

**BEFORE THE HON'BLE NATIONAL GREEN TRIBUNAL
SOUTHERN ZONE AT CHENNAI**

APPLICATION NO. 8 OF 2016 (SZ)

R. Ravimaran
S/o. Ramachandran
No.42, Beach Road, Thazhankuppam,
Ennore,
Chennai-600 057.

... Applicant.

VERSUS

Union of India,
Rep. by its Secretary,
The Ministry of Environment, Forests and Climate Change,
Jorbagh, New Delhi & Others.

... Respondents.

INDEX

S.No	Date	Documents	P.No
1	27.04.2022	Report filed by NCTPS-I	1
<u>2</u>		Work Orders	9
3		Line Clear Forms	41
4		Stack Emission Data NCTPS-I	56
5		Calibration Certificates	58
6		Extract of NIOT Report	62
7		Ground water Survey Report By TNPCB	64
8		E-mails from Care Air-TNPCB	67
9	27.04.2022	Report filed by NCTPS-II	83
10		Stack Emission Data NCTPS-II	87

DATED AT CHENNAI ON THIS THE 27th DAY OF APRIL 2022


**M/s. VIJAYA MEHANATH
COUNSEL FOR 2nd and 3rd RESPONDENT**

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1. Union of India,
Rep. by its Secretary,
The Ministry of Environment, Forests and Climate Change,
Jorbagh, New Delhi.
2. The Tamil Nadu Generation and
Distribution Corporation (TANGEDCO)
represented by its Chairman Cum Managing Director
10th Floor, NPKRR Maaligai, 144, Anna Salai,
Chennai-600 002.
3. North Chennai Thermal Power Station
Rep. by its Chief Engineer,
Athipattu, Chennai.
Thiruvallur District - 600 120.
4. Kamarajar Port Limited (Erstwhile Ennore Port Limited)
Rep. by its Chairman cum Managing Director, 4th Floor,
Super Speciality Diabetic Centre (erstwhile DLB building)
Near Clive Battery Bus Stop
Rajaji Salai,
Chennai-600 001.
5. The Tamil Nadu Pollution Control Board
Rep. by its Member Secretary,
76, Mount Salai, Guindy,
Chennai-600 032.
6. The District Environmental Engineer,
Tamilnadu Pollution Control Board,
77-A, South Avenue Road, Ambattur Industrial Estate,
Ambattur Taluk, Chennai-600 058
Thiruvallur District.
7. The Tamil Nadu Coastal Zone Management Authority
Rep. by its Member Secretary,
Panagal Building, Chennai.


**CHIEF ENGINEER
NORTH CHENNAI THERMAL POWER STATION
TNEB, CHENNAI-600 120.**

8. Public Works Department
Rep. by its Secretary,
Secretariat, Fort St. George,
Chennai. ...Respondents.

STATUS REPORT FILED BY THE 2ND & 3RD RESPONDENTS

The 2nd and 3rd Respondents beg to submit as follows:

1. It is submitted that the present status report is being filed in compliance with the direction issued by this Hon'ble Tribunal and the same is as follows:
2. It is submitted that during the hearing on 25.04.2022, this Hon'ble Court was pleased to direct the TANGEDCO to file its report on the following points.
 - a. **To produce documents with regard to emission standards ie., whether the unit is stopped as and when emission exceeds the limits and reports thereof.**

It is humbly submitted that the exceedance of norms is only momentarily and not in a persisting manner. However online mechanism such as rapping and hammering of ESP fields is being done round the clock for which AMC works have been awarded.

Also, it is submitted that steps are being taken to ensure all the ESP fields are in service. It can be seen that the monthly average of SPM Norms is within Norms.

In every Annual overhaul, ESP is being overhauled and worn out/Defective internals if any, are being replaced and the following works are being carried out to maintain the design efficiency of ESP

1. Water washing of ESP
2. Renewal of Inner Arm, Outer Arm, Pin wheel, Shock bar pad, Shock bar angle, emitting coil, and collecting plate.
3. Topping up of gear box oil in CERM & EERM.
4. Rectification works carried out such as field short and CERM & EERM gear box problem.


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NORTH CHENNAI THERMAL POWER STATION
TNEB, CHENNAI-600 120.

b. Replacement of the existing E.S.P with modern and advanced equipment and to state the period required for the same:

FGD (Flue Gas Desulfurization) is proposed to be commissioned for achieving the emission standard for Sox. As per the recommendation of the consultant M/s.Mecon.Pvt.Ltd who has been engaged in the commissioning of FGD, the additional dust burden will be taken care of by FGD and the SPM level will be further reduced and hence refurbishment of ESP will be decided accordingly.

c. Objections for DPR as stated in the Joint Expert Committee Report.

Findings:

It has been stated that the OCEMS have been tampered so that actual results are not transferred to CPCB and TNPCB.

In NCTPS-I whenever there is momentary exceedance, an alarm message is being received from Care Air Center/TNPCB through mail and SMS. The mail copies are enclosed for reference. As soon as emission levels resume to the limits, the reset message "site returned to normalcy" is also being received. The copies are enclosed. Hence it is evident that no Tampering at NCTPS-I stack emission has been made.

Findings:

As against a legal requirement of 100% of fly ash utilisation, TANGEDCO's fly ash utilization was less than 50% in 2020-21.

It is submitted that 29.96% fly ash has been lifted to cement companies, the remaining 70.04% of ash has been wet sluiced and transported to the ash dyke and has been lifted.


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NORTH CHENNAI THERMAL POWER STATION
TNEB, CHENNAI-600 120.

NCTPS-I was initially designed for complete wet sluicing. As an improvement work, the PDFACS was installed on 50% of ESP hopper in all three units. The dry fly ash is conveyed through PDFACS to silos and disposed to Cement Companies and other Brick Manufacturing Companies. Whenever there is no demand for Cement Companies or during rainy seasons, the dry fly ash is wet sluiced into slurry, and pumped to Dyke. Further as an additional improvement, now it is proposed to install a 100% PDFAC System in all the three units. The procurement process is in progress. Hence, it is stated that 100% ash is utilized either in dry form or wet form. It is also ensured that, after 100% installation of the PDFAC System, 100% dry fly ash will be evacuated.

Findings:

Despite the tampering of OCEMS, between 01.04.2019 and 07.03.2022 (1071days), NCTPS Stage 1 is recorded to have emitted particulate matter (including ash) in excess of permissible levels for 481days.

During the year 2019, the SPM level has exceeded for which the following works have been carried out to reduce the emission level of SPM

The overhauling of ESP which comprises of

1. Water washing of ESP
2. Renewal of Inner Arm, Outer Arm, Pinwheel, Shock bar pad, Shock bar angle emitting coil and collecting plate.
3. Topping up of gear box oil in CERM & EERM.
4. Rectification works carried out such as field short and CERM & EERM gear box problem.

Overhaul works carried out pent house area:

1. Renewal of entire sagged Radiant roof tubes.
2. Renewal of Skin casing sheets.
3. Renewal of refractory.
4. Replacement of Air pre heater elements.


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5. Complete replacement patch welding and renewal of Metallic expansion bellow in flue gas, secondary Air, and Hot air ducts. After completion of the above works, SPM level has been reduced.

It is also submitted that the exceedances are momentary not in a persisting manner. Whenever exceedance of Norms is observed, online Mechanism of Rapping and hammering is being done round the clock for which works contract has been awarded as already stated above.

Findings:

Mandatory green belt conditions prescribed in consent have not been complied with.

The total area of the plant- 549 acres.

Green belt area already developed -116 acres

Balance to be developed- 65 acres.

During 2022-23 – 35 acres will be developed.

In 2023-24 –30 acres will be developed.

Findings:

The ash dyke is unlined and has no geomembrane lining, exposing ground water to contaminants from the structure.

Consultancy work entrusted to IIT-Madras and interim report received and further evaluation is under process.

Findings:

TNPCB and CPCB in the current report estimate unaccounted for ash at 65.96 lakh tonnes, of which an unquantified Portion is in river/backwater/surrounding areas.

The above said quantity of 65.96 lakhs MT which was stored in the primary pond(180 Hect) was handed over to SEZ project and has been effectively utilized for site grading and for developing the Ennore SEZ Thermal Power project only.


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Findings:

Estuarine vegetation, including sea grass and mangroves in Kosasthalai's backwaters, and the thick vegetation along Buckingham Canal has been lost due to the dumping of ash and dredged material.

Cleaning of wet ash from the land areas is under process and after completion, the growth of estuarine vegetation will be ensured.

Finding:

Surface sediments are heavily contaminated with levels of cadmium, chromium, copper, lead, nickel, and zinc well in excess of safe levels as per Canadian sediment quality guidelines for the protection of aquatic life.

It is submitted that as per the direction of Hon'ble NGT, marine Impact study at Ennore Creek and the sea was carried out by M/s National Institute of Ocean Technology and a draft report on the above study has been received.

In the above report, it has been mentioned that various development projects utilizing the creek system have altered the bathymetry and changed the creek system's flow.

Inputs from Manali Industrial belt and North Chennai Industries in addition to frequent interference in the creek morphology.

Further, NCTPS-I alone is not responsible for heavy contamination with surface sediments.


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NORTH CHENNAI THERMAL POWER STATION
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Finding:**Ground water heavily contaminated with dissolved salts, aluminum arsenic lead, manganese, and zinc.**

In respect of Case No.162/2021, (which has been disposed of vide NGT order Dated 31.01.22) as per direction of Joint committee constituted by the Hon'ble NGT, TNPCB arranged a survey to assess ground water contamination if any due to the spillage of ash from the leakages of pipelines and seepage from Ash pond, subsurface water samples were collected from the bore well nearby to ash pond (about 400m away from chepakkam village) and the piezometric wells provided near the ash ponds. It can be seen from the report that the results are within tolerance limits. In the report, it is found that the parameters are within the standards.

Ambient air quality monitoring survey was conducted by TNPCB at Chepakkam village (24 hours sampling on 31.08.21) and Athipattu village (24 hours sampling on 26.08.21) at NCTPS near substation (24 hour sampling on 02.09.2021).

It has been mentioned in the report as below

"The result revealed that the parameter PM10 value (152 Kg/m³) at Athipattu village alone exceeded the ambient Air quality standards (100kg/m³) prescribed."

It is submitted that Zuari Cement factory is located nearby Athipattu Village.

It is humbly submitted that it clearly shows that the ambient air quality is not affected by NCTPS-I.

3. It is also submitted that, even though TANGEDCO is facing a severe financial crunch, TANGEDCO is striving hard to meet the Power Demand by taking all possible steps to comply with the Emission norms and adhering to TNPCB directions.


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NORTH CHENNAI THERMAL POWER STATION
TNEB, CHENNAI-600 120.

4. It is respectfully submitted that this Respondent is complying with the directions issued by this Hon'ble Tribunal and also the environmental norms without any default to protect the environment.

Under the above-placed facts and circumstances, this Hon'ble Tribunal may be pleased to accept the status report and take the same on record and pass such further order or orders as this Hon'ble Court may deem fit and proper in the circumstances of the case and thus render justice.

Dated at Chennai on this the 27th day of April 2022


CHIEF ENGINEER
NORTH CHENNAI THERMAL POWER STATION
TNEB, CHENNAI-600 120.

3RD RESPONDENT

VERIFICATION

I, K.Chandrasekar, son of G.Krishnamurthy aged 57 years, working as Chief Engineer having an office at North Chennai Thermal Power Station - I do hereby verify that the contents of paras are true to the best of my personal knowledge and paras believed to be true on legal advice and that I have not suppressed any material fact.

Verified at Chennai on this the 27th day of April 2022.


CHIEF ENGINEER
NORTH CHENNAI THERMAL POWER STATION
TNEB, CHENNAI-600 120.

3RD RESPONDENT


CHIEF ENGINEER
NORTH CHENNAI THERMAL POWER STATION
TNEB, CHENNAI-600 120.

Annexure - 2

TAMIL NADU GENERATION & DISTRIBUTION CORPORATION LIMITED

FROM
ER.K.KRISHNAN, B.E.,
SUPERINTENDING ENGINEER/
MECHANICAL-I,
N.C.T.P.S.-I, CHENNAI 120.

TO
M/s. Nitish Engineering,
No.35, Perumal Koil North Street,
Minjur - 601 203.

Lr.No.SE/MI/NCTPS-I/EA/AE/F.Spn.211/17-18/D. 785/18, Dt. 05.06.18.

Sir,

Sub: NCTPS - I - SE/MI circle - BM Dn. - Unit - I, II & III - ESP - Attending breakdown works in ESP for a period of 6 months (or) completion of quantity whichever comes earlier from the date of taken over of site - Acceptance order - Reg.

- Ref: 1.Your tender dated on.03.03.18.
2.This office Neg. Lr.No. SE/MI/NCTPS-I/EA/AE/F.Spn.211/17-18/D.859/18,dt.15.03.18.
3. Your Negotiation dated.17.03.18.
4. Pre.Acc.Order Lr.No SE/MI/NCTPS-I/EA/AE/F.Spn.211/17-18/D.908/18,dt.17.03.18.

1.0. ACCEPTANCE:

I acting for and on behalf of and by the order and direction of Tamil Nadu Generation & Distribution Corporation Limited accept your offer after negotiation for the above work for a total value of Rs.6,23,964/- (Rupees Six Lakhs Twenty Three Thousand Nine Hundred & Sixty Four Only) and GST extra as per the accepted schedule furnished below.

S. No	Qty.	Description of work	Rate/Per Rs.	Amount Rs.
1.	20 Nos. 10	Rectification of field short: Work involves opening of inspection doors, thorough inspection of field collecting and emitting electrodes. Renewal of emitting electrodes and aligning gap between collecting electrode by U guide welding/ plate bend removing. Opening of hopper doors for removing ash. Test charge for field normalizing to the satisfactory operation, including consumables and T&P's.	5456/-	1,09,120.00
2.	10 Nos.	Manual opening and closing of Guillotine gates of ESP inlet and outlet. The work involves arrangement of tools and plants for closing electrically inoperative gate manually to isolate the pass to facilitate to attend the field short. Opening and normalising after completion of work, including consumables and T&P's.	3662/-	36,620.00
3.	360 Opns.	Upkeepment of equipments and area, attending minor oil and ash leaks in all the fans and ESP area, including consumables and T&P's.	796/-	2,86,560.00
4.	2 Nos.	Disconnecting and removal of defective CERM gear box from its position at 15 mtrs height and removal of coupling. Fixing of coupling in the spare gear box lifting positioning, fixing in its position and normalising for smooth operation, including drawl, devolution, consumables and T&P's etc.,	3051/-	6,102.00
5.	2 Nos.	Disconnecting and removal of defective EERM gear box from its position at 32 mtr height and removal of coupling. Fixing of coupling in the spare gear box lifting positioning, fixing in its position and normalising for smooth operation, including drawl, devolution, consumables and T&P's etc.,	3567/-	7,134.00
6.	75m	Welding of eroded welding joints in structures inside the ESP. Works involves inspection of welding joints in collecting & emitting electrode structures, ESP inside casing, welding of eroded weakened joints (metal filling by welding), including consumables and T&P's.	92/-	6,900.00

Superintending Engineer / Mechanical-I
26/31

For NITISH ENGINEERING

S. S. S.

7.	36 Opns.	Complete cleaning of flue gas duct, SA & PA delivery duct and hot air ducts completely, including consumables and T&P's.	3532/-	1,27,152.00
8.	24 Field	Tightening of bolts and nuts of rapping mechanism inner arm, outer arm and tack welding, including consumables and T&P's.	1849/-	44,376.00
				6,23,964.00
		Rs.6,23,964/- (Rupees Six Lakhs Twenty Three Thousand Nine Hundred & Sixty Four Only)		
		Labour: Rs.5,94,169/- Consumables :Rs.17,961/- Others: Rs.11,834/-		

Note: i) EPF & ESI extra as applicable
ii) GST extra as per provision of the rules on producing documentary evidences.

2.0. SECURITY DEPOSIT:

You have been already requested (preliminary order cited under ref.) to remit a sum of Rs.37,790/- towards 5% Security deposit in the form of cash, Demand Draft, Bankers Cheque. This amount will not carry any interest and will be refunded on satisfactory completion of contract only.

3.0. AGREEMENT:

You are requested to furnish a non-judicial stamp paper for a value of Rs.20/- (Rupees twenty only) for entering into an agreement with TANGEDCO. The agreement has to be executed within 15 days from the date of receipt of this order, excluding maximum 7 days as allowed for receipt, (22 days from the date of acceptance order) failing which your Earnest Money Deposit will be forfeited without any further intimation.

4.0. INDEMNITY BOND:

You are further requested to furnish an indemnity bond on a non-judicial stamp paper to value of Rs.80/- (Rupees eighty only).

5.0. PERIOD OF CONTRACT:

The contract period is for Six months (or) completion of quantity whichever comes earlier from the date of taken over of site.

The work should be completed as per the direction of Engineer-in-charge.

6.0. INSURANCE:

You are requested to arrange insurance for the employees engaged in the work as per the specification.

7.0. PAYMENT TERMS:

- Progressive part payment of 95% on completion of work after three months.
- 5% payment within 90 days after completion of total work.

8.0. TAXES & DUTIES: Appropriate rate of GST shall be admitted, as per provisions of the rules.

9.0. EPF & MP Act 1952: The statutory provisions for EPF contribution will be admissible extra on furnishing the relevant document.

Superintending Engineer (Mechanical)
NORTH CHENNAI THERMAL POWER STATION
T.N.E.B., CHENNAI - 120.

27/31

For NITISH ENGINEERING

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Proprietor

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10.0. ESI Act 1948: The statutory provisions for ESI contribution will be admissible extra on furnishing the relevant document.

11.0. LD CLAUSE: As per TANGEDCO terms.

12.0. GUARANTEE CLAUSE:

The guarantee period for the above work is **3(Three) months** from the date of utilization. Any defects noticed in workmanship during the guarantee period, the same should be rectified at free of cost.

13.0. SAFETY CONDITIONS:

To ensure safety, health & welfare of workers, you are requested to follow the safety conditions.

14.0. GENERAL:

The other terms and conditions governing the contract shall be according to the conditions laid down in the Specn.No.SE/MI/NCTPS/211/17-18.

Yours faithfully,



SUPERINTENDING ENGINEER/ MECHANICAL-I,
N.C.T.P.S.-I.

2/4

Copy to the Financial Controller/NCTPS - I.
Copy to the Executive Engineer/BM Dn./NCTPS - I.

Superintending Engineer / Mechanical-I
NORTH ORENNAI THERMAL POWER STATION

23/31

For NITISH ENGINEERING
Proprietor

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TAMIL NADU GENERATION & DISTRIBUTION CORPORATION LIMITED

FROM
ER.K.KRISHNAN, B.E.,
SUPERINTENDING ENGINEER/
MECHANICAL-I,
N.C.T.P.S.-I, CHENNAI 120.

TO
M/s. Nitish Engineering,
No.35, Perumal Koil North Street,
Minjur - 601 203.

Lr.No.SE/MI/NCTPS-I/EA/AE/F.Spn.53/18-19/D.2654/18, Dt. 18.08.18.

Sir,

Sub: NCTPS - I - SE/MI circle - BM Dn. - Unit - II & III - Overhaul of ESP 2 streams during annual overhaul for the year 2018-19 - Acceptance order - Reg.

- Ref: 1. Your tender dated on.08.05.18.
2. This office Neg. Lr.No. SE/MI/NCTPS-I/EA/AE/F.Spn.53/18-19/D.1645/18,dt.23.05.18.
3. Your Negotiation dated.29.05.18.
4. Pre.Acc.Order Lr.No SE/MI/NCTPS-I/EA/AE/F.Spn.53/18-19/D.2124/18,dt.07.07.18.

1.0. ACCEPTANCE:

I acting for and on behalf of and by the order and direction of Tamil Nadu Generation & Distribution Corporation Limited accept your offer after negotiation for the above work for a total value of Rs.8,75,684/ (Rupees Eight Lakhs Seventy Five Thousand Six Hundred & Eighty Four Only) and GST extra as per the accepted schedule furnished below.

S. No	Qty.	Description of work	Rate/Per Rs.	Amount Rs
1.	4 Nos.	Opening all the manhole doors in 7.5 mtr. and roof top of ESP, mechanical cleaning and water washing the fields in ESP including collecting plates, emitting electrode rapping mechanism and structures inside the ESP and ESP hoppers, and closing all the manhole doors including the cost of asbestos ropes for doors completely, cost of consumables and T&P's.	19330/-	77,320.00
2.	4 Pass	Overhaul of Collecting Electrode Rapping Mechanism (A&B Streams): This work includes inspection of CERM rapping shaft, inner & outer arm, plain bearings, set rings and gear box assembly and its clutch & coupling, shock bar, attending minor repair works in the CERM. Renewal of gear box oil, including cost of consumables and T&P's.	12476/-	49,904.00
3.	4 Pass	Overhaul of Emitting Electrodes Rapping Mechanism (A&B Streams): The work includes inspection of EERM shaft insulators, vertical and horizontal shaft, pin wheel, plain bearing, thrust bearing, inner and outer arm and attending minor repair works. Cleaning and inspection of shaft insulator with C.T.C. renewal of gear box oil, including cost of consumables and T&P's.	17305/-	69,220.00
4.	2 Fields	Rectification of Emitting electrode suspension frames in ESP field: Work involves complete inspection at height of 13.5 mtr of emitting coil hook frame, cleaning of eroded and damaged portion of hookees, rectification of damages by welding and strengthening of frames as directed by Engineer in charge, including cost of consumables and T&P's. (Required materials will be supplied by TANGEDCO).	18431/-	36,862.00

Signature
Superintending Engineer / Mechanical-I
NORTH CHENNAI THERMAL POWER STATION
T.N.E.B., CHENNAI - 120.

21/29

For NITISH ENGINEERING

Signature
Proprietor

- 20 -

81

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5	12 Nos.	Rectification of inspection ladder in ESP field :Work involves complete inspection up to height of 13.5 mtr of ladder, cleaning of eroded and damaged portion of ladder rectification of damages by patch welding and strengthening of ladder as directed by Engineer in charge, including cost of consumables and T&P's, (Required materials will be supplied by TANGEDCO).	4031/-	48,372.00
6.	6 Nos.	Replacement of ESP inspection door: Work involves disconnecting the handle lever and dismantling the inspection door and fixing of new inspection door, bolting the handle lever and clamping, including drawal, devolution, consumables and T&P's.(Required materials will be supplied by TANGEDCO).	1664/-	9,984.00
7.	15 Nos.	Fabrication and fixing of corroded & damaged shaft insulators inspection door frame: Work involves cutting and removal of corroded and damaged shaft insulator inspection door frame, edge preparation, fabrication of new frame & fixing and complete welding, including cost of consumables and T&P's. (Required materials will be supplied by TANGEDCO).	1700/-	25,500.00
8.	6 Nos.	Charges for renewal of support/ shaft insulators: Work involves locking the field frame, releasing of lock nut and support insulator. Fixing of new insulator, bolting, releasing field and aligning, including cost of consumables and T&P's. (Required materials will be supplied by TANGEDCO).	2016/-	12,096.00
9.	6 Nos.	Checking the condition and measuring the thickness of collecting electrodes per field (254.50). Collecting electrodes shall be checked in 1 shift, including cost of consumables and T&P's.	3470/-	20,820.00
10.	4Fields	Checking the condition and measuring the thickness of emitting electrodes. (In NCTPS-I -1440 Nos. per field), including cost of consumables and T&P's.	4146/-	16,584.00
11.	30 Nos.	Reconditioning the collecting electrodes by patch welding etc., completely (MS plates will be supplied by TANGEDCO), including cost of consumables and T&P's.	205/-	6,150.00
12.	20 sets	Charges for checking, reconditioning/ replacing of wornout spares of drive arrangement of emitting rapping mechanism with spares, including cost of consumables and T&P's.	790/-	15,800.00
13.	120 Nos.	Charges for bend removal by hot correction in collecting electrodes including cutting gas, labour, scaffolding arrangements etc., including cost of consumables and T&P's.	164/-	19,680.00
14.	150m	Charges for strengthening of eroded ESP internal structure and transporting angles from Central Stores/ NCTPS, cutting into required size leading lifting, positioning and welding, including cost of consumables and T&P's. (Required materials will be supplied by TANGEDCO).	87/-	13,050.00
15.	6 Nos.	Labour charges for dismantling ERM grip coupling, bearing housing, shaft, bearing & checking the bearing, bush, shaft, and renewal of worn-out bearing, reconditioning/ replacing shaft, re assembling, including cost of consumables and T&P's. (Required materials will be supplied by TANGEDCO).	4919/-	29,514.00
16.	1152 Sq.m	Charges for cleaning and painting two coat of enamel paint, in ESP man hole doors, inspection doors, CERM & EERM gear box etc., including cost of paint, consumables and T&P's.	86/-	99,072.00
17.	96 Nos.	Charges for cleaning ash deposit in support insulators inside the ESP, including cost of consumables and T&P's.	353/-	33,888.00

-21- 88

32 Nos.	Charges for cleaning the accumulated ash inside the ESP hoppers, including cost of consumables and T&P's.	707/-	22,624.00
19. 4 Nos.	Charges for renewal / reconditioning of 1 No. flange at bottom of hopper, man hole doors, poking hole, heating chamber, provided & removal of working platforms on hopper and related equipment including the cost of welding electrodes, including cost of consumables and T&P's.	13380/-	53,520.00
20. 14 Nos.	Charges for overhauling of man hole door assembly in ESP by cleaning, inspection of pins, studs, bolt & nuts, lever, operation freeness, replace the sealing asbestos rope etc., and rectification of defects if any, including cost of consumables and T&P's.	4919/-	68,866.00
21. 6 Nos.	Charges for dismantling, renewal of bearings & gears and internals, reassembling of CRM gear boxes, including cost of consumables and T&P's.	6534/-	39,204.00
22. 2 Nos.	Charges for replacing the worn out CERM /EERM shafts with structure, tumbling hammers, plain bearings with necessary scaffolding arrangements, including cost of consumables and T&P's. (Required materials will be supplied by TANGEDCO).	25274/-	50,548.00
23. 2 Time	Charges for cleaning & water washing the boiler ground floor area after over hauling of Boiler, including cost of consumables and T&P's.	21150/-	42,300.00
24. 2 Time	Charges for removal of all solid waste like cotton/ wool waste, insulating materials, waste welding rod cut bits, spillage of oil etc., from boiler 0 mtr to 52 mtr floor areas and devolute metal scrap to central stores, including cost of consumables and T&P's.	7403/-	14,806.00
Rs.8,75,684/- (Rupees Eight Lakhs Seventy Five Thousand Six Hundred & Eighty Four Only) Labour : Rs.7,81,363/- Consumables: Rs.78,617/- Others : Rs.15,704/-			8,75,684.00

- Note:** i) EPF & ESI extra as applicable.
ii) GST extra as per provision of the rules on producing documentary evidences.
iii) SAC code no.9954.

2.0. SECURITY DEPOSIT:

You have been already requested (preliminary order cited under ref.) to remit a sum of Rs.52,940/ towards 5% Security deposit in the form of cash, Demand Draft, Bankers Cheque . This amount will not carry any interest and will be refunded on satisfactory completion of contract only.

3.0. AGREEMENT:

You are requested to furnish a non-judicial stamp paper for a value of Rs.20/- (Rupees twenty only) for entering into an agreement with TANGEDCO. The agreement has to be executed within 15 days from the date of receipt of this order, excluding maximum 7 days as allowed for receipt, (22 days from the date of acceptance order) failing which your Earnest Money Deposit will be forfeited without any further intimation.

4.0. INDEMNITY BOND:

You are further requested to furnish an indemnity bond on a non-judicial stamp paper to value of Rs.80/ (Rupees eighty only).

Signature

Superintending Engineer / Mechanical-4
NORTH CHENNAI THERMAL POWER STATION
V.M.D.O., CHENNAI - 100. 26/29

For NITISH ENGINEERING

Signature

Proprietor

**TAMIL NADU GENERATION & DISTRIBUTION
CORPORATION LIMITED**

FROM
ER. K. KRISHNAN, B.E.,
SUPERINTENDING ENGINEER/
MECHANICAL-I,
M.C.T.P.S.-I, CHENNAI 120.

TO
M/s. Nitish Engineering,
No.35, Perumal Koil North Street,
Minjur - 601 203.

Sir,

Lr.No. SE/MI/NCTPS-I/EA/AE/F.Spn.185/18-19/D. 3363/18, Dt. 16.10.18.

Sub: NCTPS - I - SE/MI circle - BM Dn. - Unit - 1, 2 & 3 - ESP - Attending breakdown works in ESP for a period of 6 months (or) completion of quantity whichever comes earlier from the date of taken over of site during the year 2018 - 19 - Acceptance order - Reg.

Ref: 1. Your tender dated on 10.10.18.
2. This office Neg. Lr.No. SE/MI/NCTPS-I/EA/AE/F.Spn.185/18-19/D.3363/18, dt.16.10.18.
3. Your Negotiation dated 16.10.18.
4. Pre.Acc.Order Lr.No SE/MI/NCTPS-I/EA/AE/F.Spn.185/18-19/D.3365/18, dt.16.10.18.

1.0. ACCEPTANCE:

I acting for and on behalf of and by the order and direction of Tamil Nadu Generation & Distribution Corporation Limited accept your offer after negotiation for the above work for a total value of Rs.6,49,666/- (Rupees Six Lakhs Forty Nine Thousand Six Hundred & Sixty Six Only) and GST extra as per the accepted schedule furnished below.

S No	Qty	Description of work	Rate/Per Rs.	Amount Rs.
1.	20 Nos.	Rectification of field short. Work involves opening of inspection doors, thorough inspection of field collecting and emitting electrodes. Renewal of emitting electrodes and aligning gap between collecting electrode by U guide welding/ plate bend removing. Opening of hopper doors for removing ash. Test charge for field normalizing to the satisfactory operation, including consumables and T&P's.	5678/-	1,13,560.00
2.	10 Nos.	Manual opening and closing of Guillotine gates of ESP Inlet and outlet. The work involves arrangement of tools and plants for closing electrically inoperative gate manually to isolate the pass to facilitate to attend the field short. Opening and normalising after completion of work, including consumables and T&P's.	3811/-	38,110.00
3.	360 Opns.	Upkeepment of equipments and area, attending minor oil and ash leaks in all the fans and ESP area, including consumables and T&P's.	829/-	2,98,440.00
4.	2 Nos.	Disconnecting and removal of defective GERM gear box from its position at 15 mtrs height and removal of coupling. Fixing of coupling in the spare gear box lifting positioning, fixing in its position and normalising for smooth operation, including drawl, devolution, consumables and T&P's etc., (Required material will be supplied by TANGEDCO).	3177/-	6,354.00
5.	2 Nos.	Disconnecting and removal of defective EERM gear box from its position at 32 mtr height and removal of coupling. Fixing of coupling in the spare gear box lifting positioning, fixing in its position and normalising for smooth operation, including drawl, devolution, consumables and T&P's etc., (Required material will be supplied by TANGEDCO).	3715/-	7,430.00
6.	75m	Welding of eroded welding joints in structures inside the ESP. Works involves inspection of welding joints in collecting & emitting electrode structures, ESP inside casing, welding of eroded weakened joints (metal filling by welding), including consumables and T&P's.	96/-	7,200.00

(5)

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12.0. GUARANTEE CLAUSE:

The guarantee period for the above work is **3(Three) months** from the date of utilization. Any defects noticed in workmanship during the guarantee period, the same should be rectified at free of cost.

13.0. SAFETY CONDITIONS:

To ensure safety, health & welfare of workers, you are requested to follow the safety conditions.

14.0. GENERAL:

The other terms and conditions governing the contract shall be according to the conditions laid down in the Specn.No.SE/MI/NCTPS/185/18-19.

Yours faithfully,

Signature
4/12

SUPERINTENDING ENGINEER/MECHANICAL-I,
N.C.T.P.S.-I.

2/4

Copy to the Financial Controller/NCTPS - I.

Copy to the Executive Engineer/BM Dn./NCTPS - I.

**TAMIL NADU GENERATION & DISTRIBUTION
CORPORATION LIMITED**

FROM
ER.K.KRISHNAN, B.E.,
ADDITIONAL CHIEF ENGINEER/
MECHANICAL-I,
N.C.T.P.S.-I, CHENNAI 120.

TO
M/s. Nitish Engineering,
No.35, Perumal Koil North Street,
Minjur - 601 203.

Lr.No.ACE/MI/NCTPS-I/EA/AE/F.Spn.78/19-20/D.2639/19, Dt.21.09.19.

Sir,

Sub: NCTPS - I - SE/MI circle - BM Dn. - Unit - II & III - Overhaul of ESP 2 streams during annual overhaul for the year 2019 - 20 - Acceptance order - Reg.

Ref: 1. Your tender dated on.12.07.19.
2. This office Neg. Lr.No. ACE/MI/NCTPS-I/EA/AE/F.Spn.78/19-20/D.1874/19,dt.24.07.19.
3. Your Negotiation dated.24.07.19.
4. Pre.Acc.Order Lr.No ACE/MI/NCTPS-I/EA/JE/F.Spn.78/19-20/D.1892/19,dt.25.07.19.

1.0. ACCEPTANCE:

I acting for and on behalf of and by the order and direction of Tamil Nadu Generation & Distribution Corporation Limited accept your offer after negotiation for the above work for a total value of Rs.11,61,079/- (Rupees Eleven Lakhs Sixty One Thousand & Seventy Nine Only) and GST extra as per the accepted schedule furnished below.

S. No	Qty.	Description of work	Rate/Per Rs.	Amount Rs.
1.	4 Nos.	Opening all the manhole doors in 7.5 mtr. and roof top of ESP, mechanical cleaning and water washing the fields in ESP including collecting plates, emitting electrode rapping mechanism and structures inside the ESP and ESP hoppers and closing all the manhole doors, including the cost of asbestos ropes for doors completely, cost of consumables and T&P's.	19650/-	78,600.00
2.	4 Pass	Overhaul of collecting electrode rapping mechanism (A & B streams): This work includes inspection of CERM rapping shaft, inner & outer arm, plain bearings, set rings and gear box assembly and its clutch & coupling, shock bar, attending minor repair works in the CERM. Renewal of gear box oil, including cost of consumables and T&P's.	13092/-	52,368.00
3.	4 Pass	Overhaul of emitting electrodes rapping mechanism (A & B Streams): The work includes inspection of EERM shaft insulators, vertical and horizontal shaft, pin wheel, plain bearing, thrust bearing, inner and outer arm and attending minor repair works. Cleaning and inspection of shaft insulator with C.T.C. Renewal of gear box oil, including cost of consumables and T&P's.	18157/-	72,628.00
4.	4 Fields	Rectification of Emitting electrode suspension frames in ESP field: Work involves complete inspection at height of 13.5 mtr of emitting coil hook frame, cleaning of eroded and damaged portion of hocks, rectification of damages by welding and strengthening of frames as directed by Engineer in charge, including cost of consumables and T&P's. (Required materials will be supplied by TANGEDCO).	19356/-	77,424.00
5.	6 Nos.	Rectification of inspection ladder in ESP field: Work involves complete inspection up to height of 13.5 mtr of ladder, cleaning of eroded and damaged portion of ladder rectification of damages by patch welding and strengthening of ladder as directed by Engineer in charge, including cost of consumables and T&P's. (Required materials will be supplied by TANGEDCO).	4228/-	25,368.00
6.	15 Nos.	Renewal of pocking pipes: Work involves cutting and removal of damaged pocking pipes, gauching, edge preparation, erection of new pocking one, including drawal & devolution, consumables and T&P's. (Required materials will be supplied by TANGEDCO).	471/-	7,065.00

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7.	25 Nos.	Replacement of ESP inspection door: Work involves disconnecting the handle lever and dismantling the inspection door and fixing of new inspection door, bolting the handle lever and clamping, including drawal, devolution, consumables and T&P's. (Required materials will be supplied by TANGEDCO).	1744/-	43,600.00
8.	15 Nos.	Fabrication and fixing of corroded & damaged shaft insulators inspection door frame: Work involves cutting and removal of corroded and damaged shaft insulator inspection door frame, edge preparation, fabrication of new frame & fixing and complete welding, including cost of consumables and T&P's. (Required materials will be supplied by TANGEDCO).	1782/-	26,730.00
9.	6 Nos.	Charges for renewal of support/ shaft insulators: Work involves locking the field frame, releasing of lock nut and support insulator. Fixing of new insulator, bolting, releasing field and aligning, including cost of consumables and T&P's. (Required materials will be supplied by TANGEDCO).	2113/-	12,678.00
10.	6 Nos.	Checking the condition and measuring the thickness of collecting electrodes per field (254.50). Collecting electrodes shall be checked in 1 shift, including cost of consumables and T&P's.	3636/-	21,816.00
11.	20 Nos.	Charges for checking, replacing/reconditioning of worn out/ bent shock bar guides both front and rear wherever necessary, including cost of consumables and T&P's. (Required materials will be supplied by TANGEDCO.)	145/-	2,900.00
12.	30 Nos.	Charges for checking, replacing worn out shock bar after providing necessary scaffolding arrangements, including cost of consumables and T&P's. (Required materials will be supplied by TANGEDCO).	2209/-	66,270.00
13.	10 sets	Charges for checking, replacing of wornout pin wheel assembly, including cost of consumables and T&P's. (Required materials will be supplied by TANGEDCO.)	828/-	8,280.00
14.	118 Nos.	Charges for checking, replacing of worn out plain bearing in CRM and ERM horizontal shafts etc., including cost of consumables and T&P's. (Required materials will be supplied by TANGEDCO).	46/-	5,428.00
15.	4 Fields	Checking the condition and measuring the thickness of emitting electrode (in NCTPS-I - 1440 Nos. per field). Including cost of consumables and T&P's.	4345/-	17,380.00
16.	550 Nos.	Checking the rapping mechanisms both emitting and collecting replacing/ re-conditioning of eroded tumbling hammers, including cost of consumables and T&P's.	46/-	25,300.00
17.	30 Nos.	Reconditioning the collecting electrodes by patch welding etc., completely (MS Plates will be supplied by TANGEDCO), including cost of consumables and T&P's.	215/-	6,450.00
18.	20 sets	Charges for checking, reconditioning/ replacing of wornout spares of drive arrangement of emitting rapping mechanism with spares, including cost of consumables and T&P's.	828/-	16,560.00
19.	120 Nos.	Charges for bend removal by hot correction including cutting gas, labour, scaffolding arrangement etc., consumables and T&P's.	172/-	20,640.00
20.	150m	Charges for strengthening of eroded ESP internal structure and transporting angles from central stores/ NCTPS, cutting into required size leading, lifting, positioning and welding, including cost of consumables and T&P's. (Required materials will be supplied by TANGEDCO).	92/-	13,800.00
21.	6 Nos.	Labour charges for dismantling EERM grip coupling, bearing housing, shaft, bearing & checking the bearing, bush, shaft and renewal of worn-out bearing, reconditioning/ replacing shaft, re assembling, including cost of consumables and T&P's.	5158/-	30,948.00
22.	1152 Sq.m	Charges for one coat of painting the gear boxes and all inspection door with enamel paint, including cost of paint, consumables and T&P's.	47/-	54,144.00
23.	96 Nos.	Charges for cleaning ash deposit in support insulators inside the ESP, including cost of consumables and T&P's.	370/-	35,520.00
24.	32 Nos.	Charges for cleaning the accumulated ash inside the ESP hoppers, including cost of consumables and T&P's.	742/-	23,744.00

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25.	4 Nos.	Charges for renewal/ reconditioning of 1 No. flange at bottom of hopper, man hole doors, poking hole, heating chamber, provided & removal of working platforms on hopper and related equipment, including the cost of welding electrodes, cost of consumables and T&P's.	14040/-	56,160.00
26.	14 Nos.	Charges for overhauling of man hole door assembly in Boiler by cleaning, inspection of pins, studs, bolt & nuts, lever, operation freeness, replace the sealing asbestos rope etc., and rectification of defects if any, including cost of consumables and T&P's	5158/-	72,212.00
27.	100 Nos.	Charges for renewal/ reconditioning of fallen deflection plates over the primary/ secondary screen plates. This work involves providing scaffolding arrangements leading, positioning and fixing the deflection plates, including cost of consumables and T&P's. (Required materials will be supplied by TANGEDCO).	105/-	10,500.00
28.	6 Nos.	Charges for dismantling, renewal of bearings & gears and internals, reassembling of CERM gear boxes, including cost of consumables and T&P's.	6850/-	41,100.00
29.	6 Nos.	Charges for replacing the worn out CERM/ EERM shafts with structure, tumbling hammers, plain bearings with necessary scaffolding arrangements, including cost of consumables and T&P's. (Required materials will be supplied by TANGEDCO).	26515/-	1,59,090.00
30.	150 Nos.	Renewal of Collecting Electrode Shock Bar pad: Work involves cutting and removal wornout shock bar pad and erection new one and bolting with shock bar, including drawal & devolution, consumables and T&P's. (Required materials will be supplied by TANGEDCO).	110/-	16,500.00
31.	2 Time	Charges for cleaning & water washing the boiler ground floor area after overhauling of Boiler, including cost of consumables and T&P's.	22176/-	44,352.00
32.	2 Time	Charges for removal of all solid waste like cotton/ wool waste, insulating materials, waste welding rod cut bits, spillage of oil etc., from boiler 0 mtr to 52 mtr floor areas and devolute metal scrap to central stores, including cost of consumables and T&P's.	7762/-	15,524.00
				11,61,079.00
Rs.11,61,079/- (Rupees Eleven Lakhs Sixty One Thousand & Seventy Nine Only)				
Labour : Rs.10,78,137/- Consumables: Rs.60,910/- Others: Rs.22,032/-				

- Note:** i) ESI extra as applicable.
ii) GST extra as per provision of the rules on producing documentary evidences.
iii) SAC Code No.995419, 995416.

2.0. SECURITY DEPOSIT:

You have been already requested (preliminary order cited under ref.) to remit a sum of Rs.68,970/- towards 5% Security deposit in the form of cash, Demand Draft, Bankers Cheque or irrevocable Bank Guarantee. This amount will not carry any interest and will be refunded on satisfactory completion of contract only.

3.0. AGREEMENT:

You are requested to furnish a non-judicial stamp paper for a value of Rs.20/- (Rupees twenty only) for entering into an agreement with TANGEDCO. The agreement has to be executed within 15 days from the date of receipt of this order, excluding maximum 7 days as allowed for receipt, (22 days from the date of acceptance order) failing which your Earnest Money Deposit will be forfeited without any further intimation.

4.0. INDEMNITY BOND:

You are further requested to furnish an indemnity bond on a non-judicial stamp paper to value of Rs.80/- (Rupees eighty only).

..4..

5.0. PERIOD OF CONTRACT:

The contract period is for 20 days from the date of taken over of site for each Unit II & III.
The work should be completed as per the direction of Engineer-in-charge.

6.0. INSURANCE:

You are requested to arrange insurance for the employees engaged in the work as per the specification.

7.0. PAYMENT TERMS:

- (a) Progressive part payment of 95% on completion of work in each Unit – II & III.
- (b) 5% payment within 90 days after completion of total work.

8.0 INCOME TAX:

Income Tax will be recovered from the contractors every running bill at the prevailing rate of tax in force with amendments issued from time to time as per the Income Tax Act.

9.0. TAXES & DUTIES:

Appropriate rate of GST shall be admitted as per provisions of the rules of the GST Act and as per the provisions mentioned in the tender specification called for. As per section 50/2018 dated 13.09.2018 Tax deducted at source under GST (TDS under GST) provisions shall be come into force with effect from 01.10.2018, for the invoice and its payments made to contractor or supplier of taxable goods (or) services (or) both, if the contract value exceeds Rs.2,50,000/-.

10.0. ESI Act 1948: The statutory provisions for ESI contribution will be admissible extra on furnishing the relevant document.

11.0. LD CLAUSE: As per TANGEDCO terms.

12.0. GUARANTEE CLAUSE:

The guarantee period for the above work is **3(Three) months** from the date of utilization. Any defects noticed in workmanship during the guarantee period, the same should be rectified at free of cost.

13.0. SAFETY CONDITIONS:

To ensure safety, health & welfare of workers, you are requested to follow the safety conditions.

14.0. GENERAL:

The other terms and conditions governing the contract shall be according to the conditions laid down in the Specn.No.ACE/MI/NCTPS/78/19-20.

Yours faithfully,


ADDITIONAL CHIEF ENGINEER/ MECHANICAL-I,
N.C.T.P.S.-I.

Copy to the Financial Controller/NCTPS - I.
Copy to the Executive Engineer/BM Dn./NCTPS - I.

**TAMIL NADU GENERATION & DISTRIBUTION
CORPORATION LIMITED**

FROM
ER.M.GOPAL, B.E.,
SUPERINTENDING ENGINEER/
MECHANICAL-I (I/C),
N.C.T.P.S.-I, CHENNAI 120.

TO
M/s.Nitish Engineering,
No.35, Perumal Koil North Street,
Minjur - 601 203.

Lr.No.SE/MI/NCTPS-I/EA/AE/F.Sp.n.268/18-19/D. 3081 /19, Dt. 20/10/19.

Sir,

Sub: NCTPS - I - SE/MI circle - BM Dn. - Unit - 1, 2 & 3 - ESP - Attending breakdown works in ESP for a period of 6 months (or) completion of quantity whichever comes earlier from the date of taken over of site - Acceptance order - Reg.

Ref: 1. Your tender dated on.16.03.19.
2. This office Neg. Lr.No.ACE/MI/NCTPS-I/EA/AE/F.Sp.n.268/18-19/D.1392/19,dt.07.06.19.
3. Your Negotiation dated.10.06.19.
4. Pre.Acc.Order Lr.No.ACE/MI/NCTPS-I/EA/AE/F.Sp.n.268/18-19/D.1472/19,dt.15.06.19.

1.0. ACCEPTANCE:

I acting for and on behalf of and by the order and direction of Tamil Nadu Generation & Distribution Corporation Limited accept your offer after negotiation for the above work for a total value of Rs.7,11,438/- (Rupees Seven Lakhs Eleven Thousand Four Hundred & Thirty Eight Only) and GST extra as per the accepted schedule furnished below.

S. No	Qty.	Description of work	Rate/Per Rs.	Amount Rs.
1.	20 Nos.	Rectification of field short: Work involves opening of inspection doors, thorough inspection of field collecting and emitting electrodes. Renewal of emitting electrodes and aligning gap between collecting electrode by U guide welding/ plate bend removing. Opening of hopper doors for removing ash. Test charge for field normalizing to the satisfactory operation, including consumables and T&P's.	6237/-	1,24,740.00
2.	10 Nos.	Manual opening and closing of Guillotine gates of ESP inlet and outlet. The work involves arrangement of tools and plants for closing electrically inoperative gate manually to isolate the pass to facilitate to attend the field short. Opening and normalising after completion of work, including consumables and T&P's.	4191/-	41,910.00
3.	360 Opns.	Upkeepment of equipments and area, attending minor oil and ash leaks in all the fans and ESP area, including consumables and T&P's.	909/-	3,27,240.00
4.	2 Nos.	Disconnecting and removal of defective CERM gear box from its position at 15 mtrs height and removal of coupling. Fixing of coupling in the spare gear box lifting positioning, fixing in its position and normalising for smooth operation, including drawl, devolution, consumables and T&P's etc., (Required material will be supplied by TANGEDCO).	3488/-	6,976.00
5.	2 Nos.	Disconnecting and removal of defective EERM gear box from its position at 32 mtr height and removal of coupling. Fixing of coupling in the spare gear box lifting positioning, fixing in its position and normalising for smooth operation, including drawl, devolution, consumables and T&P's etc., (Required material will be supplied by TANGEDCO).	3400/-	6,800.00
6.	75m	Welding of eroded welding joints in structures inside the ESP. Works involves inspection of welding joints in collecting & emitting electrode structures, ESP inside casing, welding of eroded weakened joints (metal filling by welding), including consumables and T&P's.	104/-	7,800.00
7.	36 Opns.	Complete cleaning of flue gas duct, SA & PA delivery duct and hot air ducts completely, including consumables and T&P's.	4035/-	1,45,260.00

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8.	24 Field	Tightening of bolts and nuts of rapping mechanism inner arm, outer arm and tack welding, including consumables and T&P's.	2113/-	50,712.00
				7,11,438.00
		Rs.7,11,438/- (Rupees Seven Lakhs Eleven Thousand Four Hundred & Thirty Eight Only)		
		Labour : Rs.6,77,673/- Consumables: Rs.20,321/- Others : Rs.13,444/-		

Note: i) ESI extra as applicable.
ii) GST extra as per provision of the rules on producing documentary evidences.
iii) SAC code No.9954.

2.0. SECURITY DEPOSIT:

You have been already requested (preliminary order cited under ref.) to remit a sum of Rs.42,270/- towards 5% Security deposit in the form of cash, Demand Draft or Bankers Cheque. This amount will not carry any interest and will be refunded on satisfactory completion of contract only.

3.0. AGREEMENT:

You are requested to furnish a non-judicial stamp paper for a value of Rs.20/- (Rupees twenty only) for entering into an agreement with TANGEDCO. The agreement has to be executed within 15 days from the date of receipt of this order, excluding maximum 7 days as allowed for receipt, (22 days from the date of acceptance order) failing which your Earnest Money Deposit will be forfeited without any further intimation.

4.0. INDEMNITY BOND:

You are further requested to furnish an indemnity bond on a non-judicial stamp paper to value of Rs.80/- (Rupees eighty only).

5.0. PERIOD OF CONTRACT:

The contract period is for six months (or) completion of quantity whichever comes earlier from the date of taken over of site.

The work should be completed as per the direction of Engineer-in-charge.

6.0. INSURANCE:

You are requested to arrange insurance for the employees engaged in the work as per the specification.

7.0. PAYMENT TERMS:

- (a) Progressive part payment of 95% on completion of work after three months.
- (b) 5% payment with in 90 days after completion of total work.

8.0 INCOME TAX:

Income Tax will be recovered from the contractors every running bill at the prevailing rate of tax in force with amendments issued from time to time as per the Income Tax Act.

9.0. TAXES & DUTIES:

Appropriate rate of GST shall be admitted as per provisions of the rules of the GST Act and as per the provisions mentioned in the tender specification called for. As per section 50/2018 dated 13.09.2018 Tax deducted at source under GST(TDS under GST) provisions shall be come into force with effect from 01.10.2018, for the invoice and its payments made to contractor or supplier of taxable goods (or) services (or) both, if the contract value exceeds Rs.2,50,000/-.

10.0. ESI Act 1948: The statutory provisions for ESI contribution will be admissible extra on furnishing the relevant document.

.3..

11.0. LD CLAUSE: As per TANGEDCO terms.

12.0. GUARANTEE CLAUSE:

The guarantee period for the above work is **3(Three) months** from the date of utilization. Any defects noticed in workmanship during the guarantee period, the same should be rectified at free of cost.

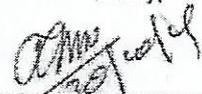
13.0. SAFETY CONDITIONS:

To ensure safety, health & welfare of workers, you are requested to follow the safety conditions.

14.0. GENERAL:

The other terms and conditions governing the contract shall be according to the conditions laid down in the Specn.No.SE/MI/NCTPS/268/18-19.

Yours faithfully,



SUPERINTENDING ENGINEER/ MECHANICAL-I (I/C),
N.C.T.P.S.-I.

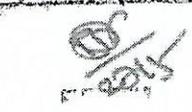
Copy to the Financial Controller/NCTPS - I.

Copy to the Executive Engineer/BM Dn./NCTPS - I.

**TAMIL NADU GENERATION & DISTRIBUTION
CORPORATION LIMITED**

FROM
Er.D.ANANDAN, B.E., M.B.A., B.O.E.,
SUPERINTENDING ENGINEER/
MECHANICAL-I,
N.C.T.P.S.-I, CHENNAI 120.

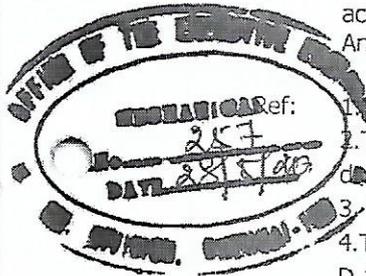
TO
M/s.R.K.L Enterprises
No.11, Gandhi Road,
(Near Anjaneyar Koil)
Minjur - 601 203.

A	L	4	DM
			

Lr.No.SE/MI/NCTPS-I/EA/AE/F.Dkt.No.120020/Spn.253/19-20/D. 976 /20, Dt. 26/1/2020.

Sir,

Sub: NCTPS-I - SE MI circle- BM- Unit - I Boiler - Renewal of damaged **pent house insulation skin casing sheets (outer)**, insulation wool Mattress, inner casing sheet, supports, and its accessories in **Unit - I Boiler Pent house area** and Rear Arch Enclosure(Left) during Annual overhaul 2019-20 - Acceptance order - Reg.



1. Your tender dated on.14.01.20.
2. This office Neg. Lr.No. SE/MI/NCTPS-I/EA/AE/F.Dkt.No.120020/Spn.253/19-20/D.110/20, dt.18.01.20.
3. Your Negotiation dated.18.01.20.
4. This office Re-Neg. Lr.No. SE/MI/NCTPS-I/EA/AE/F.Dkt.No.120020/Spn.253/19-20/D.111/20, dt.18.01.20.
5. Your Re-Negotiation dated.18.01.20.
6. Pre.Acc.Order Lr.No SE/MI/NCTPS-I/EA/AE/F.Dkt.No.120020/Spn.253/19-20/D.112/20, dt.18.01.20.

1.0. ACCEPTANCE:

I acting for and on behalf of and by the order and direction of Tamil Nadu Generation & Distribution Corporation Limited accept your offer after negotiation for the above work for a total value of Rs.17,85,180.50 or say Rs.17,85,181/- (Rupees Seventeen Lakhs Eighty Five Thousand One Hundred & Eighty One Only) and GST extra as per the accepted schedule furnished below.

S. No.	Qty.	Description of work	Rate/Per Rs.	Amount Rs.
1.	390 m ²	This work involves cutting and removal of the existing damaged M.S Corrugated sheets rectification and rewelding with new sheet in Pent house in boiler at 56m. Charges inclusive of consumables and hire charges for T&P's.	1586.00	618540.00
2.	390 m ²	Cleaning, welding of pin & retainers, laying of wool mattress, sewing the joint of mattress by GI wire, screwing the casing support with retainer, wounding the GI binding wire across the retainer (First Layer) at 56m. Charges inclusive of consumables and hire charges for T&P's.	803.00	313170.00
3.	390 m ²	This work involves removal of damaged insulation and re fixing with new/old insulation material in Boiler pressure parts upto 75mm, at 52m. Charges inclusive of consumables and hire charges for T&P's.	497.00	193830.00
4.	390 m ²	Renewal / Rectification of damaged insulation sheet: This work involves fixing of new/ retriwed GI/Al sheet over the insulation at 52m. Charges inclusive of consumables and hire charges for T&P's.	285.00	111150.00

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5.	780 m ²	Lightly resin bonded wool mattresses of 75 mm thick confirming to IS 8183 of latest issue of with 1/2" x 23 SWG wire netting at single side. Bulk density = 150 kg/Cu.m, Material= Basalt rock, Size= 1.52m x 1.22m x 75mm thick packed in HDPE bags. (Including cost of P&F, F&I and unloading charges)	465.00	362700.00
6.	1560 Nos.	MS square plate 70x70x1.5mm.	7.55	11778.00
7.	0.75 MT	MS plate 2mm thick	44946.00	33709.50
8.	1 MT	MS Angle size: 50 x 50 x 6 mm	43213.00	43213.00
9.	1560 Nos.	MS insulation pin size: 6mm x 225mm length	7.75	12090.00
10.	100 Nos.	MS cladding support channel for Boiler or say Rs.17,85,181/- (Rupees Seventeen Lakhs Eighty Five Thousand One Hundred & Eighty One Only) Labour : Rs.11,77,410/- Consumables: Rs.35,490/- Others : Rs.68,250/- Material : Rs.5,04,031/-	850.00	85000.00 <hr/> 1785180.50

- Note:** i) EPF & ESI extra as applicable.
ii) GST extra as per provision of the rules on producing documentary evidences.
iii) SAC code No.9987.
iv) HSN code No. 68061000,7209,7210.

2.0. SECURITY DEPOSIT:

You have been already requested (preliminary order cited under ref.) to remit a sum of Rs.1,07,050/- towards 5% Security deposit in the form of cash, Demand Draft, Bankers Cheque or irrevocable Bank Guarantee. This amount will not carry any interest and will be refunded on satisfactory completion of contract only.

3.0. AGREEMENT:

You are requested to furnish a non-judicial stamp paper for a value of Rs.20/- (Rupees twenty only) for entering into an agreement with TANGEDCO. The agreement has to be executed within 15 days from the date of receipt of this order, excluding maximum 7 days as allowed for receipt, (22 days from the date of acceptance order) failing which your Earnest Money Deposit will be forfeited without any further intimation.

4.0. INDEMNITY BOND:

You are further requested to furnish an indemnity bond on a non-judicial stamp paper to value of Rs.80/- (Rupees eighty only).

5.0. PERIOD OF CONTRACT:

The contract period is for 10 days for removal and 10 days for re-erection of insulation after completion of mechanical works.

The work should be completed as per the direction of Engineer-in-charge.

6	18 Nos.	Skin casing expansion joint for Radiant Roof.	1640/-	29520.00
				16,67,793.00
		Rs.16,67,793/- (Rupees Sixteen Lakhs Sixty Seven Thousand Seven Hundred & Ninety Three Only)		
		Labour : Rs.12,94,786/- Material: Rs.3,08,193/- Consumables: Rs.38,883/- Others : Rs.25,931/-		

- Note:** i) EPF & ESI extra as applicable.
ii) GST extra as per provision of the rules on producing documentary evidences.
iii) SAC Code No.9987.
iv) HSN Code No.7208.

2.0. SECURITY DEPOSIT:

You have been already requested (preliminary order cited under ref.) to remit a sum of Rs.81,170/- apart from the EMD of Rs.24,800/- towards 5% Security deposit in the form of cash, Demand Draft, Bankers Cheque or irrevocable Bank Guarantee. This amount will not carry any interest and will be refunded on satisfactory completion of contract only.

3.0. AGREEMENT:

You are requested to furnish a non-judicial stamp paper for a value of Rs.20/- (Rupees twenty only) for entering into an agreement with TANGEDCO. The agreement has to be executed within 15 days from the date of receipt of this order, excluding maximum 7 days as allowed for receipt, (22 days from the date of acceptance order) failing which your Earnest Money Deposit will be forfeited without any further intimation.

4.0. INDEMNITY BOND:

You are further requested to furnish an indemnity bond on a non-judicial stamp paper to value of Rs.80/- (Rupees eighty only).

5.0. PERIOD OF CONTRACT:

The contract period is for 15 days from the date of taken over of site.
The work should be completed as per the direction of Engineer-in-charge.

6.0. INSURANCE:

You are requested to arrange insurance for the employees engaged in the work as per the specification.

7.0. PAYMENT TERMS:

- 95% payment on completion of work.
- 5% payment within 90 days after completion of work.

8.0 INCOME TAX:

Income Tax will be recovered from the contractors every running bill at the prevailing rate of tax in force with amendments issued from time to time as per the Income Tax Act.

9.0. TAXES & DUTIES:

Appropriate rate of GST shall be admitted as per provisions of the rules of the GST Act and as per the provisions mentioned in the tender specification called for. As per section 50/2018 dated 13.09.2018 Tax deducted at source under GST(TDS under GST) provisions shall be come into force with effect from 01.10.2018, for the invoice and its payments made to contractor or supplier of taxable goods (or) services (or) both, if the contract value exceeds Rs.2,50,000/-.

10.0. EPF & MP Act 1952: The statutory provisions for EPF contribution will be admissible extra on furnishing the relevant document.

11.0. ESI Act 1948: The statutory provisions for ESI contribution will be admissible extra on furnishing the relevant document.

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12.0. LD CLAUSE: As per TANGEDCO terms.

13.0. GUARANTEE CLAUSE:

i) Workmanship

The guarantee period for the above work is **3(Three) months** from the date of utilization. Any defects noticed in workmanship during the guarantee period, the same should be rectified at free of cost.

ii) Material

The guarantee period for the supply portion is 18 months from the date of receipt of material at site or 12 months from the date of commissioning which ever occurs later subject to overhaul guarantee period of 24 months from the date of receipt of material. Any defects noticed in material during the guarantee period, the same should be rectified at free of cost.

14.0. SAFETY CONDITIONS:

To ensure safety, health & welfare of workers, you are requested to follow the safety conditions.

15.0. GENERAL:

The other terms and conditions governing the contract shall be according to the conditions laid down in the Specn.No.SE/MI/NCTPS-I/**260/19-20**.

Yours faithfully,


19/05/20
SUPERINTENDING ENGINEER/MECH.I. (4/4)
N.C.T.P.S.-I.

Copy to the Financial Controller/NCTPS - I.

Copy to the Executive Engineer/BM Dn./NCTPS - I.

**TAMIL NADU GENERATION & DISTRIBUTION
CORPORATION LIMITED**

FROM
Er.D.ANANDAN, B.E., M.B.A., B.O.E.,
SUPERINTENDING ENGINEER/
MECHANICAL-I,
N.C.T.P.S.-I, CHENNAI 120.

TO
M/s.Ferro Fabs,
No.27 Village Street,
Sathuma Nagar,
Thiruvottiyur, Chennai - 19.

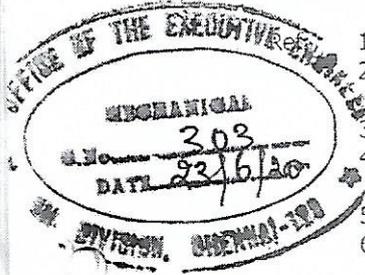
A	A2	A3	D/M
 EE/BM			

Lr.No.SE/MI/NCTPS-I/EA/AE/F.Dkt.120073/Spn.259/19-20/D. 1102/20, Dt. 19/6/2020.

Sir,

Sub: NCTPS - I - SE MI circle - BM Dn. - **Unit - I Boiler** - Rectification of defective **radiant roof tubes in Interpass area** and damaged GI Corrugated sheets in Penthouse roof during **Annual overhaul 2019-20** - Acceptance order - Reg.

1. Your tender dated on 21.01.2020.
2. This office Neg. Lr.No.SE/MI/NCTPS-I/EA/AE/F.Dkt.Spn.259/19-20/D.129/20, dt.22.01.2020.
3. Your Negotiation dated.22.01.2020.
4. Pre.Acc.Order Lr.No.SE/MI/NCTPS-I/EA/AE/F.Dkt.120073/Spn.259/19-20/D.136/20, dt.22.01.2020.
5. This office High level Negotiation dated.05.06.20.
6. SE Level TC Meeting No.494/dt.08.06.20.



Handwritten signature and date 23/6/20

1.0. ACCEPTANCE:

I acting for and on behalf of and by the order and direction of Tamil Nadu Generation & Distribution Corporation Limited accept your offer after negotiation for the above work for a total value of Rs.12,29,500/- (Rupees Twelve Lakhs Twenty Nine Thousand & Five Hundred Only) and GST extra as per the accepted schedule furnished below.

S. No.	Qty.	Description of work	Rate/Per Rs.	Amount Rs.
1.	260 Nos.	Charges for renewal of defective boiler tubes of size above 44.5mm OD inclusive of transportation, cutting of defective tubes, edge/spool preparation, welding with IBR welder and assisting for hydraulic test, including consumables and T&P's.	3850.00	1001000.00
2.	260 mtrs.	Fin welding by cleaning, surface preparation and welding. Charges inclusive of consumables and hire charges for T&P's. (Fin plates will be supplied by TANGEDCO).	465.00	120900.00
3.	100m ²	Dismantling of GI corrugated sheets from the support angle frame at 56 mtr elevations of boiler. Charges including cost of consumables and hire charges of T&P's.	147.00	14700.00
4.	100m ²	Providing the GI corrugated sheets at 56 mtr elevations of boiler. This works includes positioning the GI corrugated sheets, marking and welding. Charges inclusive of consumables and hire charges for T&P's. (GI corrugated will be supplied by TANGEDCO).	590.00	59000.00
5.	4 Times	Charges for leading, lifting and arranging platform and scaffolding wherever required in the boiler and dismantling after completion of work. Charges inclusive of consumables and hire charges for T&P's.	8475.00	33900.00
				12,29,500.00
Rs.12,29,500/- (Rupees Twelve Lakhs Twenty Nine Thousand & Five Hundred Only)				
Labour : Rs.11,70,464/- Consumables: Rs.35,308/- Others : Rs.23,728/-				

- Note:**
- i) EPF & ESI extra as applicable.
 - ii) GST extra as per provision of the rules on producing documentary evidences.
 - iii) SAC code No.9987.

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2.0. SECURITY DEPOSIT:

You have been already requested (preliminary order cited under ref.) to remit a sum of Rs.61,860/- apart from the EMD of Rs.19,700/- towards 5% Security deposit in the form of cash, Demand Draft, Bankers Cheque or irrevocable Bank Guarantee. This amount will not carry any interest and will be refunded on satisfactory completion of contract only.

3.0. AGREEMENT:

You are requested to furnish a non-judicial stamp paper for a value of Rs.20/- (Rupees twenty only) for entering into an agreement with TANGEDCO. The agreement has to be executed within 15 days from the date of receipt of this order, excluding maximum 7 days as allowed for receipt, (22 days from the date of acceptance order) failing which your Earnest Money Deposit will be forfeited without any further intimation.

4.0. INDEMNITY BOND:

You are further requested to furnish an indemnity bond on a non-judicial stamp paper to value of Rs.80/- (Rupees eighty only).

5.0. PERIOD OF CONTRACT:

The contract period is for 15 days from the date of taken over of site.

The work should be completed as per the direction of Engineer-in-charge.

6.0. INSURANCE:

You are requested to arrange insurance for the employees engaged in the work as per the specification.

7.0. PAYMENT TERMS:

- a. 95% payment on completion of work.
- b. 5% payment with in 90 days after completion of work.

8.0 INCOME TAX:

Income Tax will be recovered from the contractors every running bill at the prevailing rate of tax in force with amendments issued from time to time as per the Income Tax Act.

9.0. TAXES & DUTIES:

Appropriate rate of GST shall be admitted as per provisions of the rules of the GST Act and as per the provisions mentioned in the tender specification called for. As per section 50/2018 dated 13.09.2018 Tax deducted at source under GST(TDS under GST) provisions shall be come into force with effect from 01.10.2018, for the invoice and its payments made to contractor or supplier of taxable goods (or) services (or) both, if the contract value exceeds Rs.2,50,000/-.

10.0. EPF & MP Act 1952: The statutory provisions for EPF contribution will be admissible extra on furnishing the relevant document.

11.0. ESI Act 1948: The statutory provisions for ESI contribution will be admissible extra on furnishing the relevant document.

12.0. LD CLAUSE: As per TANGEDCO terms.

13.0. GUARANTEE CLAUSE:

The guarantee period for the above work is **3(Three) months** from the date of utilization. Any defects noticed in workmanship during the guarantee period, the same should be rectified at free of cost.

14.0. SAFETY CONDITIONS:

To ensure safety, health & welfare of workers, you are requested to follow the safety conditions.

15.0. GENERAL:

The other terms and conditions governing the contract shall be according to the conditions laid down in the Specn.No.SE/MI/NCTPS-I/259/19-20.

Yours faithfully,


19/10/20
SUPERINTENDING ENGINEER/MECH.I, H/4
N.C.T.P.S.-I.

Copy to the Financial Controller/NCTPS - I.

Copy to the Executive Engineer/BM Dn./NCTPS - I.

FROM
Er. D. ANANDAN, B.E., M.B.A., B.O.E.,
SUPERINTENDING ENGINEER/
MECHANICAL-I,
N.C.T.P.S.-I, CHENNAI 120.

TO
M/s. Nitish Engineering,
No.35, Perumal Koil North Street,
Minjur - 601 203.

Lr.No.SE/MI/NCTPS-I/EA/AE/F.Dkt.120190/Spn.94/20-21/D. 1747 /20, Dt. 26/8/2020.

Sir,

Sub: NCTPS -I - SE/M-I Circle - AOH (20-21) - BM Dn. - Unit - II & III - Overhaul of ESP 2 streams during annual overhaul for the year 2020-21- Acceptance order - Reg.

Ref: 1. Your offer dated on 17.08.2020.
2. This office Neg. Lr.No. SE/MI/NCTPS-I/EA/AE/F.Dkt.120190/Spn.94/20-21/D.1724/20, dt.26.08.20.
3. Your Negotiation dated.26.08.20

1.0. ACCEPTANCE:

I acting for and on behalf of and by the order and direction of Tamil Nadu Generation & Distribution Corporation Limited accept your offer after negotiation for the above work for a total value of Rs.10,29,335/- (Rupees Ten Lakhs Twenty Nine Thousand Three Hundred and Thirty Five Only) and GST extra as per the accepted schedule furnished below.

S. No.	Qty.	Description of work	Rate/Per Rs.	Amount Rs.
		SCHEDULE-A (UNIT-II)		
1.	2 Nos.	Opening all the manhole doors in 7.5 mtr and roof top of ESP, mechanical cleaning and water washing the fields in ESP including collecting plates, emitting electrode rapping mechanism and structures inside the ESP and ESP hoppers and closing all the manhole doors including the cost of asbestos ropes for doors completely, cost of consumables and T&P's.	20633/-	41,266.00
2.	2 Pass	Overhaul of Collecting Electrode Rapping Mechanism (A&B Streams): This work includes inspection of CERM rapping shaft, inner & outer arm, plain bearings, set rings and gear box assembly and its clutch & coupling, shock bar, attending minor repair works in the CERM. Renewal of gear box oil, including cost of consumables and T&P's.	13747/-	27,494.00
3.	2 Pass	Overhaul of Emitting Electrodes Rapping Mechanism (A&B Streams): The work includes inspection of EERM shaft insulators, vertical and horizontal shaft, pin wheel, plain bearing, thrust bearing, inner and outer arm and attending minor repair works. Cleaning and inspection of shaft insulator with C.T.C. Renewal of gear box oil, including cost of consumables and T&P's.	19065/-	38,130.00
4.	2 Fields	Rectification of Emitting electrode suspension frames in ESP field: Work involves complete inspection at height of 13.5 mtr of emitting coil hook frame, cleaning of eroded and damaged portion of hockes, rectification of damages by welding and strengthening of frames as directed by Engineer in charge, including cost of consumables and T&P's. (Required materials will be supplied by TANGEDCO).	20324/-	40,648.00
5.	4 Nos.	Rectification of inspection ladder in ESP field: Work involves complete inspection up to height of 13.5 mtr of ladder, cleaning of eroded and damaged portion of ladder rectification of damages by patch welding and strenthning of ladder as directed by Engineer in charge, including cost of consumables and T&P's. (Required materials will be supplied by TANGEDCO).	4439/-	17,756.00
6.	8 Nos.	Fabrication and fixing of corroded & damaged shaft insulators inspection door frame: Work involves cutting and removal of corroded and damaged shaft insulator inspection door frame, edge preparation, fabrication of new frame & fixing and complete welding, including cost of consumables and T&P's. (Required materials will be supplied by TANGEDCO).	1871/-	14,968.00

7.	3 Nos.	Checking the condition and measuring the thickness of collecting electrodes per field (254.50). Collecting electrodes shall be checked in 1 shift, including cost of consumables and T&P's.	3818/-	
8.	2 Fields	Checking the condition and measuring the thickness of emitting electrodes. (In NCTPS-I - 1440 Nos per field and rate arrived proportionately), including cost of consumables and T&P's.	4562/-	9,12
9.	70 Nos.	Charges for bend removal by hot correction including cutting gas, labour, scaffolding arrangements etc., including cost of consumables and T&P's.	181/-	12,670.00
10.	75m	Charges for strengthening of eroded ESP internal structure and transporting Angles from Central Stores / NCTPS, cutting into required size leading, lifting, positioning and welding, including cost of consumables and T&P's. (Required materials will be supplied by TANGEDCO).	97/-	7,275.00
11.	5 Nos.	Labour Charges for dismantling ERM grip coupling, bearing housing, shaft, bearing & checking the bearing, bush, shaft and renewal of worn-out bearing, reconditioning / replacing shaft, re assembling, including cost of consumables and T&P's.	5416/-	27,080.00
12.	576 Sq.m	Charges for one coat of enamel painting the gear boxes and all inspection door with enamel paint, including cost of cost of paint, consumables and T&P's.	53/-	30,528.00
13.	48 Nos.	Charges for cleaning ash deposit in support insulators inside the ESP, including cost of consumables and T&P's.	389/-	18,672.00
14.	16 Nos.	Charges for cleaning the accumulated ash inside the ESP hoppers, including cost of consumables and T&P's.	779/-	12,464.00
15.	5 Nos.	Charges for renewal / reconditioning of 1 No. flange at bottom of hopper, man hole doors, poking hole, heating chamber, provided & removal of working platforms on hopper and related equipment including the cost of welding electrodes, cost of consumables and T&P's.	14742/-	73,710.00
16.	8 Nos.	Charges for overhauling of man hole door assembly in ESP by cleaning, inspection of pins, studs, bolt & nuts, lever, operation freeness, replace the sealing asbestos rope etc., and rectification of defects if any, including cost of consumables and T&P's.	5416/-	43,328.00
17.	50 Nos.	Charges for renewal / reconditioning of fallen deflection plates over the primary / secondary screen plates. This work involves providing scaffolding arrangements leading and positioning and fixing the deflection plates, including cost of consumables and T&P's. (Required materials will be supplied by TANGEDCO).	110/-	5,500.00
18.	5 Nos.	Charges for dismantling, renewal of bearings & gears and Internals, reassembling of CRM gear boxes, including cost of consumables and T&P's.	7193/-	35,965.00
19.	40 Nos.	Renewal of Collecting Electrode Shock Bar pad: Work involves cutting and removal wornout shock bar pad and erection new one and bolting with shock bar, including drawal & devolution, cost of consumables and T&P's. (Required materials will be supplied by TANGEDCO).	116/-	4,640.00
20.	1 Time	Charges for cleaning & water washing the boiler ground floor area after overhauling of Boiler, including cost of consumables and T&P's.	23285/-	23,285.00
21.	1 Time	Charges for removal of all solid waste like cotton/ wool waste, insulating materials, waste welding rod cut bits, spillage of oil etc., from boiler 0 mtr, ID, FD, PA Fans floor areas and devolute metal scrap to central stores, including cost of consumables and T&P's.	8150/-	8,150.00
22.	6 Nos.	Replacement of ESP inspection door: Work involves disconnecting the handle lever and dismantling the inspection door and fixing of new inspection door, bolting the handle lever and clamping, including drawal, devolution, cost of consumables and T&P's. (Required materials will be supplied by TANGEDCO).	1831/-	10,986.00

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5.0. PERIOD OF CONTRACT:

The contract period is for 15 days from the date of taken over of site.
The work should be completed as per the direction of Engineer-in-charge.

6.0. INSURANCE:

You are requested to arrange insurance for the employees engaged in the work as per the specification.

7.0. PAYMENT TERMS:

- a. 95% payment on completion of work.
- b. 5% payment within 90 days after completion of work.
- c. Since all the Financial Transactions shall be done through online mode, the Contractors/ Suppliers are to furnish their bank account details in the Invoice/ Bills in printed format like Name of the Bank, Beneficiary Name, Address of the Bank, Bank Branch having their Account Number, IFS Code and Branch code for bill to be claimed towards works executed against the K2 agreement/chit agreement. Necessary Bank charges shall be borne by you.

8.0 INCOME TAX:

Income Tax will be recovered from the contractors every running bill at the prevailing rate of tax in force with amendments issued from time to time as per the Income Tax Act.

9.0. TAXES & DUTIES:

Appropriate rate of GST shall be admitted as per provisions of the rules of the GST Act and as per the provisions mentioned in the tender specification called for. As per section 50/2018 dated 13.09.2018 Tax deducted at source under GST(TDS under GST) provisions shall be come into force with effect from 01.10.2018, for the invoice and its payments made to contractor or supplier of taxable goods (or) services (or) both, if the contract value exceeds Rs.2,50,000/-.

10.0. EPF & MP Act 1952: The statutory provisions for EPF contribution will be admissible extra on furnishing the relevant document.

11.0. ESI Act 1948: The statutory provisions for ESI contribution will be admissible extra on furnishing the relevant document.

12.0. LD CLAUSE: As per TANGEDCO terms.

13.0. GUARANTEE CLAUSE:

The guarantee period for the above work is **6(Six) months** from the date of utilization. Any defects noticed in workmanship during the guarantee period, the same should be rectified at free of cost.

14.0. SAFETY CONDITIONS:

To ensure safety, health & welfare of workers, you are requested to follow the safety conditions.

15.0. SPECIAL CONDITION:

As annexure enclosed.

16.0. GENERAL:

The other terms and conditions governing the contract shall be according to the conditions laid down in the Specn.No.SE/MI/NCTPS-I/102/20-21.

Yours faithfully,

SUPERINTENDING ENGINEER/MECH.I,
N.C.T.P.S.-I.

(3/4)

Copy to the Financial Controller/NCTPS - I.
Copy to the Executive Engineer/BM Dn./NCTPS - I.
Copy to Stock File.

**TAMIL NADU GENERATION & DISTRIBUTION
CORPORATION LIMITED**

FROM
Er. D. ANANDAN, B.E., M.B.A., B.O.E.,
SUPERINTENDING ENGINEER/
MECHANICAL-I,
N.C.T.P.S.-I, CHENNAI 120.

TO
✓ M/s.Nitish Engineering,
No.35, Perumal Koil North Street,
Minjur - 601 203.

Lr.No.SE/MI/NCTPS-I/EA/AE/F.Dkt.119237/Spn.21/20-21/D.2067/20, Dt.29.10.2020.

Sir,

Sub: NCTPS – I - SE/MI circle – **AMC (20-21)** - BM Dn. – Unit 1, 2 & 3 – ESP - Attending breakdown works in ESP for a period of **6 months** (or) completion of quantity whichever comes earlier from the date of taken over of site - **Acceptance order** - Reg.

- Ref:
1. Your offer dated on 02.07.2020.
 2. This office Neg. Lr.No. SE/MI/NCTPS-I/EA/AE/F.Dkt.119237/Spn.21/20-21/D.1239/20, dt.13.07.20.
 3. Your Negotiation dated.18.07.2020.
 4. This office 2nd Neg. Lr.No. SE/MI/NCTPS-I/EA/AE/F.Dkt.119237/Spn.21/20-21/D.1345/20, dt.21.07.20.
 5. Your Negotiation dated.28.07.2020.
 6. This office 3rd Neg. Lr.No. SE/MI/NCTPS-I/EA/AE/F.Dkt.119237/Spn.21/20-21/D.1421A/20, dt.29.07.20.
 7. This office High level Negotiation dated.30.07.20.
 8. Pre.Acc.Order Lr.No.SE/MI/NCTPS-I/EA/AE/F.Dkt.119237/Spn.21/20-21/D.1433/20, dt.31.07.20.

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1.0. ACCEPTANCE:

I acting for and on behalf of and by the order and direction of Tamil Nadu Generation & Distribution Corporation Limited accept your offer after negotiation for the above work for a total value of Rs.4,35,070/- (Rupees Four Lakhs Thirty Five Thousand and Seventy Only) and GST extra as per the accepted schedule furnished below.

S. No.	Qty.	Description of work	Rate/Per Rs.	Amount Rs.
1.	18 Nos.	Rectification of field short: Work involves opening of inspection doors, thorough inspection of field collecting and emitting electrodes. Renewal of emitting electrodes and aligning gap between collecting electrode by U guide welding/ plate bend removing. Opening of hopper doors for removing ash. Test charge for field normalizing to the satisfactory operation, including consumables and T&P's.	6610/-	1,18,980.00
2.	9 Nos.	Manual opening and closing of Guillotine gates of ESP inlet and outlet. The work involves arrangement of tools and plants for closing electrically inoperative gate manually to isolate the pass to facilitate to attend the field short. Opening and normalizing after completion of work, including consumables and T&P's.	4450/-	40,050.00
3.	180 Opns.	Upkeepment of equipments and area, attending minor oil and ash leaks in all the fans and ESP area, including consumables and T&P's.	965/-	1,73,700.00
4.	2 Nos.	Disconnecting and removal of defective CERM gear box from its position at 15 mtrs height and removal of coupling. Fixing of coupling in the spare gear box lifting positioning, fixing in its position and normalizing for smooth operation, including drawl, devolution, consumables and T&P's etc., (Required material will be supplied by TANGEDCO).	3700/-	7,400.00
5.	2 Nos.	Disconnecting and removal of defective EERM gear box from its position at 32 mtr height and removal of coupling. Fixing of coupling in the spare gear box lifting positioning, fixing in its position and normalizing for smooth operation, including drawl, devolution, consumables and T&P's etc., (Required material will be supplied by TANGEDCO).	3610/-	7,220.00

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6.	75m	Welding of eroded welding joints in structures inside the ESP. Works involves inspection of welding joints in collecting & emitting electrode structures, ESP inside casing, welding of eroded weakened joints (metal filling by welding), including consumables and T&P's.	110/-	8,250.00
7.	6 Opns.	Complete cleaning of flue gas duct, SA & PA delivery duct and hot air ducts completely, including consumables and T&P's.	4285/-	25,710.00
8.	24 Field	Tightening of bolts and nuts of rapping mechanism inner arm, outer arm and tack welding, including consumables and T&P's.	2240/-	53,760.00
				4,35,070.00
Rs.4,35,070/- (Rupees Four Lakhs Thirty Five Thousand and Seventy Only)				
Labour: Rs.4,14,373/- Consumables: Rs.12,502/- Others: Rs.8,195/-				

- Note:** i) EPF & ESI extra as applicable.
 ii) GST extra as per provision of the rules on producing documentary evidences.
 iii) SAC code No.9954

2.0. SECURITY DEPOSIT:

You have been already requested (preliminary order cited under ref.) to remit a sum of Rs.26,280/- towards 5% Security deposit in the form of cash, Demand Draft or Bankers Cheque. This amount will not carry any interest and will be refunded on satisfactory completion of contract only

3.0. AGREEMENT:

You are requested to furnish a non-judicial stamp paper for a value of Rs.20/- (Rupees twenty only) for entering into an agreement with TANGEDCO. The agreement has to be executed within 15 days from the date of receipt of this order, excluding maximum 7 days as allowed for receipt, (22 days from the date of acceptance order) failing which your Earnest Money Deposit will be forfeited without any further intimation.

4.0. INDEMNITY BOND:

You are further requested to furnish an indemnity bond on a non-judicial stamp paper to value of Rs.80/- (Rupees eighty only).

5.0. PERIOD OF CONTRACT:

The contract period is for Six months (or) completion of quantity whichever comes earlier from the date of taken over of site.

The work should be completed as per the direction of Engineer-in-charge.

6.0. INSURANCE:

You are requested to arrange insurance for the employees engaged in the work as per the specification.

7.0. PAYMENT TERMS:

- Progressive part payment of 95% on completion of work after three months.
- 5% payment with in 90 days after completion of total work.
- Since all the Financial Transactions shall be done through online mode, the Contractors/ Suppliers are to furnish their bank account details in the Invoice/ Bills in printed format like Name of the Bank, Beneficiary Name, Address of the Bank, Bank Branch having their Account Number, IFS Code and Branch code for bill to be claimed towards works executed against the K2 agreement/chit agreement. Necessary Bank charges shall be borne by you.

8.0 INCOME TAX:

Income Tax will be recovered from the contractors every running bill at the prevailing rate of tax in force with amendments issued from time to time as per the Income Tax Act.

..3..

9.0. TAXES & DUTIES:

Appropriate rate of GST shall be admitted as per provisions of the rules of the GST Act and as per the provisions mentioned in the tender specification called for. As per section 50/2018 dated 13.09.2018 Tax deducted at source under GST(TDS under GST) provisions shall be come into force with effect from 01.10.2018, for the invoice and its payments made to contractor or supplier of taxable goods (or) services (or) both, if the contract value exceeds Rs.2,50,000/-.

10.0. EPF & MP Act 1952: The statutory provisions for EPF contribution will be admissible extra on furnishing the relevant document.

11.0. ESI Act 1948: The statutory provisions for ESI contribution will be admissible extra on furnishing the relevant document.

12.0. LD CLAUSE: As per TANGEDCO terms.

13.0. GUARANTEE CLAUSE:

The guarantee period for the above work is **6(Six) months** from the date of utilization. Any defects noticed in workmanship during the guarantee period, the same should be rectified at free of cost.

14.0. SAFETY CONDITIONS:

To ensure safety, health & welfare of workers, you are requested to follow the safety conditions.

15.0. GENERAL:

The other terms and conditions governing the contract shall be according to the conditions laid down in the Specn.No.SE/MI/NCTPS-I/21/20-21.

Yours faithfully,


SUPERINTENDING ENGINEER/MECH.I,
N.C.T.P.S.-I.

Copy to the Financial Controller/NCTPS - I.
Copy to the Executive Engineer/BM Dn./NCTPS - I.
Copy to Stock File.

TAMIL NADU GENERATION & DISTRIBUTION CORPORATION LIMITED

OK

FROM
DR.N.P.MYILSWAMY, B.E., M.B.A., Ph.D.,
SUPERINTENDING ENGINEER,
MECHANICAL-I,(I/C),
N.C.T.P.S-1.,CHENNAI 120.

To
M/s.Nitish Engineering,
No.35, Perumal Koil North Street,
Minjur - 601 203.

Lr.No.SE/MI/NCTPS-I/EA/AE/F.Dkt.120481/Spn.168/20-21/WCT No.18/21-22, Dt. 13.05.21.

Sir,

Sub: NCTPS - I - SE/MI circle - BM Dn. - Unit 1, 2 & 3 - ESP - Attending breakdown works in ESP for a period of 6 months (or) completion of quantity whichever comes earlier from the date of taken over of site - K2 Agreement - Execution of - Reg.

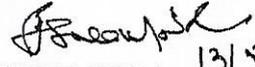
Ref: Lr.No.SE/MI/NCTPS-I/EA/AE/F.Dkt.120481/Spn.168/20-21/
WCTNo.18/21-22,Dt.10.05.21.

K2 Agreement for the above work for a face value of Rs.4,35,070/- (Rupees Four Lakhs Thirty Five Thousand & Seventy Only) executed in favour of you is accepted and registered as K2/SE/MI/ NCTPS-I/06/2021-22.

A copy of the same is enclosed herewith for your reference.

The receipt of the same may be acknowledged.

Yours faithfully,


13/05/21
SUPERINTENDING ENGINEER
MECHANICAL-I,N.C.T.P.S-I,(I/C)

Encl: Copy of K-2 Agt.No.06/21-22.

Copy to the Financial Controller/NCTPS.

Encl: Original K2 Agt.No./06/2021-22 - 36 pages

Original Indemnity Bond- 06 pages

EMD : MSME Undertaking

SD Amount : Rs.26,290/- PR No.15285 dt.13.05.2021.

Copy to Executive Engineer/BM/NCTPS (2 copies).

Encl:Copy of K-2 Agt.No./06/21-22.



NORTH CHENNAI THERMAL POWER STATION-I

Executive Engineer
Electrical Maintenance-I
NCTPS-I / Chennai-120.

From

Er.V.Rajasekaran, B.E,
Superintending Engineer,
Electrical System,
NCTPS I,
Chennai - 120.

To

M/s. A.L Enterprises,
No.326,Dr. Ambedkar Street,
Attipattu, Chennai - 600 120.
GSTIN: 33CHDPK5666E1ZF
Mob.No: 9445704168.

LT.No. SE /ES /NCTPS-I / EA /WC-24/21-22 /D.No: 413 /21-22, dt: 12 .07.2021.

Sir,

Sub: NCTPS-I -- ES Circle -- EM -I Dn. -- S. Dn. III-- Overhauling of LT rapping motors both CERM & EERM in the ESP area at unit I, II & III during the Annual overhauling period of the year 2021-22 - Acceptance Order Issued - Regarding.

Ref: 1) Specn.No. SE/ES/NCTPS-I/WC- 24/2021-22.

(1.0) ACCEPTANCE:

I acting for and on behalf of and by the order and direction of Tamil Nadu Generation and Distribution Corporation Limited accept your offer for the above work to a value of **Rs.4,63,932/- (Rupees Four Lakhs Sixty Three Thousand Nine Hundred and Thirty Two only)** Admissible GST ,EPF & ESI extra as detailed in the Accepted schedule of rate subject to the terms and conditions set forth herein.

(2.0) Description of Works / Rates / Charges:

NCTPS-I -- ES Circle -- EM -I Dn. -- S. Dn. III-- Overhauling of LT rapping motors both CERM & EERM in the ESP area at unit I, II & III during the Annual overhauling period of the year 2021-22.

ACCEPTED SCHEDULE OF RATES

Sl. No	Description of work	Qty.	Rate/per		Amount		
			Rs.	P.	Rs.	P.	
1	Charges for complete O/H of LT motor up to 1.1 KW.	144 Nos	1235.00		177840.00		
2	Charges for metal filling, Machining and repairing of worn out shafts/ bearing sealing surfaces of one side, checking of bearing housings, providing sleeves in the end cover of ond side.	144 Nos	420.00		60480.00		
3.1	Paint 410ml	144 Nos	42.50		6120.00		
3.2	Thinner 500ml	144 Nos	34.00		4896.00		
3.3	Varnish 100ml	144 Nos	72.00		10368.00		
3.4	Baniyan Waste 500gm	144 Nos	30.00		4320.00		
4.1	Bearing 6302	144 Nos	169.00		24336.00		
4.2	Bearing 6202	144 Nos	159.00		22896.00		
5	Gear with pinion assembly	144 Nos	945.25		136116.00		
6	Fan cover and fan Blade	144 Set	69.00		9936.00		
7	Hire Charges for T & P's	144 Set	46.00		6624.00		
Total						4,63,932.00	
(Rupees Four Lakhs Sixty Three Thousand Nine Hundred and Thirty Two only)							
Labour Cost: Rs.238,320.00		Hire Charges for T & P: Rs. 6624.00		Material Cost:Rs.218988.00			

Note: a) GST extra as applicable against documentary evidence.
b) EPF,ESI charges extra as applicable.
c) SAC Code 9987.

The rates mentioned in the accepted schedule of rate are nett for carrying out the works and shall be kept firm during the entire period of contract. No taxes are payable by TANGEDCO. The quantum of work indicated in the schedule are only approximate and liable to change due to site conditions for which no reason need be assigned.

FROM
Er.J.JAISHANKAR, B.E., M.I.E.,
SUPERINTENDING ENGINEER/
MECHANICAL-I,
N.C.T.P.S-1.,CHENNAI 120.

To
M/s.Nitish Engineering,
No.35, Perumal Koil North Street,
Minjur - 601 203.

Lr.No.SE/MI/NCTPS-I/EA/AE/F.Dkt.121108/Spn.103/21-22/WCT.No.188/21-22,Dt.02.08.21.

Sir,

Sub: NCTPS - I - SE/MI circle - AOH (21-22) - BM Dn.- Unit II - Overhaul of ESP 2 streams during annual overhaul for the year 2021-22.- K2 Agreement - Execution of - Reg.

Ref: Lr.No.SE/MI/NCTPS-I/EA/AE/F.Dkt.121108/Spn.103/21-22/WCT.No188/21-22,Dt.30.07.2021.

K2 Agreement for the above work for a face value of Rs.6,47,446/- (Rupees Six Lakhs Forty Seven Thousand and Four Hundred and Forty Six Only) executed in favour of you is accepted and registered as K2/SE/MI/ NCTPS-I/115/2021-22.

A copy of the same is enclosed herewith for your reference.

The receipt of the same may be acknowledged.

Yours faithfully,

He
SUPERINTENDING ENGINEER,
MECHANICAL-I, N.C.T.P.S-I

Encl: Copy of K-2 Agt.No.115/21-22.

Copy to the Financial Controller/NCTPS.

Encl: Original K2 Agt.No./115/2021-22 - 42 pages

Original Indemnity Bond- 06 pages

EMD : Udyam Registration Certificate

SD Amount : Rs.39,060/- PR No.16061

dt.02.08.2021.

Copy to Executive Engineer/BM/NCTPS (2 copies).

Encl: Copy of K-2 Agt.No./115/21-22.

To
AE/BM D2
01/02/21
AE/BM D2



NORTH CHENNAI THERMAL POWER STATION-I

FROM

TO

Er.G. Manimekalai, M.É., M.B.A.,
Chief Engineer (I/C),
NCTPS - I,
Chennai - 600 120.

✓ **M/s. M. Anbazhagan,**
3, Perumal Kovil Street,
Minjur - 601 203.
GSTIN:33ACYP3032A1Z8
Phone No: 2793 4850

Lr.No.CE/SE/ES/NCTPS-I/EA/WC-66/2021-22/D.No. 905 /21-22, Dt. 07. 10 .2021.

Sir,

Sub: NCTPS - I - ES Circle -EM-I Dn - S.Dn-III - Works contract estimate - Carrying out maintenance activities of HVR Transformer, CERM, EERM motors - Removing the ash deposits and cleaning of ESP HVR Transformer floor area HVR Transformer & EERM (32mts) & CERM Motors (7Mtrs) - etc., of unit I, II and III for a period of 180 days - Acceptance Order - Reg.

Ref: 1. Specn.No.CE/SE/ES/NCTPS-I/WC-66/2021-22.
2. Your Online offer dt.16.09.2021.
3. This office Neg.Lr.No.SE/ES/NCTPS-I/EA/WC.No.66/2021-22/D.749/21-22,dt.18.09.2021.
4. Your Negotiation dated.18.09.2021.

(1.0) ACCEPTANCE:

I acting for and on behalf of and by the order and direction of Tamil Nadu Generation & Distribution Corporation Limited accept your offer after negotiation for the above work for a total value of **Rs.7,19,464/-** (Rupees Seven Lakhs Nineteen Thousand Four Hundred and Sixty Four only) Admissible ESI, EPF & GST extra as detailed in the Accepted schedule of rate subject to the terms and conditions set forth herein.

(2.0) Description of Works / Rates / Charges:

Sl. No	Description of work	Qty.	Rate/per Rs. P.	Amount Rs. P.
1	Ash cleaning in ESP HVR transformer floor 32 mtr.(5250 sq.mtr x 4 times).	21000 Sq.Mtr.	16.75	3,51,750.00
2	Cleaning of one set of HVR transformer, EERM and CERM motors (72x4times) (24 HVR transformers/unit)	288 Opn	513.00	1,47,744.00
3	Annual maintenance of HVR transformer	48 Nos	755.00	36,240.00
4	Weekly maintenance of HVR transformer	1750 opn	103.00	1,80,250.00
5	Consumables (Baniyan waste)	60 Kg	58.00	3,480.00
Total				7,19,464.00
(Rupees Seven Lakhs Nineteen Thousand Four Hundred and Sixty Four only) Labour Cost:Rs.7,15,984.00 Consumable: Rs. 3,480.00				
Note: a) GST extra as applicable against documentary evidence. b) EPF,ESI charges extra as applicable. c) SAC Code 9987.				

The rates mentioned in the accepted schedule of rate are nett for carrying out the works and shall be kept firm during the entire period of contract. No taxes are payable by TANGEDCO. The quantum of work indicated in the schedule are only approximate and liable to change due to site conditions for which no reason need be assigned.

(3.0) THE PERIOD OF CONTRACT:

The work should be carried out within a period of **180 Days** from the date of handing over and handed over to TANGEDCO in complete shape.

(4.0) PAYMENTS:

The payment for the works completed will be made as follows:

(i) 95% payment will be made within 90 days after satisfactory completion of entire work.

(ii) The balance 5% will be retained as retention amount and will be paid in a reasonable time.

(iii) **Mode of Payment:** Since all the Financial Transactions shall be done through online mode, the Contractors/ Suppliers are to furnish their bank account details in the Invoice/ Bills in printed format like Name of the Bank, Beneficiary Name, Address of the Bank, Bank Branch having their Account Electrical System No. IFS Code and Branch code for each bill to be claimed towards works executed against the K2 agreement/contract agreement. Necessary Bank charges shall be borne by you.

TANGEDCO, Chennai - 600 120

M ANBAZHAGAN
3, PERUMAL KOVIL STREET

A1/A2/A3/Sr/DN/F
 411/22

AHP

TAMIL NADU GENERATION & DISTRIBUTION CORPORATION LIMITED

FROM

Er.V.MICHAEL ALBERT, B.E.,
 CHIEF ENGINEER,
 N.C.T.P.S. - I,
 CHENNAI 600 120.

TO

Thiru.L.Jayantha Vishnu Siva,
 Flat No.6, D-1 Block,
 DABC Abhinayam Phase-3,
 Sriram Nagar, Nolambur,
 Chennai - 600 095.

Lr.No.CE/SE/MI/NCTPS-I/EA/AE/F.Dkt.121258/Spn.190/21-22/WCT No. 279 /21-22, Dt. 24.12.21.

Sir,

Sub: NCTPS - I - SE/MI circle - AMC (21-22) - AHP Dn.- Unit I,II & III - Outsourcing of Operation and Maintenance of PDFAC System consists of PLC, Switch gear panels, modules, breakers, Fly ash conveying, Instrument compressors, Intermediate conveying and Instrument compressors and Auxiliaries, PDFACS equipments in ESP area, Intermediate silo, cooling tower and fly ash pipelines to a length of 1500Mtrs from ESP NCTPS-I to 1000MT silo top located at NCTPS Stage-II including structural supports, silo top target box, vent bag filter system, silo unloading chutes, loading the fly ash vehicles round the clock and 100MT Weigh bridge and Auxiliaries, cleaning of silo area and silo approach road for a period of 60 days or until completion of quantity (58000 MT) whichever is earlier. - Acceptance Order - Reg.



Ref:

1. Specn.No.CE/SE/MI/NCTPS-I/190/21-22.
2. Your offer dt.23.11.2021
3. This office Neg. Lr.No.SE/MI/NCTPS-I/EA/AE/F.DKT.121258/Spn.190/21-22/ D.1155/21,dt.02.12.21
4. Your Negotiation dated.02.12.2021.

1.0. ACCEPTANCE:

I acting for and on behalf of and by the order and direction of Tamil Nadu Generation & Distribution Corporation Limited accept your offer after negotiation for the above work for a total value of Rs.35,84,400/- (Rupees Thirty Five Lakhs Eighty Four Thousand & Four Hundred only) and GST extra as per the accepted schedule furnished below.

S. No	Qty.	Description of work	Rate/per Rs.	Amount Rs.
1.	58000 MT	Charges for Unit - I,II & III - Outsourcing of Operation and Maintenance of PDFAC System consists of PLC, Switch gear panels, modules, breakers, Fly ash conveying, Instrument compressors, Intermediate conveying and Instrument compressors and Auxiliaries, PDFACS equipments in ESP area, Intermediate silo, cooling tower and fly ash pipelines to a length of 1500Mtrs from ESP NCTPS-I to 1000MT silo top located at NCTPS Stage-II including structural supports, Silo top target box, vent bag filter system, silo unloading chutes, loading the fly ash vehicles round the clock and 100MT Weigh bridge and Auxiliaries, cleaning of Silo area and silo approach road for the evacuation quantity of (58000 MT) whichever is earlier. including cost of labour, spares and consumable, etc.,	61.80/-	3584400
		Rs.35,84,400/- (Rupees Thirty Five Lakhs Eighty Four Thousand & Four Hundred only)		35,84,400
		Labour : Rs.29,15,080/-	Consumables + Others: Rs.6,69,320/-	

Note:

- i) EPF & ESI extra as applicable
- ii) GST@18% extra as per provision of the rules on producing documentary evidences.
- iii) SAC Code No.99871

For CHIEF ENGINEER/N.C.T.P.S
 CHENNAI 120

Signature

Unit - ESP

TAMILNADU ELECTRICITY BOARD NORTH CHENNAI THERMAL POWER STATION

APPLICATION FOR WORK PERMIT

No: 2

- 1. Date and Day : 09.01.22
- 2. Line clear required by name : A.S. Jayabumar
- 3. Designation : AEMech.
- 4. Equipment on which work to be carried out: ESP field
- 5. Nature of work : To attend ESP field/ U/V
- 6. Lines to be isolated for safe working : FS SC, U/V 4A, 1B, 1D, 2D.
- 7. Probable period of shutdown : Per field supply kept off.

From : 09.01.22 To : 09.01.22
06:00 hrs. 10:00 hrs.

Counter Signed

[Signature] 09/01/22

Signature of the person
Authorising the work
Designation :

[Signature] 09/01/22
Signature of the person taking
Line clear under item 2.
Designation :

Approved vide No. _____ and forwarded to _____ for necessary action

[Signature]
A.S. Jayabumar
AEM 09/01/22

[Signature] 09/01/22
Executive Engineer / Gen / NCTPS

Work permit issued vide period No. W.P. _____

Signature :
Designation :
Signature of the Issuing Officer

TANGEDCO Press, Offset . 13/2017

Work permit No 51

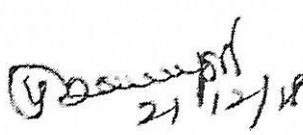
20.12.18

TAMIL NADU GENERATION AND DISTRIBUTION CORPORATION LIMITED
THERMAL POWER STATION

LINE CLEAR FORM

No. 06 / 2018

A. Requisition

- 1). Date and day of the work : 21.12.18 / Friday
- 2). Line clear required by : M. SAMBANDAN
- 3). Nature of the work : Yearly maintenance on HVRTs, Heaters, Rapping Motor, DCP's and Vb LT modules & Field panels
- 4). Line to be cleared : Respective VC to be isolated
- 5). Probable period of shutdown : 21.12.18 To 20.01.19
- 6). Signature :  21/12/18

B. Issues

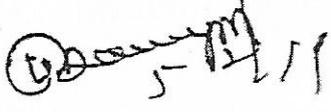
- 1). Details of safety precautions taken by AE / JE giving the line clear : AC / DC off conditions.
- 2). Line covered by L.C. in : Module off conditions
- 3). Line clear issued at : 10.45 hrs.
- 4). Signature of AE / JE issuing L.C. :  21/12/18.

TAMIL NADU GENERATION AND DISTRIBUTION CORPORATION LIMITED
THERMAL POWER STATION

LINE CLEAR FORM

No. 06 12018

C. Return

- 1). L.C. returned at : 1500 Hrs on 5.2.18
- 2). Are all men and equipment clear : Yes cleared
- 3). Nature of work done. : partly wire down on
HRL Tr, Haults Rapping
motor, ACP's and its
LT modules & field
P cable
- 4). Signature of the person returning L.C. :  5-12-18

D. Normalization

- 1). Action taken by AE / JE before Recharging the lines : men and material removed
- 2). Lines charged at : @ 05/02/2018 / 15:00 hrs
- 3). Conditions after charging : L.C. Ret...
on...

Junior Engineer/Assistant Engineer /Assistant Executive Engineer for review

W.P. No. 24.

TANGEDCO Press, Offset . 8/2017

**TAMIL NADU GENERATION AND DISTRIBUTION CORPORATION LIMITED
THERMAL POWER STATION**

LINE CLEAR FORM

No. 71 / 20 20

A. Requisition

- 1). Date and day of the work : 24/11/2020 12.12hr
- 2). Line clear required by : A. S. Jayakumar AEM
- 3). Nature of the work : Exp. feed GA / 4C
Inspection.

- 4). Line to be cleared : HT & LT supply kept off
- 5). Probable period of shutdown : 4 Hours

6). Signature

[Handwritten Signature]
24/11/2020
AEM/342

B. Issues

1). Details of safety precautions taken by AE / JE giving the line clear :

Lc Issued
To be returned during lightup.

2). Line covered by L.C. in :
Specification

[Handwritten Mark]
A/S

3). Line clear issued at :

24.11.2020
12:15 Hrs

4). Signature of AE / JE issuing L.C. :

TAMIL NADU GENERATION AND DISTRIBUTION CORPORATION LIMITED
THERMAL POWER STATION

LINE CLEAR FORM

No. 71 / 20

C. Return

- 1). L.C. returned at : 16/137H 24.11.2020
- 2). Are all men and equipment clear : Yes
- 3). Nature of work done : Fixed 2A & 4C
work completed.

LC written.

4). Signature of the person returning L.C.

[Handwritten Signature]
24/11/2020
16/137H

D. Normalization

- 1). Action taken by AE / JE before Recharging the lines :
- 2). Lines charged at :
- 3). Conditions after charging :

LC Cancelled

[Handwritten Signature]
24.11.2020
16.15H

Junior Engineer/Assistant Engineer /Assistant Executive Engineer for review

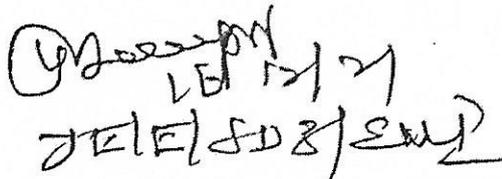
TANGEDCO Press, Offset . 8/2017

TAMIL NADU GENERATION AND DISTRIBUTION CORPORATION LIMITED
THERMAL POWER STATION

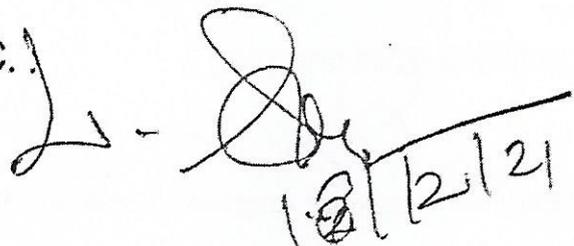
WP 84 / 16-12-21
LINE CLEAR FORM

No. 22 / 2021

A. Requisition

- 1). Date and day of the work : 16.12.21, Thursday
- 2). Line clear required by : Er. M. SAMBANDAN
- 3). Nature of the work : Annual maintenance
: ESP / A & B buses
and its modules
in UT
- 4). Line to be cleared : Up stream & down stream
: b/w FT & CB's
to be worked
- 5). Probable period of shutdown : 16.12.21 to 05.1.22
: 1100 Hrs to 1700 Hrs
- 6). Signature : 

B. Issues

- 1). Details of safety precautions taken by AE / JE giving the line clear : HT Park racked out from switch
Local Bkr are opened
All Panal doors removed
- 2). Line covered by L.C. in : Specification
- 3). Line clear issued at : 12.25 hrs.
- 4). Signature of AE / JE issuing L.C. : 
18/12/21

TAMIL NADU GENERATION AND DISTRIBUTION CORPORATION LIMITED
THERMAL POWER STATION

LINE CLEAR FORM

No. 22 / 2022

C. Return

1). L.C. returned at : 11.01.2022 (10:30 AM)

2). Are all men and equipment clear : YES

3). Nature of work done :
A/C WORK COMPLETED

[Signature]
11-1-22
S.P. S.P. S.P. S.P. S.P. S.P.

4). Signature of the person returning L.C. :

D. Normalization

1). Action taken by AE / JE before Recharging the lines :

[Signature]
Work completed.

2). Lines charged at : 2 Bus A & B. Normalized

3). Conditions after charging :

[Signature]

Junior Engineer/Assistant Engineer /Assistant Executive Engineer for review

TANGEDCO Press, Offset . 8/2017

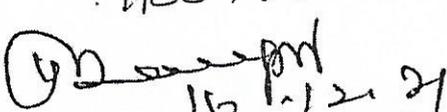
TAMIL NADU GENERATION AND DISTRIBUTION CORPORATION LIMITED

THERMAL POWER STATION

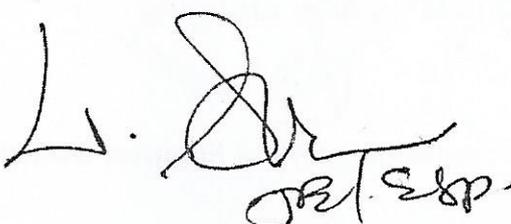
WP 85/16-12-21
LINE CLEAR FORM

No. 23 / 2021

A. Requisition

- 1). Date and day of the work : 16-12-21, Thursday
- 2). Line clear required by : ER. M. SAMBANDAN
- 3). Nature of the work : Annual mtr work
on Auxiliary Bus A8B,
all heaters, rapping
motor, AVR TR8/UT
- 4). Line to be cleared : AA power modules
- 5). Probable period of shutdown : one to be r/ out
16-12-21 to 05.1-22
1100 AM 1700 AM
- 6). Signature : 
16-12-21
JE/EL 818/ENT

B. Issues

- 1). Details of safety precautions taken by AE / JE giving the line clear : HT 3cr Karadont.
from surge and
panels removed,
on esp side.
- 2). Line covered by L.C. in :
Specification
- 3). Line clear issued at : 12.25 hrs.
- 4). Signature of AE / JE issuing L.C. : 
L. Srip.
16/12/21

TAMIL NADU GENERATION AND DISTRIBUTION CORPORATION LIMITED
THERMAL POWER STATION

LINE CLEAR FORM

No. 23 / 2022

C. Return

1). L.C. returned at : 11.01.2022 (10.30 AM)

2). Are all men and equipment clear : YES

3). Nature of work done : All work completed

S. M. [Signature] 11-1-22
JE / S.P.D. / E.T.S

4). Signature of the person returning L.C. :

D. Normalization

1). Action taken by AE / JE before Recharging the lines :

2). Lines charged at :

3). Conditions after charging :

Applied work completed. Lines are normal.

[Signature]

Junior Engineer/Assistant Engineer /Assistant Executive Engineer for review

TANGEDCO Press, Offset . 8/2017

TAMIL NADU GENERATION AND DISTRIBUTION CORPORATION LIMITED

THERMAL POWER STATION

WP86/16-12-21

LINE CLEAR FORM

No. 24/ 12021

A. Requisition

- 1). Date and day of the work
- 2). Line clear required by
- 3). Nature of the work

16-12-21 Thursday

EM-SAMBANDAN

overhauling work

on CERM KEERM motor / u D

- 4). Line to be cleared

All repetitive Pannels modules

- 5). Probable period of shutdown:

16-12-21 to 05-1-22
 1100 Hrs 1705 Hrs

- 6). Signature

[Signature]
 16/12/21
 J E / E / S D S / ENT

B. Issues

- 1). Details of safety precautions taken by AE / JE giving the line clear :

All Blower. Knocked out and local pannels

- 2). Line covered by L.C. in : Specification

removed. All are OPR conditions.

- 3). Line clear issued at :

12.25 hrs.

- 4). Signature of AE / JE issuing L.C. :

[Signature]
 16/12/21

TAMIL NADU GENERATION AND DISTRIBUTION CORPORATION LIMITED
THERMAL POWER STATION

LINE CLEAR FORM

No. 2(p/1202)

C. Return

- 1). L.C. returned at : 11.01.2022 10.30/2022
- 2). Are all men and equipment clear : YES
- 3). Nature of work done : AOH work completed

[Signature]
11.01-22
JE/EP/EM-I

4). Signature of the person returning L.C. :

D. Normalization

- 1). Action taken by AE / JE before Recharging the lines : *Can wellard.*
: CERM & EERM in work
- 2). Lines charged at : work completed
- 3). Conditions after charging : Normalized

[Signature]
Junior Engineer/Assistant Engineer /Assistant Executive Engineer for review

TANGEDCO Press, Offset, 8/2017
TAMIL NADU GENERATION AND DISTRIBUTION CORPORATION LIMITED
THERMAL POWER STATION

[111]

WP No 87 dt 19.1.22
LINE CLEAR FORM

No. 87/2022

A. Requisition

- 1). Date and day of the work
- 2). Line clear required by
- 3). Nature of the work

19.1.22 Wednesday
 : ER. M. SAMBANDAN
 : Junior Engineer/E
 : Overhauling work on
 CERM & ERM motors
 in U 14

- 4). Line to be cleared
- 5). Probable period of shutdown:

All respective modules
 to be isolated
 19.1.22 to 30.01.22
 1200Hrs 1700Hrs

6). Signature


 19/1/22

B. Issues

- 1). Details of safety precautions taken by AE / JE giving the line clear :

Respective modules
 isolated.

- 2). Line covered by L.C. in :
Specification

- 3). Line clear issued at :

14.15 hrs 19/01/22

- 4). Signature of AE / JE issuing L.C. :


 [M. Sambandan, JE (Mech) EOP]

TAMIL NADU GENERATION AND DISTRIBUTION CORPORATION LIMITED
THERMAL POWER STATION

LINE CLEAR FORM

No. 25 / 2022

C. Return

1). L.C. returned at : 16.00 Hrs / 29.1.2022

2). Are all men and equipment clear : YES, clear

3). Nature of work done : AOH work

Completed
(CERM. BERTH
motor)

4). Signature of the person
returning L.C.

S. W. [Signature] 29.1.22
JP/ESP-2/ETA-2

D. Normalization

1). Action taken by AE / JE before

Recharging the lines

: AOH work
Completed

2). Lines charged at

: 03:55
ESP III, AC PE - III, TIGHT

3). Conditions after charging

: L.C. Cancelled

J.C. [Signature] 29.1.22

Junior Engineer/Assistant Engineer /Assistant Executive Engineer for review

TANGEDCO Press. Offset . 8/2017

TAMIL NADU GENERATION AND DISTRIBUTION CORPORATION LIMITED
THERMAL POWER STATION

LINE CLEAR FORM

No. 64 / 20 22

A. Requisition

- 1). Date and day of the work : 20/3/22 / 12.30 hrs
- 2). Line clear required by : A.S Jagadevan AE/AY
- 3). Nature of the work : To check GSP fixed LA 4A, 3C & 5C

- 4). Line to be cleared : HT & CI supply kept off loadings
- 5). Probable period of shutdown :

20/3/22
AE/AY/0-2

6). Signature

B. Issues

- 1). Details of safety precautions taken by AE / JE giving the line clear :
- 2). Line covered by L.C. in : Specification
- 3). Line clear issued at :
- 4). Signature of AE / JE issuing L.C. :

K.C. Jeyaraj
20/3/22
AE/AY/0-2

TAMIL NADU GENERATION AND DISTRIBUTION CORPORATION LIMITED
THERMAL POWER STATION

LINE CLEAR FORM

No. 64 / 20 22

C. Return

1). L.C. returned at

: 30/3/22 / 23 both

2). Are all men and equipment clear

Yes

3). Nature of work done.

Ad field attached

4). Signature of the person returning L.C.

AE
30/3/22
AE/BULU-2

D. Normalization

1). Action taken by AE / JE before Recharging the lines :

LC returned

2). Lines charged at :

3). Conditions after charging :

A. B. A
30/3/22
23210 hrs

Junior Engineer/Assistant Engineer /Assistant Executive Engineer for review

STACK EMISSION DATA

Year	Month	Number of stacks	Stack emission (ug/m3)								
			PM10			SO2			Nox		
			U-I	U- II	U - III	U-I	U- II	U - III	U-I	U- II	U - III
2021-2022	April	3	118	96	79	912	551	454	366	402	400
	May	3	99	91	88	775	457	559	366	415	438
	June	3	75	90	70	698	641	546	397	359	317
	July	3	80	86	63	660	633	458	430	324	262
	August	3	82	***	65	621	***	500	429	***	266
	September	3	72	81	69	583	331	445	438	324	319
	October	3	89	84	88	536	238	328	393	295	491
	November	3	88	80	74	472	480	252	366	352	474
	December	3	83	78	85	456	493	469	375	306	477
	January	3	94	73	97	***	508	377	***	296	435
February	3	96	80	96	666	570	426	424	344	158	
2020-2021	April	3	51	113	***	289	358	***	146	455	***
	May	3	78	65	81	580	464	678	375	349	430
	June	3	77	95	79	585	443	595	370	253	396
	July	3	85	55	78	577	647	615	405	380	438
	August	3	85	71	83	452	368	630	408	339	427
	September	3	85	***	79	366	***	584	384	***	385
	October	3	81	64	67	543	347	470	367	399	316
	November	3	74	46	78	471	363	587	334	371	387
	December	3	74	***	86	511	***	682	305	***	428
	January	3	99	114	65	***	289	508	***	290	326
	February	3	83	78	85	1123	429	643	385	338	429
March	3	106	83	69	1037	414	415	348	366	329	
	April	3	131	60	74	***	695	812	***	459	631
	May	3	121	113	99	***	415	681	***	441	568
	June	3	135	156	97	***	435	652	***	734	431
	July	3	145	179	101	***	447	431	***	448	478

2019-2020	August	3	85	71	83	452	368	630	408	339	427
	September	3	133	176	***	***	706	***	***	521	***
	October	3	129	120	***	***	317	***	***	595	***
	November	3	120	130	185	***	658	807	***	759	458
	December	3	101	***	144	363	***	623	344	***	444
	January	3	***	111	130	***	685	572	***	435	566
	February	3	89	89	110	600	685	612	393	577	294
	March	3	60	67	80	458	618	406	254	305	324

*** under maintenance/ Analyser under repair/unit not in service

	<p style="text-align: center;">TAMIL NADU GENERATION AND DISTRIBUTION CORPORATION LTD NORTH CHENNAI THERMAL POWER STATION-I QUALITY MANAGEMENT SYSTEM (ISO 9001:2015 CERTIFIED)</p>	
	<p style="text-align: center;">STACK MEASUREMENT SYSTEM – OPACITY (SPM)</p>	<p style="text-align: right;">Page 1</p>

TYPE OF ANALYZER: INSITU TYPE

Date	Unit	EXT'N Value	Calculated Dust Factor	SPM based on dust factor (mg/Nm ³)	Actual Analyser Reading (mg/Nm ³)	% Error
02.03.2021	I	1.325	74	96	98	+2.08
02.03.2021	II	1.212	72	88	91	+3.4
02.03.2021	III	1.250	73	91	92	+1.09


 02.3.2021
 Executive Engineer,
 Control & Instrumentation,
 NCTPS –I, Chennai -120.

	<p style="text-align: center;">TAMIL NADU GENERATION AND DISTRIBUTION CORPORATION LTD NORTH CHENNAI THERMAL POWER STATION-I QUALITY MANAGEMENT SYSTEM (ISO 9001:2015 CERTIFIED)</p>	
	<p style="text-align: center;">STACK MEASUREMENT SYSTEM – OPACITY (SPM)</p>	<p style="text-align: right;">Page 1</p>

TYPE OF ANALYZER: INSITU TYPE

Date	Unit	EXT'N Value	Calculated Dust Factor	SPM based on dust factor (mg/Nm ³)	Actual Analyser Reading (mg/Nm ³)	% Error
03.09.2021	I	1.325	74	96	92	-4.166
03.09.2021	II	SD	SD	SD	SD	-
03.09.2021	III	1.250	73	91	86	-5.49


 03.9.2021
 Executive Engineer,
 Control & Instrumentation,
 NCTPS –I, Chennai -120.

	<p style="text-align: center;">TAMIL NADU GENERATION AND DISTRIBUTION CORPORATION LTD NORTH CHENNAI THERMAL POWER STATION-I QUALITY MANAGEMENT SYSTEM (ISO 9001:2015 CERTIFIED)</p>	
	<p style="text-align: center;">STACK MEASUREMENT SYSTEM – OPACITY (SPM)</p>	<p style="text-align: right;">Page 1</p>

TYPE OF ANALYZER: INSITU TYPE

Date	Unit	EXT'N Value	Calculated Dust Factor	SPM based on dust factor (mg/Nm ³)	Actual Analyser Reading (mg/Nm ³)	% Error
05.06.2021	I	1.325	74	96	95	-1.04
05.06.2021	II	1.212	72	88	84	-4.54
05.06.2021	III	1.250	73	91	88	-3.29


 05.6.2021
 Executive Engineer,
 Control & Instrumentation,
 NCTPS –I, Chennai -120.

	<p style="text-align: center;">TAMIL NADU GENERATION AND DISTRIBUTION CORPORATION LTD NORTH CHENNAI THERMAL POWER STATION-I QUALITY MANAGEMENT SYSTEM (ISO 9001:2015 CERTIFIED)</p>	
	<p style="text-align: center;">STACK MEASUREMENT SYSTEM – OPACITY (SPM)</p>	<p style="text-align: right;">Page 1</p>

TYPE OF ANALYZER: INSITU TYPE

Date	Unit	EXT'N Value	Calculated Dust Factor	SPM based on dust factor (mg/Nm ³)	Actual Analyser Reading (mg/Nm ³)	% Error
04.12.2021	I	1.325	74	96	93	-3.125
04.12.2021	II	SD	SD	SD	SD	-
04.12.2021	III	1.250	73	91	94	+3.29


 04.12.2021
 Executive Engineer,
 Control & Instrumentation,
 NCTPS –I, Chennai -120.



3.0 SUMMARY AND CONCLUSIONS

The NIOT synoptic study was undertaken in November 2021 which is postmonsoon season in this part of the country. The extended rainfall beyond the period of the regular spell was widespread all along Tamil Nadu, especially the north Chennai coast. This has resulted in heavy freshwater inflow from the two river systems (Kosisthaliyar and Korttaliyar rivers) that drains into Ennore creek. Presently NCTPS withdraws seawater for cooling purposes from Kamarajar Port by gravitational flow gradient and discharges the cooling water into the Ennore creek system, thereby adding a volume of about one lakh cubic meter per hour into the system. Further, various developmental projects utilizing the creek system have altered the bathymetry and changed the creek system's flow conditions creating depressions leading to stagnant waters in several locations whilst also improving drainage in several places where slopes are made. All these factors have altered the water input into the creek system, thereby increasing the dilution capacity of the creek system.

Reduction in biochemical oxygen demand (BOD) values compared to 1999 levels is observed, indicating lower levels of organic matter degradation. A decline of ammonical nitrogen values has also been observed in the creek system, confirming the organic load reduction, as ammonical nitrogen is the precursor in organic matter degradation. In addition, the ammonical nitrogen reduction has also caused odor reduction in the creek system as the increased volume of water leads to dilution of pollutants.

While water quality observations provide a synoptic measure of the environmental conditions, long-term impacts are generally manifested in the biotic ecosystem, especially in the benthic fauna. That is why it has pertinent to carry out a detailed scientific analysis of the results. In the present study, the benthic population density shows mixed response & species diversity recorded an increase in species counts compared to 2018 & 1999 data indicating a trend towards creek recovery. In general, heated water discharge inside the creek system is one of the primary concerns and this study tracked for indicator species, *Cerithidea* sp., which has been recorded in the Ennore creek system, a gastropod found to be tolerant to thermal discharges along Tuticorin coastal waters considered to be an indicator species for thermal discharges. However, their occurrence was found to be a typical benthic fauna for mangrove ecosystems, and its utility for indicative species needs indepth studies. The efficiency of mangrove sediments to trap heavy metals & several nutrients / pollutants in the sediments shall be utilized, and the mangrove belt needs to be preserved at Ennore creek.



The positive impact of dilution is an undeniable fact and significant improvement in organic pollution degradation and reduction is observed. Therefore, keeping the creek inlet / mouth open at all times to ensure sufficient dilution is recommended. Inputs from Manali industrial belt and north Chennai industries in addition to frequent interference in the creek morphology due to alterations like dredging makes it impossible to single out any particular industry responsible for impacts in the creek system. Hence, limiting further industrial discharges is essential to manage the Ennore creek ecosystem in its present levels for its sustainability as well as the Pulicat lake, a Ramsar-protected site located to the north which is connected to the Ennore Creek.

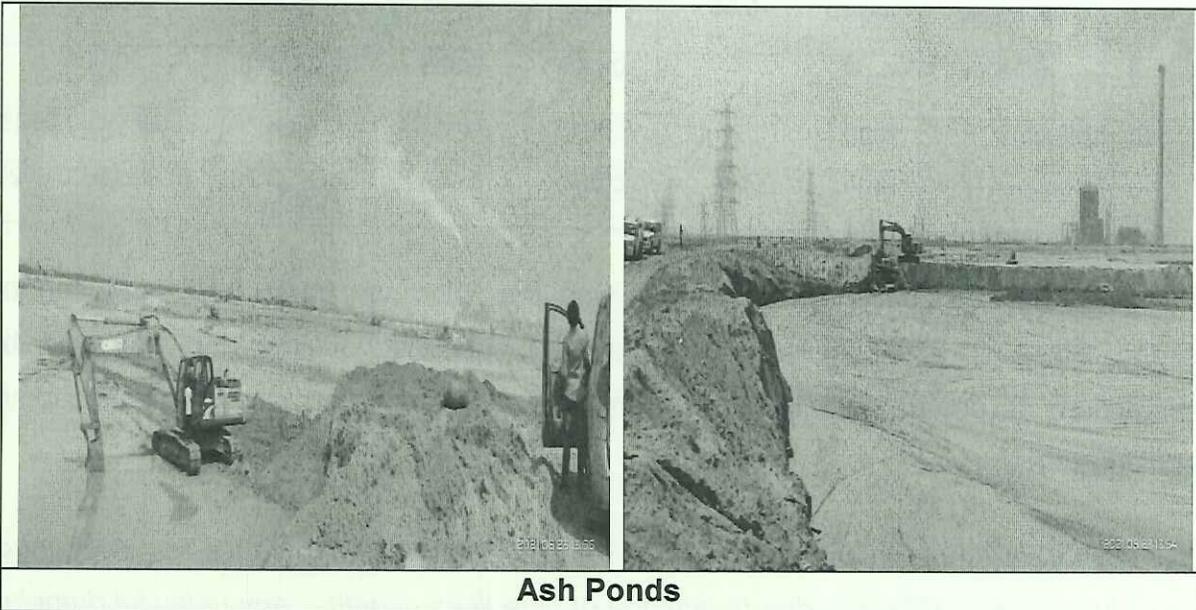
It is therefore essential to

1. Ensure that the Ennore inlet (mouth) is maintained open in a sustainable manner to ensure mixing and dilution
2. Maintain the mangrove belt within the Ennore Creek
3. Ensure that no further discharges are approved into the creek system
4. Carry out annual environmental / ecological monitoring of the creek by stakeholders for determining any possible changes and undertake immediate remedial measures
5. Maintain slopes for draining of waters whenever bathymetry changes (including dredging) are done to ensure that there is no stagnation.

REPORT OF JOINT COMMITTEE IN COMPLIANCE TO HON'BLE
NATIONAL GREEN TRIBUNAL(SZ), CHENNAI ORDER DATED
30/07/2021 IN O.A.NO.162 OF 2021

Submitted to
Hon'ble National Green Tribunal (SZ)
Chennai

September 2021



Further to assess ground water contamination if any due to the spillage of ash from the leakage of pipelines and seepage from Ash pond, sub surface water samples have been collected from the Borewell nearby to ash pond (about 400m away from Seppakkam Village) and the piezometric wells provided near the ash ponds. The results of the sub surface water samples are submitted as follows:

Sl. No	Parameters	Unit	Tolerance limits for inland surface waters, Class C as per IS:2296-1982	Bore well@ nearby Seppakkam Village	Piezometric well@ south side of the Ash Pond near M/s.Zuari Cement	Piezometric well@west side of the Ash Pond near Seppakkam Village	Piezometric well@west side of the Ash Pond to the northern side of point-2 near Seppakkam Village
				1	2	3	4
1	Zinc (as Zn)	mg/L	15	0.58	0.73	0.82	0.78
2	Copper (as Cu)	mg/L	1.5	<0.033	<0.033	<0.033	<0.033
3	Cadmium	mg/L	0.01	<0.013	<0.013	<0.013	<0.013
4	Lead (asPb)	mg/L	0.1	<0.07	<0.07	<0.07	<0.07
5	Nickel	mg/L	-	<0.05	<0.05	<0.05	<0.05
6	Total Chromium	mg/L	-	<0.05	<0.05	<0.05	<0.05
7	Manganese	mg/L	-	0.18	0.26	0.44	0.38
8	Calcium	mg/L	-	152	1403	2004	1002
9	Magnesium	mg/L	-	131	913	819	585
10	Sodium	mg/L	-	975	10210	13600	12520
11	Potassium	mg/L	-	215	320	420	260

12	Total Iron	mg/L	-	0.41	0.68	0.84	0.77
13	Cyanide (as CN)	mg/L	0.05	<0.05	<0.05	<0.05	<0.05
14	Alluminium	mg/L	-	0.005	0.895	BLQ[LOQ: 0.002]	0.091
15	Mercury	mg/L	-	0.0016	0.0097	0.0010	BLQ[LOQ:0.0005]
16	Arsenic	mg/L	0.2	0.004	0.006	BLQ[LOQ: 0.002]	BLQ[LOQ:0.002]

The above results are compared with the tolerance limits for inland surface waters, Class C (Drinking water source with conventional treatment followed by disinfection) as per IS:2296-1982 and found that the parameters are within the above said standards.

5.d. Whether there was any air pollution or water contamination caused on account of the spillage of fly ash due to leakage of pipe lines, whether any unlawful dumping of fly ash is being done in the nearby water bodies.

1. To assess the air pollution caused if any due to the carryover of ash, ambient air quality monitoring survey was conducted at Seppakkam Village (24 hours sampling on 31.08.2021) and Atthipattu Village (24 hours sampling on 26.08.2021) and at NCTPS, Near Sub Station (24 hours sampling on 02.09.2021). The results are tabulated below:

Parameters	Standards (24hrs Average) (All values are in micro gram/m ³)	Atthipattu Village near NCTPS	Seppakkam Village near NCTPS	NCTPS near Sub Station
PM10	100	152	80	76
PM2.5	60	14	22	19
SO ₂	80	4.9	4	3.1
NO ₂	80	25.8	19.1	16.6
CO	-	0.33	0.28	0.42
NH ₃	400	37	41.6	27.9
Ozone	-	13.7	26.4	13.4

The results revealed that the parameter PM10 value (152 micro g/m³) at Atthipattu Village alone exceeded the Ambient Air Quality (AAQ) standards (100 micro g/m³) prescribed.

2. Further, to assess ground water contamination if any due to the spillage of ash from the leakage of pipelines and seepage from Ash pond, sub surface water samples have been collected from the Bore well nearby to ash pond (about 400m

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To: eetrnctps@tnebnet.org⁽⁺⁾, deegummidipoondi@gmail.com⁽⁺⁾, jceemchennai@gmail.com⁽⁺⁾

Date: 01 Jan 2022, 01:15:41 AM

Subject: [01106-NCTPS-THIRUVALLUR] - Action Required

<NCTPS-THIRUVALLUR>

Exceedance Alarm(Exceeded Prescribed Standards):
S-PM UNIT3(100.12 mg/m3)

For Exceedance Alarm, Please mail details for the reason and action taken to restore normalcy.

For Maintenance mode, Please communicate with cactnpcb@gmail.com before taking for maintenance.

For Failure mode, action taken for restoration to be mailed to cactnpcb@gmail.com.

This is an automated alert e-mail. If there is any discrepancy with above information, Please call CAC-TNPCB.

Act Imm. CAC - TNPCB

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jceemchennai@gmail.com⁽⁺⁾**Date:** 01 Jan 2022, 01:32:53 AM**Subject:** [01106-NCTPS-THIRUVALLUR] - Site Returned to normalcy

Site Returned to normalcy

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From: Care Air - TNPCB <cactnpcb@gmail.com>⁽⁺⁾

To: eetrgnctps@tnebnet.org⁽⁺⁾, deegummidipoondi@gmail.com⁽⁺⁾, jceemchennai@gmail.com⁽⁺⁾

Date: 15 Dec 2021, 09:05:52 PM

Subject: [01106-NCTPS-THIRUVALLUR] - Action Required

<NCTPS-THIRUVALLUR>

Exceedance Alarm(Exceeded Prescribed Standards):
S-PM UNIT3(100.29 mg/m3)

For Exceedance Alarm, Please mail details for the reason and action taken to restore normalcy.

For Maintenance mode, Please communicate with cactnpcb@gmail.com before taking for maintenance.

For Failure mode, action taken for restoration to be mailed to cactnpcb@gmail.com.

This is an automated alert e-mail. If there is any discrepancy with above information, Please call CAC-TNPCB.

Act Imm. CAC - TNPCB

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jceemchennai@gmail.com⁽⁺⁾**Date:** 15 Dec 2021, 09:22:27 PM**Subject:** [01106-NCTPS-THIRUVALLUR] - Site Returned to normalcy

Site Returned to normalcy

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To: eetrnctps@tnebnet.org⁽⁺⁾, deegummidipoondi@gmail.com⁽⁺⁾, jceemchennai@gmail.com⁽⁺⁾

Date: 20 Dec 2021, 11:00:42 AM

Subject: [01106-NCTPS-THIRUVALLUR] - Action Required

<NCTPS-THIRUVALLUR>

Exceedance Alarm(Exceeded Prescribed Standards):
S-PM UNIT3(100.99 mg/m3)

For Exceedance Alarm, Please mail details for the reason and action taken to restore normalcy.

For Maintenance mode, Please communicate with cactnpcb@gmail.com before taking for maintenance.

For Failure mode, action taken for restoration to be mailed to cactnpcb@gmail.com.

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Act Imm. CAC - TNPCB

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From: Care Air - TNPCB <cactnpcb@gmail.com>⁽⁺⁾
To: eetrnctps@tnebnet.org⁽⁺⁾, deegummidipoondi@gmail.com⁽⁺⁾,
 jceemchennai@gmail.com⁽⁺⁾
Date: 20 Dec 2021, 06:20:24 PM
Subject: [01106-NCTPS-THIRUVALLUR] - Site Returned to normalcy

Site Returned to normalcy

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From: Care Air - TNPCB <cactnpcb@gmail.com>⁽⁺⁾**To:** eetrnctps@tnebnet.org⁽⁺⁾, deegummidipoondi@gmail.com⁽⁺⁾, jceemchennai@gmail.com⁽⁺⁾**Date:** 17 Dec 2021, 12:33:54 PM**Subject:** [01106-NCTPS-THIRUVALLUR] - Action Required

<NCTPS-THIRUVALLUR>

Exceedance Alarm(Exceeded Prescribed Standards):
S-PM UNIT3(100.26 mg/m3)

For Exceedance Alarm, Please mail details for the reason and action taken to restore normalcy.

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For Failure mode, action taken for restoration to be mailed to cactnpcb@gmail.com.

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From: Care Air - TNPCB <cactnpcb@gmail.com>⁽⁺⁾**To:** eetrnctps@tnebnet.org⁽⁺⁾, deegummidipoondi@gmail.com⁽⁺⁾,
jceemchennai@gmail.com⁽⁺⁾**Date:** 17 Dec 2021, 12:50:36 PM**Subject:** [01106-NCTPS-THIRUVALLUR] - Site Returned to normalcy

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From: Care Air - TNPCB <cactnpcb@gmail.com>(+)
To: eetrnctps@tnebnet.org(+), deegummidipoondi@gmail.com(+), jceemchennai@gmail.com(+)
Date: 19 Dec 2021, 02:00:02 AM
Subject: [01106-NCTPS-THIRUVALLUR] - Action Required

<NCTPS-THIRUVALLUR>

Exceedance Alarm(Exceeded Prescribed Standards):
S-PM UNIT3(100.57 mg/m3)

For Exceedance Alarm, Please mail details for the reason and action taken to restore normalcy.

For Maintenance mode, Please communicate with cactnpcb@gmail.com before taking for maintenance.

For Failure mode, action taken for restoration to be mailed to cactnpcb@gmail.com.

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From: Care Air - TNPCB <cactnpcb@gmail.com>⁽⁺⁾

To: eetrgnctps@tnebnet.org⁽⁺⁾, deegummidipoondi@gmail.com⁽⁺⁾,
jceemchennai@gmail.com⁽⁺⁾

Date: 19 Dec 2021, 02:16:56 AM

Subject: [01106-NCTPS-THIRUVALLUR] - Site Returned to normalcy

Site Returned to normalcy

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From: Care Air - TNPCB <cactnpcb@gmail.com>⁽⁺⁾

To: eetrgnctps@tnebnet.org⁽⁺⁾, deegummidipoondi@gmail.com⁽⁺⁾, jceemchennai@gmail.com⁽⁺⁾

Date: 19 Dec 2021, 04:00:03 AM

Subject: [01106-NCTPS-THIRUVALLUR] - Action Required

<NCTPS-THIRUVALLUR>

Exceedance Alarm(Exceeded Prescribed Standards):
S-PM UNIT3(103.16 mg/m3)

For Exceedance Alarm, Please mail details for the reason and action taken to restore normalcy.

For Maintenance mode, Please communicate with cactnpcb@gmail.com before taking for maintenance.

For Failure mode, action taken for restoration to be mailed to cactnpcb@gmail.com.

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From: Care Air - TNPCB <cactnpcb@gmail.com>(+)

To: eetrgnctps@tnebnet.org(+), deegummidipoondi@gmail.com(+),
jceemchennai@gmail.com(+)

Date: 19 Dec 2021, 04:34:13 AM

Subject: [01106-NCTPS-THIRUVALLUR] - Site Returned to normalcy

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<NCTPS-THIRUVALLUR>

Exceedance Alarm(Exceeded Prescribed Standards):
S-PM UNIT3(100.26 mg/m3)

For Exceedance Alarm, Please mail details for the reason and ac
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For Maintenance mode, Please communicate with cactnpcb@gmail.co
ntanence.

For Failure mode, action taken for restoration to be mailed to

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From: Care Air - TNPCB <cactnpcb@gmail.com>⁽⁺⁾

To: eetrnctps@tnebnnet.org⁽⁺⁾, deegummidipoondi@gmail.com⁽⁺⁾,
jceemchennai@gmail.com⁽⁺⁾

Date: 17 Dec 2021, 12:50:36 PM

Subject: [01106-NCTPS-THIRUVALLUR] - Site Returned to normalcy

Site Returned to normalcy

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<NCTPS-THIRUVALLUR>

Exceedance Alarm(Exceeded Prescribed Standards):
S-PM UNIT3 (101.06 mg/m3)

For Exceedance Alarm, Please mail details for the reason
ormalcy.

For Maintenance mode, Please communicate with cactnpcb@gr
ntanence.

For Failure mode, action taken for restoration to be mail

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information, Please call CAC-TNPCB.

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From: Care Air - TNPCB <cactnpcb@gmail.com>⁽⁺⁾

To: eetrgnctps@tnebnet.org⁽⁺⁾, deegummidipoondi@gmail.co
jceemchennai@gmail.com⁽⁺⁾

Date: 01 Jan 2022, 07:16:45 AM

Subject: [01106-NCTPS-THIRUVALLUR] - Site Returned to nor

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APPLICATION NO. 8 OF 2016 (SZ)

R. Ravimaran
S/o. Ramachandran
No.42, Beach Road, Thazhankuppam,
Ennore,
Chennai-600 057.

... Applicant.

VERSUS

1. Union of India,
Rep. by its Secretary,
The Ministry of Environment, Forests and Climate Change,
Jorbagh, New Delhi.
2. The Tamil Nadu Generation and
Distribution Corporation (TANGEDCO)
represented by its Chairman Cum Managing Director
10th Floor, NPKRR Maaligai, 144, Anna Salai,
Chennai - 600 002.
3. North Chennai Thermal Power Station
Rep. by its Chief Engineer,
Athipattu, Chennai.
Thiruvallur District – 600 120.
4. Kamarajar Port Limited (Erstwhile Ennore Port Limited)
Rep. by its Chairman cum Managing Director, 4th Floor,
Super Speciality Diabetic Centre (erstwhile DLB building)
Near Clive Battery Bus Stop
Rajaji Salai,
Chennai - 600 001.
5. The Tamil Nadu Pollution Control Board
Rep. by its Member Secretary,
76, Mount Salai, Guindy,
Chennai - 600 032.
6. The District Environmental Engineer,
Tamilnadu Pollution Control Board,
77-A, South Avenue Road, Ambattur Industrial Estate,
Ambattur Taluk, Chennai-600 058
Thiruvallur District.
7. The Tamil Nadu Coastal Zone Management Authority
Rep. by its Member Secretary,
Panagal Building, Chennai.
8. Public Works Department
Rep. by its Secretary,
Secretariat, Fort St. George,
Chennai.

... Respondents.


Chief Engineer
North Chennai Thermal Power Station
Stage II / TANGEDCO
TNEB / Chennai-600 120.

STATUS REPORT FILED BY THE 2ND & 3RD RESPONDENTS FOR UNIT No.II

The 2nd and 3rd Respondents beg to submit as follows:

1. It is submitted that the present status report is being filed in compliance with the direction issued by this Hon'ble Tribunal and the same is as follows:
2. It is submitted that during the hearing on 25.04.2022, this Hon'ble Court was pleased to direct the TANGEDCO to file its report on the following points.

a. **To produce documents with regard to emission standards ie., whether the unit is stopped as and when emission exceeds the limits and reports thereof.**

It is humbly submitted that the exceedance of norms due to the failure of 24 nos. ESP field in Unit I and 18 nos.ESP field in Unit II. However, an auto mechanism such as rapping and hammering is being done round the clock to reduce the emission parameters. Further generation is restricted to avoid exceedance of emission parameters by decreasing the coal flow to the Boiler then and there.

In every Annual overhaul ESP is being overhauled and worn out/Defective internals if any are being replaced and the following works are being carried out to maintain the design efficiency of ESP.

1. Water washing of ESP
 2. Renewal of Inner Arm, Outer Arm, Pinwheel, Shock bar pad, Shock bar angle, emitting coil and collecting plate.
 3. Topping up of gearbox oil in CERM & EERM.
 4. Rectification works carried out such as field short and CERM & EERM gearbox problem
- b. **Replacement of the existing E.S.P with modern and advanced equipment and to state the period required for the same:**

There are 80 nos. of fields in each unit. Already the poorly performing fields are being replaced in a phased manner. P.O already placed and material supplied.

Unit I ESP:

Out of the 24nos. field 9 nos. already replaced and performing well. The remaining 15nos. fields of Unit I ESP will be replaced in 3 months' time.

Chief Engineer
North Chennai Thermal Power Station
Stage II / TANGEDCO
TNEB / Chennai-600 120.


Chief Engineer
North Chennai Thermal Power Station
Stage II / TANGEDCO
TNEB / Chennai-600 120.

Out of the 18nos. poor ESP fields 8 nos. have been already replaced and performing well. The remaining 10 nos. fields will be replaced by Aug'2022.

FGD is proposed to be commissioned for achieving the emission standard for Sox. As per the recommendation of the consultant M/S. Mecon Pvt. Ltd. who is engaged in the commissioning of FGD the additional dust burden will be taken care of by FGD and the SPM level will be further reduced. Tender to be opened on 06.06.2022 for implementation of sea water-based FGD for an amount of Rs.740 Crores.

c. Objections for DPR as stated in the JointExpert Committee Report.

It is submitted the following objection before Hon'ble NGT as stated in the Joint Expert committee report.

Findings:

It has been stated that the OCEMS have tampered so that actual results are not transferred to CPCB and TNPCB.

It is assured that the OCEMS of NCTPS II has not tampered and the actual results are being transferred to CPCB / TNPCB continuously.

Findings:

As against a legal requirement of 100% of fly ash utilization, TANGEDCO's fly ash utilization was less than 50% in 2020-21."

It is submitted that the fly ash of NCTPS II 72.74% and 74.71% has been lifted for the year 2020-21 and 2021-22 respectively by the cement companies and the remaining 27.26% and 25.29% of ash have been sent as wet ash and lifted by the transporters. However, to augment the 100% fly ash utilization, the PDFAC system has been proposed and work awarded and will be completed in nine months. This will ensure 100% fly ash utilization.

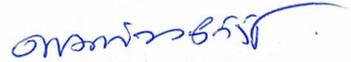
Findings:

Between 01.04.2019 and 07.03.2022 (1071 days), NCTPS Stage II is recorded to have emitted particulate matter (including ash) in excess of permissible levels for 731 days

Action is being taken to reduce the emission parameter by replacing the failed ESP fields within three months.

Chief Engineer
North Chennai Thermal Power Station
Stage II / TANGEDCO
TNEB / Chennai-600 120.

Chief Engineer
North Chennai Thermal Power Station
Stage II / TANGEDCO
TNEB / Chennai-600 120.


Chief Engineer
North Chennai Thermal Power Station
Stage II / TANGEDCO
TNEB / Chennai-600 120.

Findings:**Mandatory green belt conditions prescribed in the consent have not been complied with.**

The total area of the plant – 205 acres.

Green belt area already developed - 28.53 acres

Balance to be developed - 19.73 acres

During 2022-23 – 10 acres will be developed.

During 2023-24 – 9.73 acres will be developed.

3. It is also submitted that, even though TANGEDCO is facing a severe financial crunch, TANGEDCO is striving hard to meet the Power Demand by taking all possible steps to comply with the Emission norms and adhering to TNPCB directions.

4. It is respectfully submitted that this Respondent is complying with the directions issued by this Hon'ble Tribunal and also the environmental norms without any default to protect the environment.

Under the above-placed facts and circumstances, this Hon'ble Tribunal may be pleased to accept the status report and take the same on record and pass such further order or orders as this Hon'ble Court may deem fit and proper in the circumstances of the case and thus render justice.

Dated at Chennai on this the 27th day of April 2022

VERIFICATION

I, P.S.ESWARAMURTHY aged 58 years, working as Chief Engineer having an office at North Chennai Thermal Power Station - II do hereby verify that the contents of paras are true to the best of my personal knowledge and paras believed to be true on legal advice and that I have not suppressed any material fact.

Verified at Chennai on this the 27th day of April 2022.


3RD RESPONDENT
 Chief Engineer
 North Chennai Thermal Power Station
 Stage II / TANGEDCO
 TNEB / Chennai-600 120.


3RD RESPONDENT

Chief Engineer
 North Chennai Thermal Power Station
 Stage II / TANGEDCO
 TNEB / Chennai-600 120.

Chief Engineer
 North Chennai Thermal Power Station
 Stage II / TANGEDCO
 TNEB / Chennai-600 120.

ASH LIFTING AND UTILISATION PARTICULARS FOR THE YEAR 2020-21

Sl. No	DESCRIPTION	UNIT	Apr-20	May-20	Jun-20	Jul-20	Aug-20	Sep-20	Oct-20	Nov-20	Dec-20	Jan-21	Feb-21	Mar-21	TOTAL
1	Coal Consumption	Tons	0	224921	353584	261523	395266	208014	260563	264243	129175	231158	320207	296897	2945551
2	% of Ash Content	%	0.0%	34.30%	41.20%	33.00%	37.00%	33.60%	33.10%	37.70%	35.20%	36.80%	41.80%	36.50%	36.38%
3	Ash Generated	Tons	0	77147.90	145677	86303	146248	69893	86246	99620	45470	85066	133847	108367	1083884
4	Fly ash Generated	Tons	0	61718.32	116541	76832	116999	69086	69045	79696	41505	60397	107077	86694	885591
5	Fly Ash Utilized	Tons	0	49514	106587	76832	107896	69086	69045	79381	41505	60321	75091	50856	786114
6	% of Fly Ash Utilized	%	0.00%	80.23%	91.46%	100.00%	92.22%	100.00%	100.00%	99.61%	100.00%	99.00%	70.13%	58.68%	90.12%
7	Wet ash generated	Tons	0	15429.58	29135	17261	29250	13979	17249	19924	9094	24669	26769	21673	224432
8	Wet ash disposed through vehicle(Rs.10/-)	Tons	0	0	0	0	0	0	0	0	0	0	0	0	0
9	Ash disposed through vehicle	Tons	0	5827	5695	1753	2467	8343	4643	10823	2784	3580	6498	16722	69135
10	Wet ash Disposed Through Free of Cost	Tons	0	0	0	0	144	138	90	183	71.46	376	102.78	1168	2272.83
11	Lifted qty of wet ash sent to dyke through NCTPS-I	Tons	0	75600	187622	327725	165659	20000	30000	21000	20000	20000	60000	60000	987606
12	Wet ash disposed (Inside the dyke) in slurry form	Tons	0	9602.58	23440.32	15508	26783	5498	12516	8919	6238	20714	20168	3783	153169
13	Balance Wet ash disposed (Inside the dyke) in slurry form(difference qty =generated wetash-wetash lifted in NCTPS-I)		0	0	0	0	0	0	0	0	0	0	0	0	0
14	Dry Fly Ash Dumped in slurry form dyke.	Tons	0	12204.32	9954.29	0.00	9103	0	0	315	0	76	0	0	31653
15	The balance quantity of fly ash was manually removed from ESP hoppers and dumped to bottom ash silo area.	Tons	0	0	0	0	0	0	0	0	0	0	31986	35838	67824.00
16	Opening balance of Bottom ash below the silo	Tons	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0	0	0	0.00
17	Total ash utilized (Sl No: 5+10)	Tons	0	49514	106587	76832	108040	69224	69135	79564	41576.46	60696.59	75193.78	52024	788386.83
18	% of Ash Utilized	%	0.00%	64.18%	73.17%	89.03%	73.87%	99.04%	80.16%	79.87%	91.44%	95.00%	101.01%	103.00%	72.74%
19	Revenue in Fly Ash	Rs.	0	2641380	5887280	4313540	5975900	3728830	3568740	3905440	2287530	3494470	4423510	3068800	43295420
20	Revenue in Bottom Ash	Rs.	0	0	0	0	0	0	0	0	0	0	0	0	0
21	MSTC Charges	Rs.	0	59431	132464	97055	134458	83899	80297	87872	40032	61153	77411	53704	907775
22	Revenue to the Board including Bottom Ash(inRs)	Rs.	0	2581949	5754816	4216485	5841442	3644931	3488443	3817568	2247498	3433317	4346099	3015096	42387645

Note : Quantities in column (11) is not included in utilized quantity as it is Lifted from previous stock at Dyke.

**Executive Engineer/Mech,
AHP.Div/NCTPS-II,Chennai-120**

ASH LIFTING AND UTILISATION PARTICULARS FOR THE YEAR 2021-22

Sl. No	DESCRIPTION	UNIT	Apr-21	May-21	Jun-21	Jul-21	Aug-21	Sept-21	Oct-21	Nov-21	Dec-21	Jan-22	Feb-22	Mar-22	TOTAL
1	Coal Consumption	Tons	245513	0	210244	324900	383628	133997	362391	377796	384722	420973	407157	432742	3684063
2	% of Ash Content	%	35.5%	0.00%	40.90%	42.90%	42.40%	42.10%	41.30%	39.40%	41.20%	41.00%	46.20%	41.90%	41.34%
	Moisture	Tons										30310	28908	31590	90808
	Mill Reject	Tons										2165	2230	1668	6063
3	Ash Generated	Tons	87034	0.00	85990	139382	162658	56413	149667	148852	158505	159284	173721	167384	1488890
4	Fly ash Generated	Tons	69627	0.00	71520	115214	130182	45130	123105	122322	130072	131556	143119	138120	1219967
5	Fly Ash Utilized	Tons	50181	7444	65054	86931	83695	44320	76920	60183	118045	99238	127947	129130	949088
6	Residual Qty of ash stock in ESP hoppers and Fly Ash Silo	Tons	0	0.00	0	0	0	810	3000	6600	0	0	0	0	10410
7	% of Fly Ash Utilized	%	72.07%	0.00%	90.96%	75.45%	64.29%	98.20%	62.48%	49.20%	90.75%	75.43%	89.40%	93.49%	78.34%
8	Wet ash generated	Tons	17407	0.00	14470	24168	32477	11283	26562	26530	28433	27728	30602	29264	268924
9	Bottom Ash disposed through vehicle to dyke	Tons	6903	36.85	2656	0	5632	873	0	0	0	0	0	0	16101.39
10	Bottom ash Disposed on Free of Cost	Tons	1413	0	242	10537	3610	4621	13901	8861	28433	0	0	0	71617.7
10a	Bottom ash Disposed on Payment	Tons	0	0	0	0	0	0	0	0	0	27919	30602	33092	91613
11	Lifted qty of Bottom ash sent to dyke through NCTPS-I	Tons	0	50000	80000	80000	80000	15000	65000	85000	0	0	0	0	455000
12	Bottom ash disposed (Inside the dyke) in slurry form	Tons	4546	0.00	11572	13631	22012	5788	12661	17669	0	0	602	0	88481
13	Dry Fly Ash Dumped in slurry form to dyke.	Tons	0	0.00	0.00	0.00	0	0	16553	26098	0	7434	0	0	50085
13a	Waste fly ash disposed from dumped yard (Near Stage-III pump house area) on Payment	Tons	0	0.00	0.00	0.00	0	0	0	0	0	3148	13116	2227	18491
14	The balance quantity of fly ash was manually removed from ESP hoppers and dumped to bottom ash silo area/Open area	Tons	19446	0	6466	28283	46487	0	0	0	0	0	0	0	100682
15	Quantity sent to dyke as Waste fly ash from ESP hoppers (Unit - I & II) including the balance qty of generated fly ash	Tons	0	45493	21310	17234	38619	35149	26633	29441	22437	24884	15172	8990	285362
16	Quantity of waste fly ash disposed by inter-carting from unit I & II ESP hoppers and dumped at low laying areas of power plant.(including residual waste fly ash)	Tons	0	0	0	0	8981	18427	0	0	0	0	0	0	27408
17	Opening balance of Bottom ash below the silo	Tons	4545.00	0.00	0.00	0.00	1223.00	0	0	0	0	0	0	0	5768.00
18	Total ash utilized (Sl No: 5+10+10a)	Tons	51594	7444	65296	97467.74	87304.81	48941.15	90821	69044	146478	127157	158549	162222	1112318.7
19	% of Ash Utilized	%	59.28%	0%	75.93%	69.93%	53.67%	86.76%	60.68%	46.38%	92.41%	79.83%	91.27%	96.92%	73.91%
20	Revenue in Fly Ash & Waste Fly Ash	Rs.	2502150	298340	3023930	5133520	4419730	1493590	4798190	4687380	13593575	11601430	18677020	19309575	89538430
21	Revenue in Bottom Ash	Rs.	0	0	0	0	0	0	0	0	0	1256355	1553580	1489140	4299075
22	MSTC Charges	Rs.	43788	5221	52919	89837	77345	26138	83968	82029	0	0	0	0	0
23	Revenue to the Board including Bottom Ash(inRs)	Rs.	2458362	293119	2971011	5043683	4342385	1467452	4714222	4605351	13593575	12857785	20230600	20798715	93376260

Note: Quantities in column (11) is not included in utilized quantity as it is Lifted from previous stock at Dyke.