



NATIONAL FERTILIZERS LIMITED
(A Govt. of India Undertaking)
Vijaipur-473 111, GUNA (M.P.)
(An ISO 9001 and ISO 14001 Unit)

NOTICE FOR PREQUALIFICATION OF CONTRACTORS

National Fertilizers Limited, Vijaipur invites applications for pre-qualification from competent, well experienced, financially sound Contractors engaged in handling works in Government organizations and large scale industries such as Fertilizers, Petrochemicals etc. along with credentials as proof of their capability to undertake following jobs:-

Job Code	Brief Job Description & Approx. Value
M-06	Operation and Maintenance of Central Air Conditioning Plants, Servicing and Maintenance of Window Air Conditioners, Desert Coolers, Water Coolers, Refrigerators & Deep Freezers etc. (Estimated amount: Rs.17.25 Lakhs)

Interested contractors may visit NFL's Website: www.nationalfertilizers.com to download the detailed Scope of Work & other details or obtained the same from Chief Manager (Mechanical), e-mail: nsanadhya@nfl.co.in, on the address given at top within 30 days from the date of publication of the notice in the newspapers by sending DD of Rs.500/- in favour of NFL, Vijaipur (non refundable) payable at SBI, Bavrikheda (Branch Code: 8455). Complete documents in support of your claim for pre-qualification should reach in the office of the above NFL officer on or before 20/09/2010 clearly indicating on the envelope the job Code and Description. The empanelment of the contractors shall be at the entire discretion of NFL, based on evaluation of their credentials. NFL reserves the right to reject any or all the applications without assigning any reason thereof.

The applications complete in all respect may be sent to:

Chief Manager (Mechanical)
National Fertilizers Limited
Vijaipur, Distt: GUNA (M.P.)
Pin Code: 473111

Last date for submission of application complete in all aspect : **20 / 09 / 2010**

(S.K. Sharma)
Dy. General Manager (Mechanical)
NFL, Vijaipur

CONTACT PERSONS

Sh. S. K. Sharma, Dy. General Manager (Mechanical)
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Sh. N. Sanadhya, Chief Manager (Mechanical)
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Co-ordinating Officer: **Sh. Shailesh Agrawal, Manager (Mechanical)**
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National Fertilizers Limited, Vijaipur

(Maintenance Planning Cell)

Ref: NFVP/ M / MPC-PREQ / AC / 2010

Sub: Pre-qualification/Registration of Parties for Operation and Maintenance of Air Conditioning Equipments at NFL, Vijaipur.

Applications are invited from the reputed Parties / Contractors for Prequalification / Registration for a period of three years against the following Category:

Category – Mechanical

Sr.	Job Code	Brief Job Description	Estimated. Value (Rs. In Lakhs)
1	M-06	Operation and Maintenance of Central Air Conditioning Plants, Servicing and Maintenance of Window Air Conditioners, Desert Coolers, Water Coolers, Refrigerators & Deep Freezers etc.	17.25

Interested parties are requested to submit their application along with the copies of required credentials and complete documents on or before: **20/09/2010**.

(S.K. Sharma)
Dy. GM (Mechanical)
NFL, Vijaipur

APPLICATION FORM FOR REGISTRATION/PRE-QUALIFICATION OF PARTIES FOR MECHANICAL WORKS FOR THREE YEARS

The intending Contractors/Firms/Companies shall submit the following information/documents along with their Applications:-

1	Name of Applicant/Firm/Company i) Nationality ii) Full Address	
2	Company Profile	
A	Whether i) Private Limited Company ii) Un-divided Hindu Family/Individual iii) Partnership Firm (Please attach certified copy of partnership deeds/articles of association and memorandum of association and power of attorney who is signing documents on behalf of applicant/firm/company).	
B	Year of Establishment	
C	Name of Bankers and their full address. (Solvency Certificate to be submitted on enclosed Performa Annexure-II)	
D	Details of Equipment/ Machinery/Tools etc. owned by the Firm.	
E	Details of Staff Working with the Firm (attach separate sheets)	
F	Place of Business.	
3	Provident Fund Code No./ ESI Code No. (duly certified copy to be enclosed)	
4	Sales Tax/CST Registration No. (duly certified copy to be enclosed)	
5	Details of Labour Licence (duly certified copy to be enclosed.)	
6	Income Tax Permanent Account Number (PAN) (duly certified copy to be enclosed.)	
7	Service Tax Registration Number (duly certified copy to be enclosed)	
8	Annual Turnover during the last three financial years (Certified copy of P&L Account and Balance Sheet etc. to be enclosed.).	
9	<u>Choice of Applicant for Enlistment</u> <u>PLEASE SEE SCOPE OF WORK FOR THE JOB</u>	
vi	Operation and Maintenance of Central Air Conditioning plants, Servicing and Maintenance of Window Air Conditioners, Desert Coolers, Water Coolers, Refrigerators & Deep Freezers etc.	
10	List of works executed (Details to be provided as per Annexure-III)	
11	Whether the Applicant was already in this Undertaking? If so, which class and Category (Duly certified copy to be enclosed).	
12	Whether enlisted with another Department, Public Sector Undertaking? If so, which Class and Category showing amount up to which qualified to tender (Duly certified copy to be enclosed).	
13	Has the applicant or any of his partner or shareholders been black listed or delisted or put on holiday list from the approved list of contractors or demoted to lower class or Order passed, banning/suspending business with the Applicant etc. by any Deptt, in the past? If Yes, please give the details.	
14	A list of those persons who are working with the Applicant in any capacity and who are near relatives to any of the employees of the Owner (NFL) or in the Ministry/Department should be submitted (Names are to be intimated if employment given to such persons at later date).	

15	Application shall be submitted along with documents/ information and application fee in the form of Demand Draft of Rs. 113 being non-refundable payable to M/s National Fertilizers Limited, Vijapur Distt. Guna (MP) and must reach the Office of Chief Manager (Mechanical) on or before 20/09/2010.	
16	Declaration by Contractors: All the information filled herein and attached hereto are true to the best of my knowledge and belief. I/we declare that in the event of finding them false, the enlistment if made will stand cancelled without any notice or reference thereof. It is further certified that I/We will not get myself/ourselves registered under more than one name.	
<p>NOTE:</p> <ol style="list-style-type: none"> 1. The enlistment of Contractors shall be at the entire discretion of NFL based on objective evaluation of the details regarding past experience, technical and financial competence, and resourcefulness of the Contractors/Firms/Companies. 2. NFL reserves the right to reject any or all the Applications without assigning any reasons thereof. 3. NFL has the right not to issue tender form to any particular Contractor/Firm/Company and can also suspended, remove/de-list, demote or black-list the Contactor's name under certain circumstances. 4. All parties are requested to apply for prequalification with all the required documents and credentials in one go. Incomplete application forms are liable to be rejected. 		

Note: Please attach separate sheets for the details, wherever, necessary.

Signature of authorized person of the Firm/Company with seal

Form-I

Interested party is to submit the following with signed documentary proof.

S. No.	Description	
1	PF registration No / ESI registration No.	
2	PAN (Income Tax Permanent Account No.)	
3	a) Service Tax Registration No.	
	b) Accounting Code No.	
	c) Sale Tax Code No.	
4	Labour Licence No. (In general) Labour Licence No. (Madhya Pradesh)	
5	Year in which the party was established	

Signature of the Contractor with Seal

(Note: Party not having PF No./Service tax registration No./ESI registration No. need not apply for prequalification)

Form -2

Interested party is to submit the following with signed documentary proof.

S.No.	Description	Status	Remarks
1	Certified copy of last 3 year's P&L account	Yes/No.	
2	Employer of the party is whether related with any NFL employee or not. If yes, give the details.	Yes/No.	
3	Bank reference/Bank solvency certificate on Performa enclosed as Annexure-II.	Yes/No.	
4	Is the party enlisted / prequalified with any other Govt. Deptt./Public Ltd. Company? If yes, give the details.	Yes/No.	
5	Financial capability of the party with balance sheet (latest balace sheets to be attached)		
6	Status of the party (whether Pvt./ partnership/Public Ltd., partnerships deed/article of association.)		

Signature of the party/Contractor with seal

BANK REFERENCE LETTER/SOLVENCY CERTIFICATE

(On Bank's Letter Head)

Certified that M/sat (address)

.....is having an account in our bank as per

following particulars:-

1. Type of Account : Cash-Credit/Current/Savings
2. Bank Account No.
3. Cash-Credit/O.D. Limit (If any) :NO/YES, for Rs.
4. Since when holding Account?
5. Financial Standing & Soundness : .SOUND/POOR
6. Dealing & Conduct of the Party : Satisfactory/Un-satisfactory
7. Any other comments

This is issued on the request of M/s
for submission to M/s National Fertilizers, Vijapur, Distt. Guna (MP)

Date: (Signature of Bank Manager)

Place :

Seal :

Annexure-III

ELIGIBILITY CRITERIA OF PARTIES W.R.T. EXPERIENCE

Ref No.	
Name of Contract	Operation and Maintenance of Central Air Conditioning Plants, Servicing and Maintenance of Window Air Conditioners, Desert Coolers, Water Coolers, Refrigerators & Deep Freezers etc at NFL, Vijaipur.
Estimated Cost (for one year)	Rs. 17.25 Lakh

S.No	Description	Financial Year	Details of the documents to be submitted	
1	Average Annual Financial turnover during last three years ending st 31 March of the previous financial year.	2007-08		
		2008-09		
		2009-10		
2	Experience of having successfully completed similar works during last seven years ending the day of month previous to the one in which applications are invited should be either of the following:- a. Three similar completed work costing not less than 40% amount of the Estimated Cost. (with Performance/Completion Certificate)	1	Work Order Ref. No.	
			Name of Company	
			Contract Value	
			Contract Period	
		2	Work Order Ref. No	
			Name of Company	
			Contract Value	
			Contract Period	
		3	Work Order Ref. No.	
			Name of Company	
			Contract Value	
			Contract Period	

OR			
b. Two similar Completed Work Costing not less than 50% amount of the Estimated Cost. (with Performance/Completion Certificate)	1	Work Order Ref. No	
		Name of Company	
		Contract Value	
		Contract Period	
	2	Work Order Ref. No	
		Name of Company	
		Contract Value	
		Contract Period	
OR			
c. One similar Completed Work Costing not less than 80% amount of the Estimated Cost. (with Performance/Completion Certificate)	1.	Work Order Ref. No	
		Name of Company	
		Contract Value	
		Contract Period	

NOTE:

1. Similar Work means work employing same Technology, Nature of Job and skill but quantities can vary.
2. Self attested documentary evidences for Annual Turnover to be enclosed.
3. Self attested documentary evidences for Work Orders given above to be enclosed.
4. Self attested documentary evidences for Performance/Completion Certificate of above given Work Orders to be enclosed.

Signature of the Party/ Contractor with seal

National Fertilizers Limited, Vijaipur

(MAINTENANCE PLANNING CELL)

TENTATIVE SCOPE OF WORK for this contract (for Web-site) along with estimated value is as given below:

6. Reference No. NFVP/ M / MPC-PREQ / AC/2010

Operation and Maintenance of Central AC units, Servicing and Maintenance of Window Type AC Units, Split AC, Desert Coolers, Water Coolers, Refrigerators & Deep Freezers etc. at NFL, Vijaipur (A gas based Fertilizer Plant).

Estimated value per Annum: Rs. 17.25 Lakhs.

Scope of Work includes the Operation & Maintenance of following:

I	55 TR capacity, DX Type (With Standby Compressor& Condenser Unit) Make Kirloskar AC-770	3 Nos
II	21 TR capacity, DX Type (With Standby Compressor & Condenser Unit) Make Kirloskar AC-470	3 Nos
III	110 TR capacity, DX type (With Standby Compressor& Condenser Unit)	3 Nos
IV	55 TR capacity, DX Type (With Standby Compressor& Condenser Unit)	2 Nos
V	10 TR capacity, Air cooled Package Units(Blue Star, Model : PAW- 1028) with 2 Compressors 5 TR each	4 Nos
VI	10 TR capacity, Air cooled Package Units(Blue Star, Model : PWC- 1021) with 2 Compressors 5 TR each	4 Nos
VII	7.5 TR capacity, Daikin make, Air Cooled Package AC	1 Nos
VIII	8.75 TR capacity, Voltas make Air Cooled Package AC	5 Nos
IX	1.0 Ton/1.5T/capacity Window Air Conditioners., (Voltas/Fedders Lloyds/Carrier/Amtrax/ACC)	260 Nos
X	2.0 TR Capacity Window AC	15 Nos
XI	2.5 TR Capacity Window AC	10 Nos
XII	2.0 TR Capacity Split type AC (Godrej, Fedders Lloyd, Voltas)	35 Nos
XII	3.0 TR Capacity split and Bi-split AC	5 Nos
XIV	Refrigerators of various capacities	33 Nos
XV	Water Coolers (15, 40, 60, 150 Lts)	40 Nos
XVI	Desert Coolers	300 Nos
XVII	Deep Freezers 1.0 TR and 0.5TR capacity	3 Nos

Note: 1. Number of machines may vary.
2. Detailed Scope of work is given as Annexure - A

**Dy. General Manager (Mechanical)
NFL, Vijaipur**

Annexure-A

TECHNICAL TERMS & CONDITIONS AND SCOPE OF WORK

TECHNICAL TERMS & CONDITIONS FOR CENTRAL AC PLANTS

1. The job involves routine Maintenance works & Operation of Central Air-conditioning units installed at Vijaipur, Line-1&2. The rates quoted will be firm during entire period of contract of one year, which may be extended on the same rates, terms and conditions for three months, if mutually agreed.
2. The Engineer in-charge will be duly intimated by the contractor before taking up any job on the Air conditioning units. The contractor shall have to take up the preventive and breakdown maintenance jobs on all the A.C. units installed at NFL site. In case of breakdown maintenance, the contractor shall have to take up the job within 4 hours of Notice and all other jobs within 24 hours of notice.
3. The contractor shall have to operate all the air-conditioning units installed at our site in consultation with shift-in-charge of respective plants. All the data should be noted in the standard Performa / log book and has to be produced as and when required by the Engineer in-charge.
4. For all the maintenance jobs/breakdown jobs, the time of completion of each job will be decided by the nature of job. Since it is maintenance work it has to be carried out on top priority basis and has to be completed in all respect within the time specified by the Engineer in-charge.
5. In case of breakdown of air conditioning system the contractor has to rectify the defect and put the plant in operation within 8 hours or time fixed by Engineer in-charge depending upon the nature of breakdown otherwise, **penalty at the rate of 1% per day or part thereof shall be charged subject to max. of 10% of each monthly bill against that Unit.** The penalty for standby equipment under breakdown like compressor, pump & heat exchanger etc, will be effective after 8 days from the date of breakdown of the equipment, as per the rate mentioned above.
6. The contractor shall make necessary records for all free issue material such as lubricants; spares etc. and submit date wise statement every month. Contractor will maintain the necessary records of the spare parts used and unused material will be returned to NFL stores. The contractor shall have to make his own arrangements for transportation, handing of materials from NFL stores to the site & back to stores.
7. The contractor should submit his bill once at the end of every month. The Engineer-in-charge will check the bill, verify and forward the same to the F&A Deptt. for making payment. The payment shall be made within 15 days of submission of bills complete in all respect

8. Tenderer should go through the tender documents and sign on each & every page of NIT as a token of acceptance of all the terms & conditions mentioned in the above documents.
9. *The Contractor shall depute one full time Supervisor with minimum qualification of Diploma (Air Conditioning / Mech.) in Engineering with Minimum 5 years experience in Operation and Maintenance of Air Conditioning (AC) Equipments. The supervisor shall be technical person well conversant and competent in operation and maintenance of AC equipments. The supervisor shall be capable of handling day-to-day affairs, coordinating, planning and guiding the operation and maintenance of the AC equipments.*

*Supervisor shall be responsible for the quality of work carried out. and to deploy adequately qualified manpower in sufficient number skilled (**Electrician-1No. & Mechanic-1No. for ARC Part-I and Electrician cum Mechanic-2 Nos. for ARC Part-II**), semiskilled (**Operators-7 Nos. for ARC Part-I**) and unskilled (**Helpers-6 Nos.**) labours required for the jobs. As our Plant is sophisticated and hazardous in nature for safe operation & maintenance, the manpower deployed by the contractor (other than helpers) should have at least five years experience in similar capacity plants with Diploma / ITI qualification in respective areas.*

10. The contractor shall have to take up both preventive as well as breakdown maintenance jobs. The Engineer-in-charge will give instructions regarding jobs to be carried out, as and when requirement arises at the site. The contractor shall have to carry out the jobs in consultation with Engineer-in-charge and have to be completed in all respect to the entire satisfaction of Engineer -in-charge.
11. The contractor shall make his own arrangement for tools and tackles including Coupling Puller, Vacuum Pump etc. Testing equipments like Halide Torch, Megger Meter, and Tong Tester.
12. The Engineer-in-charge shall approve the specification of the material to be supplied.
13. The tenderer shall quote their rates strictly as per schedule of rates attached.
14. All the technical details regarding A.C. unit, operational details, procedure of de-scaling of Condensers & any other clarification details can be had from Engineer-in-charge as and when required.
15. The contractor's operational competent staff (Operators) has to come in all the three shifts and has to report to the Shift-in-charge of the concerned plants. The position of the air conditioning units shall have to be furnished at the end of each shift to the Shift- in-charge and also Engineer-in-charge.
16. The rates quoted in Schedule of rates include the operation and maintenance of AC units for a period of one year.
17. a) NFL will hand over the AC plant to contractor with required quantities of refrigerant in the system.
b) The make-up of refrigerant (Freon-22) during operation of AC plant shall be made up by the contractor at his own cost.

- c) In case of any failure in the equipments covered in part-I, i.e. Central Air Conditioning Plant, for which the reason for failure may be attributed to the poor maintenance / operation of the plant / equipment by the contractor, the refrigerant shall be provided by the contractor at his own cost. However, NFL shall provide the refrigerant for the Central Air Conditioning System, if the reason for failure of plant /equipment is not attributed to the contractor. The decision of NFL Engineer In-charge in this regard shall be final and binding to the contractor.
- d) To minimize the failure of the equipments / loss of refrigerant, contractor shall undertake proper preventive maintenance of the equipments covered under the contract. Preventive maintenance of all the equipments shall be done before the commence of summer season to ensure smooth & breakdown free operation.
18. At the time of expiry/termination of the contract, the contractor has to hand over the AC units duly charged with required quantity of refrigerant R-22 and in running condition.
 19. Non-maintenance to temperature in the control rooms and offices below 26 Degree Celsius shall be treated as breakdown.
 20. Contractor shall overhaul the Main Compressors, Blowers and other equipments, if required before the start of summer season and ensure the break down free operation during summer season.
 21. Major replacement, like replacement of condenser etc. and modification in the system shall be in NFL scope. All welding facilities shall be provided by NFL free of cost. However, Brazing will be in the scope of the contractor, including materials to be used for brazing.
 22. Cleaning of all Electrical contacts of Starters and Switches in control panel and its replacement, if required shall be in the scope of Contractor.
 23. Contractor has to maintain the electrical panel in good condition including all the components in the panel. Bus bar connects cable, relays and fuses, central wiring including cable glands.
 24. Before starting any equipment, the contractor shall check the IR value of Motor. It's connecting and the earthing of the equipment should be properly checked.
 25. Any fault occurring during starting and its operation shall be immediately reported to Engineer-in-charge.
 26. NFL shall provide all consumables for routine operation and maintenance and overhauling done at site free of charge. However, AC contractor will provide refrigerant gas for top-up during operation and maintenance of Air-conditioning units and to ensure the same without any loss of time, if the reason for loss of refrigerant is attributed to the contractor. **The contractor should make availability of two cylinders of 60 Kgs. each at site.** The contractor at his own cost shall arrange all tools and tackles required for the job.

27. All spares, lubricating oil and Nitrogen gas for testing purpose will be supplied by NFL free of cost.
28. In case any stator of motor for compressors of central plant of ammonia-II is required to be repaired from outside or from a place other than Vijaipur, the contractor shall make his own arrangement for transportation, handling etc. and no extra payment will be payable by NFL in this behalf. However, he has to furnish an Indemnity bond for Rs. 1,00,000/- (Rupees One Lakh only) against the material to be taken out of the NFL premises for repair at their works or at a place other than Vijaipur.

SCOPE OF WORK

PART – I

The scope of work shall be complete for safe efficient trouble free and reliable operation and maintenance of Central Air Conditioning system/ package ACs. The package ACs shall be deemed to include all such items which although are not specifically mentioned here but are required to make the equipments / systems complete for achieving the above operational requirements.

The scope of work shall mainly include the following equipments but not limited to following:

A. CENTRAL AIR CONDITIONING SYSTEM, AMMONIA, LINE-2 GROUP OF PLANTS

1.1 Main control room plus main sub-station (common chilling unit)

1.1.1 Three nos. packed chillers of (two working + one standby), 110 TR normal capacities and each comprising of following:

i) One Number: Blue star York accessible Hermetic Compressor, Model = JS-84 suitable for operation on R-22, complete with suction/disch. Stop valves, crank case heater, refrigerant gas cooled hermetic induction type motor with all phase inherent overload protection suitable for 380/415V, 3 phases, 50 Hz

ii) One Number: Control panel comprising of the following:

High and low pressure cutouts, oil safety control, anti-freeze protection, indicating lights, part-winding starter, overload protection and connecting control wiring.

iii) One Number : Shell and Tube type condenser of M.S.shell and seamless C.S.tubes.

- iv) One Number : Shell and Tube type DX chiller of M.S.shell and seamless C.S. tubes.
 - v) Lot : Refrigerant piping and fitting (in aluminum) based on layout.
 - vi) Lot : Refrigerant controls and accessories like shut-off valves, liquid line strainer, liquid sight glass, solenoid valve, filter drier etc.
- 1.1.2 Three Number : End suction back pull out type pump sets for chilled water circulation
(Two working+ One standby with base plate. vibration isolation pads, auxiliaries etc.)
- 1.1.3 G.I. Air handling units each comprising of DIDW forward curved centrifugal fan, fan motor, V-belt drive, cooling coil in Aluminum, pre-filter section with purafil filters and other accessories required.
Main control room : Two numbers
Office at 1st floor : One number
- 1.1.4 One number M.S. expansion tank complete with inlet and outlet drain connection and insulation.
- 1.1.5 Fresh air units comprising of fresh air fans, fresh air washer bird screen, dampers and purafil filter for A.H.U.
Main control room : One set
Office Area 1st floor: One set
- 1.1.6 Winter heating/Monsoon reheating package comprising of strip heaters, safety start, and thermostat/humidistat of following capacities.
Main control room : One set (27 KW)
Office Area 1st floor: One set (36 KW)
- 1.1.7 Pressurisation unit suitable for mounting in rooms comprising of Fan and Filter section of Air handling units. Two numbers of 15,900 CFM.
- 1.1.8 All Electrical parts there of.

COMPRESSOR HOUSE CONTROL ROOM

- 1.2.1 Two numbers (one working + one standby) packed chillers of 55 TR nominal capacities and each comprising of following:
- i) One Number: Blue star York Accessible Hermetic Compressor, Model = JS-44, suitable for operation on R-22, complete with suction / discharge stop valves, crank case heater, refrigerant gas cooled hermetic induction type motor with all phase inherent overload protection suitable for 380/415 V, 3 phase, 50 Hz.

- ii) One Number: Control panel comprising of following:
High and Low pressure cutouts, oil safety control, antio-freeze protection, indicating lights, and part-winding starter, overload protection and interconnecting control wiring.
 - iii) One Number: Shell and Tube type condenser of M.S. shell and seamless C.S. tubes.
 - iv) One Number: Shell and Tube type DX chiller of M.S. shell and seamless C.S. tubes.
 - v) Lot : Refrigerant piping and fitting (in aluminum) based on layout.
 - vi) Lot : Refrigerant controls and accessories like shut-off valves, liquid line strainer, liquid sight glass, solenoid valve, filter drier etc.
- 1.2.2 Two Number: End suction back pull out type pump sets for chilled water circulation
(one working+ one standby) with base plate, vibration isolation pads, insulation & auxiliaries etc.
- 1.2.3 G.I. Air handling units each comprising of DIDW forward curved centrifugal fan, fan motor, V-belt drive, cooling coil with Aluminum tubes and fins, pre-filter section with purafil filters and other auxiliaries.
1 Nos. : 3000 CFM & 1 No. : 2500 CFM
- 1.2.4 One number M.S. expansion tank complete with inlet and outlet drain connection and insulation.
- 1.2.5 Fresh air units comprising of fresh air fans, fresh air washer, bird screen, dampers and purafil filter. Compressor House control room: One Set.
- 1.2.6 Winter heating/Monsoon reheating package comprising of strip heaters, safety stat, thermostat/humidistat for: Compressor House control Room: One Set (63 KW).
- 1.2.7 All Electrical parts thereof.
- 1.2.8 Alarm system/Unit for pressurization failure.
- 1.2.9 Operation and maintenance of: 4 Nos. Blue star 10 TR - Model No., PWC 1021N. AC Package Units having 2 Nos. STR Compressor, Model = CRN-50500 Make = CPL in each unit.

B. CENTRAL AC PLANT, AMMONIA, LINE-I, GROUP OF PLANTS:

1.1 CENTRAL CONTROL ROOM & OFFICE BUILDING:

Description of main equipment & their capacity (installed, working and standby) for Blue Star Central Air Conditioning Plant, Line-1, Ammonia Central Control Room & Office Building.

- 1.1.1 There are 3 Packaged type Chilled Water Plants each having 55 TR capacities. Out of these, 2 are working and 1 is standby.
- 1.1.2 There are 2 Chilled Water circulation pumps. One pump is standby.
- 1.1.3 The chilled water is circulated in the cooling coils installed in AHU. For Central Control Room there are 3 AHU's out of which one is standby. For Office Building there are 2 AHU's out of which one is standby.

1.2 EQUIPMENT DATA

1.2.1 COMPRESSOR

- 1. Make : KIRLOSKAR
- 2. Quantity : 3 nos.
- 3. Model : AC-770
- 4. Sr.No. : 354K012/13/14
- 5. Refrigerant : R-22
- 6. Max.Capacity : 55 TR

1.2.2 CONDENSER

- 1. Type : Shell & Tube
- 2. Model : CDS 2611
- 3. Make : Blue Star
- 4. Tube material : Carbon Steel

1.2.3 COOLING COIL Central Control Room Office Building

- 1. Type : Chilled water Chilled water
- 2. Quantity : 3 nos. 2 nos.

1.2.4 CHILLER

- 1. Type : DX
- 2. Quantity : 3 nos.
- 3. Model : DXC 2009
- 4. Make : Blue Star

1.2.5 PUMP SETS Chilled water

- 1. Quantity : 2 nos.
- 2. Make : KIRLOSKAR

- 3. Type : BACK PULL OUT
- 4. Model : KPD 50/16

1.2.6 AIR HANDLING UNIT: CENTRAL CONTROL ROOM OFFICE

- | | | |
|--------------------|-------------|-------------|
| 1. Air Qty.(CFM) : | 13,650 each | 19,120 each |
| 2. Make : | THERMFLOW | THERMFLOW |
| 3. Model : | THA-11 | THA-12 |
| 4. Qty. : | 3 nos. | 2 nos. |

COMPRESSOR HOUSE CONTROL ROOM

1.1 Description of main equipment & their capacity (installed, working & standby) for Central Air Conditioning Plant, Line-1, Ammonia, Compressor House Control Room:

- 1.1.1 There are 3 package type water chilling plants having 21TR capacity. Out of the 3 one is standby.
- 1.1.2 There are 2 chilled water circulation pumps, one is standby.
- 1.1.3 There are two AHUs out of which one is standby.
- 1.1.4 Water for the condenser is provided through Central cooling system.

1.2 EQUIPMENT DATA

1.2.1 COMPRESSOR

- 1. Make : KIRLOSKAR
- 2. Quantity : 3 nos.
- 3. Model : AC-470
- 4. Sr. No. : 351 K 182/183/184
- 5. Refrigerant : R-22
- 6. Max. Capacity : 21 TR (Each)

1.2.2 CONDENSER

- 1. Type : Shell & Tube
- 2. Model : CDS 1810
- 3. Make : Blue Star
- 4. Tube material : Carbon Steel

1.2.3 COOLING COIL

- 1. Type : Finned tubes
- 2. Quantity : 3 nos.
- 3. Size : 30" x 70" x 8RD

1.2.4 CHILLER

- 1. Type : Direct expansion
- 2. Quantity : 3 nos.
- 3. Model : DXC 1408
- 4. Make : Blue Star

1.2.5 PUMP SETS Chilled water

- 1. Quantity :2 nos.
- 2. Make : KIRLOSKAR
- 3. Type : BACK PULL OUT
- 4. Model : KPD 40/16

1.2.6 AIR HANDLING UNIT

- 1. Air Qty.(CFM) : 5410
- 2. Make : THERMFLOW
- 3. Model : THA-7
- 4. Qty. : 2 nos.

2.0 The routine jobs, Monthly & Seasonal to be carried shall include in general but not limited to the following items for maintenance work of AC Units.

ROUTINE MAINTENANCE (WEEKLY):

- 2.1 Cleaning of filters of air handling unit and fresh air.
- 2.2 Cleaning of equipment.
- 2.3 Tightening/replacement of belts, if required.
- 2.4 Cleaning/replacement of water line pot strainer.
- 2.5 Checking & tightening of electrical terminals.
- 2.6 Checking & tightening glands of pumps and water valves.
- 2.7 Checking the system for leakage of gas.
- 2.8 Topping up of lubricating oil.
- 2.9 Break down Maintenance of any air-conditioning plant equipment including main compressor.

3.0 MONTHLY:

- 3.1 Cleaning of Cooling Coils.

- 3.2 Cleaning of oil filter of compressor.
- 3.3 Cleaning of suction line strainers of compressor.
- 3.4 Cleaning of liquid line strainers.
- 3.5 Checking and tightening the foundation bolt of equipments.
- 3.6 Checking of correctness and calibration of all Safety / Automatic controls to be replaced, if defective.
- 3.7 Charging of additional refrigerant, if required.

4.0 SEASONAL:

- 4.1 Changing compressor oil.
- 4.2 Checking the valve plates assemblies and unloader assemblies.
- 4.3 Checking oil pump.
- 4.4 Overhauling/checking of bearing clearance of refrigeration compressor, if required.
- 4.5 Checking crankshaft for leakage. The inner, outer Neoprene "O" rings should be replaced, if found defective.
- 4.6 Descaling condenser tubes and oil cooler tubes.
- 4.7 Overhauling of ventilation system.
- 4.8 Cleaning and applying grease for all bearings.
- 4.9 Operation and maintenance of: 4 Nos. Blue star 10 TR - Model No., PAW 1021 Package Units having 2 Nos. STR Compressor, in each unit

PART-II :

TECHNICAL TERMS & CONDITIONS AND SCOPE OF WORK FOR PACKAGE AIR-CONDITIONERS, WINDOW TYPE AIR CONDITIONERS, REFRIGERATORS, WATER COOLERS, DESERT COOLERS, PACKAGE AC UNITS.

1. SCOPE OF WORK (FOR ANNEXTURE- II A OF SOR)

Scope of work under this contract shall include but not limited to the under mentioned jobs:

- A. Servicing contract for Window/Split type Air conditioners/Desert coolers/Refrigerators/Water coolers/ Deep Freezers and package Air Conditioners
 - a) **Scheduled checking/servicing/overhauling of the machines as per instructions of NFL Engineer and maintenance schedules indicated in this**

tender document or recommended by manufacturers of the machine as the case may be.

- b) Attending the faults in the machines wherever these go out of order or work inefficiently.
- c) The scope of work includes repair/replacement/ overhauling at his own cost, of all the parts of the machines, which become defective, inefficient or get damaged during working. The decision of N.F.L. Engineer regarding repair / replacement / over-hauling of any part of the machine will be final and binding on the contractor.
- d) NFL will provide, A.C./Desert Cooler bodies, evaporators, condensers that are damaged/beyond repair free of cost. But no extra labour charges will be made for their replacement. Replacement of rest of the parts including Grill is in Contractor's scope.
- e) The Contractor shall replace the damaged Rubber Seals of refrigerators doors and water cooler's cover. The damaged body sheets of water cooler shall be fabricated & replaced by the contractor. However NFL will provide sheets.
- f) The contractor shall maintain sufficient stock of the spares as indicated below:

i) Spares for window type Air conditioners & Water Coolers / Deep freezers /Refrigerator

Sealed unit compressors, blower motors, thermostat, relays, overload protectors, fan blades, capacitors, all type of filters, switches, knobs, capillary tube, piping, water taps, floats, bulbs, Rubber seals, electric wiring, plugs, refrigerant gases and any other part as may be required.

ii) Spares for Desert Coolers:

Complete water pump unit, Fan motor of different make used presently, various water distributing parts from pump discharge to suction pads, suction pads / filters, water inlet valve complete with float etc. Electric wiring, plugs, switches, knobs, speed regulators, grill indication bulbs, nuts, bolts, clamps, and any other part as may be required.

- g) In case of any failure in the equipments covered in Part-II, i.e. Package ACs, Window type Air Conditioners, Split type Air Conditioners, Desert Coolers, Water Coolers, Refrigerators, Deep Freezers, package ACs etc, the refrigerant shall be provided by the contractor. In no case NFL shall provide the refrigerant for these equipments.
- h) To minimize the failure of the equipments / loss of refrigerant, contractor shall undertake proper preventive maintenance of the equipments covered under the contract. Preventive maintenance of all the equipments shall be done before the commencement of summer season to ensure smooth & breakdown free operation.

i) Shifting of Machines

The contractor shall shift the Air conditioner / desert cooler from one room to another room if the officer owning the Air conditioner shifts his room or is transferred from one section to another.

j) Painting of machines

All the machines Air conditioner/desert cooler/water coolers/deep freezers/refrigerators to be painted at least once during the contractual period and thereafter as per the condition and requirement of machines. The job also includes cleaning and scraping as well. N.F.L. will supply Paint, spray-painting gun free of cost.

k) Maintaining of Records:

The scope of supply also includes maintaining of various records as per the instructions of Engineer In charge and as per the details given at different points in the tender document. Contractor to arrange printed register for maintaining record at his own cost.

l) Supervision

The contractor to depute his own full time supervisor for supervising the job and to manage the party's administrative jobs with two mechanics cum electrician. & four to five helpers.

B. Item rate contract

- a) The scope of work includes checking of machines, identifying the fault, shifting of machine if required to their workshop and back, repairing/replacing the defective parts and all connected jobs required to be done in replacing or repairing the defective parts including cost of spares/parts.
- b) Gas filling includes all the connected jobs of Gas cutting, Gas welding/Brazing, identifying the leaking point in gas circuit and repairing the same.
- c) The quoted Item rates as per **ANNEXURE-II C** shall include all the above-mentioned jobs and no extra payment will be made on account of connected jobs required to be performed for replacing/repairing the defective component.

C. Installation of Air conditioner:

The scope of work includes:

- a) Shifting of machines from N.F.L. stores or any other place to the place of installation.
- b) Placing, fixing filling gaps around air conditioner with insulation material provided by NFL free of cost, checking and commissioning of the machine.
- c) The civil job of making the required opening in the wall or wooden partition for installing the Air conditioner will be done by N.F.L.

D. Installation of Desert Cooler:

The scope of work includes:

- a) Shifting of machine from N.F.L. stores or any other place to the place of installation.
- b) Placing, fixing, checking and commissioning of the Desert Cooler.
- c) The civil job of making the required opening, fixing of wooden ply and support will be done by N.F.L.

E. Servicing & Maint. Of 10 TR package Units (Blue Star Make) for Urea Plant (Stream 11,21,31, & 41)., 8.75 TR (Voltas Make) & 7.5 TR package Units(Daikin Make) in Bagging Plant And CPP Control Rooms.

- 1) Replacement of damaged spares parts free of cost.
- 2) Replacement of damaged sealed units free of cost.
- 3) Charging of Freon-22 gas free of cost.
- 4) Attending of gas leakages in the system.
- 5) Any other jobs connected to 10TR, 7.5TR & 8.75TR package units.

2. Old defective part contractor's property

In case any defective part is replaced with new part, the defective old part shall remain the property of the contractor since he shall do all such replacement at his own cost.

However, in case the defective part is replaced with some repaired old part as a stopgap arrangement, the contractor to put back the original part after repairs.

Further in case of jobs done on chargeable basis (other than annual service contract) the old part shall be N.F.L's property except Compressor, Fan Motor, Blower Motor and Water Pump (D.C.).

3. Repair from authorized representative of manufacturer

The contractor will arrange to get sealed unit repaired from authorized representative or manufacturer of sealed unit only and hand over the after repair guarantee obtained from the dealers to N.F.L. for reference and records. For taking up any component for repair contractor will send a request in the form as shall be prescribed by the Engineer In - Charge. Sealed Unit repair shall stand a Guarantee for trouble free service of one year. The contractor free of cost shall attend any failure within one year.

4. Procedure of taking out component for repairs

As and when a sealed unit compressor of open unit compressor driving motor goes out of order and contractor feels that the same is to be taken out of the factory premises for repairs. The unit will be allowed to be taken out against N.F.L. outgoing gate pass as follows: -

- a) Contractor may install his own spare serviceable unit in its place to avoid penalties
- b) Contractor gives a bank guarantee for the another equivalent and cost of the unit in favour of Manager (F&A), N.F.L., Vijaipur for the minimum period of one month which shall have to be extended in case contractor fails to deliver back the unit duly repaired within one month.
- c) While taking out the components and delivering back the same contractor's representative will sign in register maintained by NFL Engineer as per proforma at **ANNEXURE-VI**. The contractor shall furnish a weekly statement showing the machines attended to by him in accordance with our schedule. The contractor shall maintain records for all running/ periodic maintenance. Contractor shall arrange all proforma/log sheets and fill them regularly. History registers will be opened separately for all equipments and all breakdown/shut-down maintenance jobs carried out will be recorded in the same. For portable Air conditioners, Water coolers etc. history register will be maintained separately for each equipment/alternatives as regards to daily/ weekly/ monthly/yearly/break down maintenance will be recorded and got initiated by the user or the Engineer-in-charge. The monthly running bill will not be released for payment till the history register is complete.

5. Time Limits for rectifying fault

Whenever any machine develops fault, the NFL Engineer or his representative shall communicate the same to the representative of the contractor normally in writing.

Every effort shall be made by the contractor to rectify the fault in the machine at the earliest. Normally all such defects are to be attended to on the same day on which these faults are reported. Only in exceptional cases a delay or more than one day shall be tolerated. In case rectification of the fault requires repairs/replacement of the sealed Unit/ Open unit the same shall normally be done in 2 days time.

- a) In case NFL observes that contractor is delaying the repair of some machines NFL will be at liberty to get the machines repaired from other sources at the risk & cost of the contractor.
- b) Contractor's Site In charge will submit his Daily Progress Report in the proforma **ANNEXURE-VII** at 4.00 P.M. every day to NFL Engineer.

6. Schedule of quantities

The tentative approximate number of machines will be under Service/Maintenance contract is given in **ANNEXURE-II A & II B**. The quantities may vary by - + 20%.

7. Stationing the mechanics at Vijaipur

As soon as the contract is awarded contractor shall depute his authorized supervisor for conducting and supervising the repair and maintenance jobs. The contractor shall also station his team of competent mechanics at Vijaipur during the operation of this contract. The strength of the mechanics to be deputed shall be adequate to meet the workload so that satisfactory progress of work is maintained. The mechanics may be required to attend to the defects in the machines even at odd hours. The site supervisor should have full authority to operate the contract in all respects on behalf of contractor and NFL will address all correspondence to the Site In charge. Site In charge will not proceed out of station or on leave without written permission from NFL Engineer. In case of long absence of Site-In charge, the contractor will depute a duly authorized substitute to look after the job in his absence.

8. Transportation facilities for the movement of machines

The Contractor will make his own arrangement for shifting/transporting of machines by cycle rickshaw within the work site. He will also employ their own manpower for handling the equipment such as loading, unloading, lifting and placing the machine in position.

9. Replacement of Units

Whenever a machine develops fault and the NFL Engineer is of the opinion that its immediate replacement with a spare machine is required, the contractor shall install the spare machine without any extra charge.

10. Taking over and handing over the Units

The contractor shall be given a mobilization period of 2 weeks for mobilization of his resources. He shall report at site along with his team of mechanics for taking over the units under this contract on the date to be intimated by NFL Engineer. The contractor and the NFL Engineer or their representatives shall jointly inspect all the units, prior to taking over a unit. Any repairs/replacement of parts if required on the machines at the time of this joint inspection shall be to NFL's account. As soon as one machine is taken over by the contractor in running condition, it will be his responsibility to maintain the same from proceeding day for which NFL Engineer will issue him a servicing sheet in writing and necessary servicing daily charges will be payable to contractor's by NFL within the terms and conditions of this NIT. However, after the machines are handed over to the contractor in sound running conditions all the responsibility for repair/replacement as per the scope of work shall be of the contractor. At the time of the completion of the contract the contractor, the NFL Engineer and new contractor shall again inspect the machines jointly and these shall be handed over to new contractor in sound running condition. Any repair/replacement of parts if required at that time shall be to the contractor's account. At the time of handing over back to NFL NFL and each machine to be painted by the contractor will fill proforma at **ANNEXURE-IV & V**. NFL free of cost will supply paint. The power supply for water cooler and desert cooler will be cut after expiry of contract period of Eight months. However the machines will remain under the charge of the contractor and will be handed over to new contractor after expiry of the contract.

11. Workshop facilities and stock of spares to be maintained by the Contractor

- a) The contractor shall arrange all the tools, tackles, instruments and spare parts required for attending to the defects in the machines expeditiously as per the conditions of progress of work. Necessary spares will be brought inside the factory against an inward Gate Pass and shall be marked with contractor's identification so that while passing out no difficulty is faced. After bringing inside the parts will be shown to NFL's Engineer and his signature obtained in contractor's spare parts register.
- b) The contractor shall keep all the arrangement for Gas welding of Cu-tubes etc. like cylinders and welding nozzles etc. at work site.

12. Payment

- a) The payment will be released to the contractor against monthly bills. At the end of every calendar month contractor shall submit to the Senior Manager (Mech) his monthly bill in quadruplicate supported by a monthly services statement duly countersigned by the users of the machines verifying that the machines have worked satisfactorily during the month.
- b) The payment shall be made on pro-rata basis on the number of machines actually serviced/machined satisfactorily worked during the month. If any machine is withdrawn from the contractor before the expiry of a full calendar month, the contractor shall make the payment for that machine on pro-rata basis for the actual number of days it is serviced/maintained.
- c) All the Bank charges in connection with payments, guarantees etc. If any, shall be to contractor's account.
- d) N.F.L. may withhold payment to such an extent as may be necessary to protect itself from loss on account of: -
 - i) Failure of the contractor to make payments properly to his sub-contractor, workmen or the suppliers of material.
 - ii) Defective work not remedied.
 - iii) Damage to N.F.L. property.
 - iv) Reasonable doubt that the contractor fails to complete the balance work.
 - v) Claims filed or reasonable evidence indicating probable filing of claims.
 - vi) For reasons mentioned elsewhere in the N.I.T.

13. Penalties

Penalty for delay in repairs of machines shall be levied at the following rates:

- a) If a machine remains out of order or under breakdown for more than 3 days and upto 7 days continuously no service charges for the machine for that month shall be payable.
- b) If a machine remains out of order or under breakdown beyond 07 days continuously, an amount, equal to the monthly servicing charges of that machine

shall be deducted from the bill for every 15 days or there part of till the machine remains out of order.

- c) In case the contractor makes an alternative arrangement by providing spare machine kept by him for the purpose, no service charges will be payable for the period for which the original machine remains with the contractor for repairs. No penalty will be levied till contractors spare AC Unit remains in position in working order.
- d) The maximum penalty per month shall be limited to 10 % of the monthly bill.

14. Protections and Watchman

The contractor shall be responsible for the safe custody of all the machines, which are removed by him from their installed places for repairs. The contractor shall be fully responsible for all such N.F.L. machines and material under his custody and shall make adequate arrangements for their protection against damage, pilferage, inclement weather, fire, other hazards etc. at his own cost.

15. Security Gate Passes

Contractor will be responsible to bring his staff inside the factory against a proper Gate Pass issued by the Commandant, C.I.S.F., NFL, Vijaipur. As and when some member of the contractor's working staff holding Gate Pass ceases to remain in services for this contract job the Gate Pass of that person is to be immediately surrendered to Commandant, C.I.S.F. by the contractor. Failing compliance of this clause will be treated as Break of Security Rules.

16. Maintenance schedule

The intent of maintenance schedule is to defined the maintenance requirement and provide a guideline for maintaining the machine in excellent working condition. The contractor will have to follow the maintenance schedule religiously and proper record shall have to be maintained which shall be counter-signed by Engineer-in-charge. The frequency job may have to be increased depending upon the condition of machine. At any stage if the Engineer-In charge feels that the maintenance schedule is not being followed or the machine are not being maintained in good conditions, the deduction are liable to be made from the Bills of the contractor at the discretion of Engineer-in-charge.

A. Window type Air-conditioner/Water cooler

- a) Thorough checking of the entire machines within 15 days of taking over and carrying out all the necessary jobs to make the machine in excellent working condition.
- b) For monthly schedule
 - i) Cleaning of Air Filters, Cooling coil,
 - ii) Oiling of fan/blower motor bearings,

- iii) Checking Gas level in compressors, water level and flow for cooling condenser.
- iv) Checking Relays, thermostat, cleaning of contact point, overloads tripping, other electrical parts, electric wiring and contact points for any loose connection / short circuiting and rectifying any fault thereupon.
- v) General cleaning of the Air-conditioner/Water cooler.
- c) Six monthly schedule
Complete overhauling which shall include thorough checking of all the parts, repair/replacement of faulty parts, thorough cleaning/washing of cooling coil and other parts, descaling of condenser, repair, denting and painting of body etc.
- d) Any machine brought to workshop for any breakdown shall be put back after thorough checking/overhauling as mentioned at 'c' above.