

	<u>BHARAT HEAVY ELECTRICAL LIMITED</u>		Enquiry No. :		
	<u>UNIT'S ADDRESS:</u>		Due Date :		
	<u>CONTACT PERSON'S NAME/DESIGN./PHONE NO./</u>		Supplier Qtn. No.:		
	<u>E-MAIL (FROM PURCHASE DEPT.)</u>		Date :		
SCOPE FOR O&M OF COOLANT RECOVERY SYSTEM					
NOTE:-					
1. The "Offered" Column and where applicable, the "Deviations" & "Remarks" Column of this format shall be filled in by the Bidder and submitted along with					
2. The offer and all documents enclosed with offer should be in English language only.					
3. Bidder must submit complete information against clause no.7 of this document. The offer meeting this clause would only be considered.					
4. Quotations should be filled in our tender schedules only. The contractor shall fill remarks as 'Confirmed or Not confirmed' under 'Offered' column for all items and specify if any as per BHEL requirement. This tender schedule must be submitted along with the General Conditions, Special conditions etc. enclosed herewith duly signed and stamped on each page along with bidder's covering letter. Any deviations need to be filled under 'Deviations' column and if required can attach separate sheet on bidder's letter pad and enclosed to the tender documents.					
NAME & ADDRESS OF THE SUPPLIER :			NAME & ADDRESS OF THE INDIAN AGENT :		
TELEPHONE NOS.:			TELEPHONE NOS.:		
FAX NOS.:			FAX NOS.:		
E-MAIL ADDRESS :			E-MAIL ADDRESS :		
Sl.No.	Description for BHEL Requirement	BHEL Requirement	Offered	Deviations	Remarks
	SCOPE :				
1	Operation and maintenance of Coolant Recovery Plant (Capacity:100LPH) at BHEL,Hyderabad-502032. The scope of work covers operating the coolant recovery plant in A-shift, and on all BHEL working days including collection of the waste coolant from the designated places outside machine shops within main factory complex, conveying in the barrels to the centralised coolant treatmentplant , storing in syntex tanks or drums and processing it to make it fit for recycling, transferring the processed coolant to the designated places outside machine shops wherever required. The scope also includes maintenance of the coolant recovery system including periodical preventive maintenance, replacement of all spares (Spares & consumables will be supplied by BHEL), testing of raw & treated coolant .	Vendor to Confirm			

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2	LOGISTICS				
2.1	The contractor should maintain proper logbook for the performance of the system and the log book should contain the details of the quantity of collection of the waste coolant, Point of collection, quantity treated, quantity handed over, name of work centre, etc., complete. Format to be filled will be given by BHEL.	Vendor to Confirm			
2.2	Spares like UV lamps, SS Filters etc., will be supplied by BHEL and the same shall be installed in the system by the contractor at no extra cost.	Vendor to Confirm			
2.3	The contractor should maintain a record for quantity of consumables and spares used every month for the verification by BHEL personnel.	Vendor to Confirm			
2.4	BHEL will provide battery operated truck. Bidder need to operate this for transporting of Used / Processed coolant.	Vendor to Confirm			
3	MATERIAL HANDLING				
3.1	The raw Coolant will be collected from designated places of shop and will be transported to CRS Plant for processing.	Vendor to Confirm			
3.2	The treated Coolant will be collected and accounted separately and handed over to machine shops.	Vendor to Confirm			
3.3	The collected tramp oil should be handed over by the contractor to the CMM Stores of BHEL.	Vendor to Confirm			
3.4	Solid waste should be handover to Scrap yard.	Vendor to Confirm			
3.5	The spent Activated Carbon shall have to be dumped in the coal yard/scrap yard by the agency.	Vendor to Confirm			
4	EQUIPMENT SIDE & QUALITY				
4.1	The tenderers are advised to visit the existing Coolant Recovery System Plant at BHEL, Hyderabad in order to assess the nature of work, man power requirement etc., before submitting their offer.	Vendor to Confirm			
4.2	Minimum 500 Litres to be processed every day	Vendor to Confirm			
4.3	Raw coolant, processed coolant and the permeate discharge should be tested for pH, Volume for every batch taken for processing and a record should be maintained and produced to BHEL for its verification.	Vendor to Confirm			
4.4	Bacteriological Analysis for TBC using Bactaslide once in a month or as and when required by BHEL on Raw and Processed coolant should be conducted at the site. The number of tests will be limited to one per month for checking the Treated Coolant and 1 (one) per month for checking the Raw waste coolant. The used Bactaslides will be burn / destroyed in the presence of Engineer - in- charge and disposed with out affecting the environment.	Vendor to Confirm			

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4.5	The composite sample of the permeate discharged and the raw coolant water shall have to be analysed for Total Suspended Solids (TSS) and Total dissolved solids (TDS), pH, concentration, bacterial count as directed by BHEL, in line with the laid down procedures of BIS. One sample of raw waste coolant and one sample of permeate once in a month has to be collected, analysed and the report of analysis should be submitted to BHEL for verification.	Vendor to Confirm			
4.6	The Contractor should use the in-built / supplied monitoring equipments such as pH meter, Refractometer etc.	Vendor to Confirm			
4.7	Should process the used coolant drums which were more than 3 months old for separation of sludge & oil from them or as instructed by BHEL personnel.	Vendor to Confirm			
4.8	Periodical disposal of sludge & oil to scrap yard,as and when required/ informed by BHEL personnel.	Vendor to Confirm			
5	MANPOWER				
5.1	The contractor should engage labourers (as per point 5.12) for One shift operation as per the man power deployment scheme to be submitted by the tenderer for operation & treating the waste coolant and for transporting the waste coolant from various buildings like Shop No.01, 02, 06, 51, 70 and other blocks to the centralised treatment plant , transporting the treated Coolant back to designated places near machine shops. The labourers engaged should be paid not less than the prevailing minimum wages as per State Government norms.	Vendor to Confirm			
5.2	The tenderer should submit details of manpower deployment scheme to be employed supporting labourers.	Vendor to Confirm			
5.3	Operation and maintenance is to be carried out in A-shift .	Vendor to Confirm			
5.4	The work is to be executed on all BHEL working days.(as per BHEL - Works Policy: AA:MM:WP)	Vendor to Confirm			
5.5	The contractor shall ensure payment of Minimum wages, Bonus to the workmen employed by him at the rate which shall not be less than the minimum wages applicable under Law from time to time.	Vendor to Confirm			
5.6	The workmen should be covered by PF & ESI Act as applicable and payment will be made only on verification of the documents for the remittance of ESI and PF for the personnel engaged in the work.	Vendor to Confirm			
5.7	Drums shall be trasporated to and fro between designated places and CRS Plant by Battery Truck supplied by BHEL.	Vendor to Confirm			
5.8	The workers should be provided with personal protective equipments such as Gloves, safety shoes etc by the Contractor.	Vendor to Confirm			

Sl.No.	Description for BHEL Requirement	BHEL Requirement	Offered	Deviations	Remarks
5.9	The contractor should keep a First Aid Box with list of Aids and should be refilled as and when required. The permeate and the reject will be collected and accounted separately and handed over to user department.	Vendor to Confirm			
5.10	Employing of manpower on each shift basis: SSW-2, USW-1.	Vendor to Confirm			
6	<i>ROUTINE MAINTENANCE & OPERATION</i>				
6.1	All the chemicals required for routine maintenance and operation shall be supplied by the BHEL.	Vendor to Confirm			
6.2	Bag filter and Cartridge filter are cleaned not less than once in a quarter by rinsing in caustic soda solution and washing it with fresh water.	Vendor to Confirm			
6.3	The Activated Carbon Filter is washed with caustic soda solution and fresh water at the end of week's operation (Saturday) and filled with fresh water and kept for 24 hours or up to starting of next shift. The entire Activated Carbon will be replaced with fresh materials once in 45 days. The spent activated carbon shall be disposed at the coal yard of PG Plant or as directed by the Engineer-in-charge.	Vendor to Confirm			
6.4	Basket Filters, Disinfection unit and process tank are to be cleaned daily after the end of the shift.	Vendor to Confirm			
6.5	Monitoring and maintaining the pressure shall be done at inlet and outlet of the Filter System.	Vendor to Confirm			
6.6	The Basket Filter unit is cleaned daily by circulating DM water for about 20 minutes and saturated with fresh water by proper closing of inlet and outlet valves.	Vendor to Confirm			
6.7	Surface Disinfection unit is to be cleaned with surf water (200gms of Aerial powder in 25 lit. water) circulated for 30 minutes and washed with fresh water. This is carried out twice in week.	Vendor to Confirm			
6.8	TDS of the treated coolant shall be corrected if it exceeds 1300 ppm, by adding fresh water and disinfected on repeated cycles.	Vendor to Confirm			
6.9	Bactaslide is used to find the bacterial content of the coolant before and after disinfection. The number of tests will be limited to not more than five per month i.e.4 (four) for checking the treated coolant and 1 (one) for checking the raw coolant once in a month.	Vendor to Confirm			
6.10	The contract agency has to fix all the spares supplied by him and also the spares supplied by BHEL at his own cost.	Vendor to Confirm			
6.11	The contractor should submit month wise reports like (a) Daily Tracker, Delivery Report, Trial coolant Tracker (b) Lab Test Report of the Used coolant and Treated coolant, and (c) PF & ESI remittance challans to Engineer-in-Charge and any other reports as informed by BHEL.	Vendor to Confirm			

Sl.No.	Description for BHEL Requirement	BHEL Requirement	Offered	Deviations	Remarks
6.12	Weekly preventive maintenance should be carry-out as per format given by BHEL, Backwash cycle should be done daily at end of the shift.	Vendor to Confirm			
6.13	Drawing of coolant oil from CMM Stores and adding it to the treated coolant in right proportion to maintain 5% concentration.	Vendor to Confirm			
6.14	Semiskilled worker should have 'Light Motor Vehicle' (LMV) driving license & experience of minimum 2 years period in driving 4 wheeler with basic maintenance exposure. Experience certificate to be provided.	Vendor to Confirm			
6.15	While operating machine, operator should follow Flow diagram given by BHEL	Vendor to Confirm			
6.16	Drums should be cleaned before filling of Treated coolant	Vendor to Confirm			
6.17	All consumables will be supplied by BHEL.	Vendor to Confirm			
7	<i>QUALIFYING CONDITIONS</i>				
7.1	The vendor should be 1) original equipment manufacturer (OEM for similar equipment) or 2) agency who is having experience in running of 'Effluent Treatment Plant(ETP)' for atleast one year. In this case, Experience certificate need to be submitted.	Vendor to Confirm			
7.2	Vendor should be able to deploy manpower within 2 weeks after issue of Work Order.	Vendor to Confirm			