.
6. The Monitor will submit a written report to the Chairman & Managing Director, RFCL within 8 to 10 weeks from the date of reference or intimation to him by the Principal and, should be occasion arise, submit proposals for correcting problematic situations.
7. Monitor shall be entitled to compensation on the same terms as being extended to/provided to Independent Directors on RFCL Board.
8. If the Monitor has reported to the Chairman & Managing Director, Ramagundam Fertilizers and Chemicals Limited, a substantiated suspicion of an offence under relevant IPC/PC Act, and the Chairman & Managing Director, RFCL has not, within the reasonable time taken visible action to proceed against such offence or reported it to the Chief Vigilance Officer, the Monitor may also transmit this information directly to the Central Vigilance Commissioner.
9. The word "Monitor" word include both singular and plural.

## Section 9 : Pact Duration

This pact begins when both parties have legally signed it. It expires for the Contractor 12 months after the last payment under the contract, and for all other Bidder 6 months after the contract has been awarded.

If any claim is made/lodged during this time, the same shall be binding and continue to be valid despite the lapse of this pact as specified above, unless it is discharged/determined by Chairman & Managing Director of RFCL.

## Section 10 : Other Provisions

- This agreement is subject to Indian Law. Place of performance and jurisdiction is the Registered Office of the Principal i.e. New Delhi.
- Changes and supplements as well as termination notices need to be made in writing. Side agreements have not been made.
- If the contractor is a partnership or a consortium, this agreement must be signed by all partners or consortium members.
- Should one or several provisions of this agreement turn out to be invalid, the remainder of this agreement remains valid. In this case, the parties will strive to come to an agreement to their original intentions.

(For & on behalf of the Principal)

(For & on behalf of Bidder/Contractor)

(Office Seal)

(Office Seal)

Place: New Delhi

Date: \_\_\_\_\_

Witness 1 : -----  
(Name & Address)

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Witness 1 : \_\_\_\_\_  
(Name & Address)

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Witness 2 : \_\_\_\_\_

(Name & Address)

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Witness 2 : \_\_\_\_\_

(Name & Address)

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