



# भारत हेवी इलेक्ट्रिकल्स लिमिटेड

( भारत सरकार का उपक्रम )

## BHARAT HEAVY ELECTRICALS LIMITED

(A Govt. of India Undertaking)

**TCN - 03**

Ref: PSER:SCT:BRM-M1436:TCN-03

Date: 01-04-2013

|     |   |  |
|-----|---|--|
| Sub | Tender change notice (TCN) 03   |  |
| Job | Design, engineering, manufacturing, supply, supervision for erection, site handling, commissioning, etc of Air Conditioning System for 2x250 MW Barauni Extension project unit # 8 & 9 at Begusarai, Bihar. |  |
| Ref | 1.0   | Tender No.- PSER:SCT:BRM-M1436:13  |
|     | 2.0   | BHEL's NIT, vide reference no PSER:SCT:BRM-M1436:3166, dated 27-02-2013. |
|     | 3.0   | BHEL's TCN-01 , vide ref no PSER:SCT:BRM-M1436:TCN-01 Dated 12-03-2013   |
|     |   | BHEL's TCN-02 , vide ref no PSER:SCT:BRM-M1436:TCN-02 Dated 19-03-2013   |
|     | 4.0   | Other references (if any).   |

With reference to above, following points/documents, relevant to tender, may please be noted and complied with while submitting offer.

- 1.0 Water analysis report as per Annexure-1 to TCN-03.
- 2.0 Due date of submission of offer is extended from **01-04-2013** to **16-04-2013 (15-00 hrs)**
- 3.0 Revised 'No deviation certificate' is attached. Bidder to submit 'No deviation certificate' as per attached Format only.
- 4.0 All other terms & conditions shall remain unchanged.

Thanking you,

Yours faithfully,  
for BHARAT HEAVY ELECTRICALS LTD

**ENGR (SCT)**

Encl

- 1.0 Annexure-1.
- 2.0 Revised 'No deviation certificate' format.

पावर सेक्टर पूर्वी क्षेत्र ( मुख्यालय )

POWER SECTOR EASTERN REGION, DJ-9/1, SALT LAKE CITY, KOLKATA - 700 091

फैक्स/Fax : (033) 23211960

फोन/Phone : बोर्ड/EPABX : 23211798/ 1691

**FORMAT FOR NO DEVIATION CERTIFICATE**  
**(To be submitted in the bidder's letter head)**

BHARAT HEAVY ELECTRICALS LIMITED,  
Power Sector - Eastern Region,  
Plot no 9/1, DJ Block, Sector – II, Salt Lake City,  
Kolkata – 700 091

|     |   |   |
|-----|---|---|
| Sub | No Deviation Certificate.   |   |
| Job | Design, engineering, manufacturing, supply, supervision for erection, site handling, commissioning, etc of Air Conditioning System for 2x250 MW Barauni Extension project unit # 8 & 9 at Begusarai, Bihar. |   |
| Ref | 1.0   | PSER:SCT:BRM-M1436:13   |
|     | 2.0   | BHEL's NIT, vide reference no PSER:SCT: BRM-M1436:3166, dated 27-02-2013. |
|     | 3.0   | BHEL's TCN-01 , vide ref no PSER:SCT:BRM-M1436:TCN-01 Dated 12-03-2013    |
|     | 4.0   | BHEL's TCN-02 , vide ref no PSER:SCT:BRM-M1436:TCN-02 Dated 19-03-2013    |
|     | 5.0   | BHEL's TCN-03 , vide ref no PSER:SCT:BRM-M1436:TCN-03 Dated 01-04-2013    |
|     | 6.0   | Other references (if any).  |

Dear Sirs,

With reference to above, this is to confirm that as per tender conditions, we have visited site before submission of our offer and noted the job content & site conditions etc. We also confirm that we have not changed/ modified the tender documents as appeared in the website/ issued by you and in case of such observance at any stage, it shall be treated as null and void.

We hereby confirm that we have not taken any deviation from tender clauses together with other references as enumerated in the above referred NIT. We hereby confirm our unqualified acceptance to all terms & conditions, unqualified compliance to technical specification, Integrity Pact (If applicable) and acceptance to reverse auctioning process.

In the event of observance of any deviation in any part of our offer at a later date whether implicit or explicit, the deviations shall stand null & void.


We confirm to have submitted offer in accordance with tender instructions and as per aforesaid references.

Thanking you,

Yours faithfully,

(Signature, date & seal of authorized  
representative of the bidder)

पावर सेक्टर पूर्वी क्षेत्र (मुख्यालय)  
POWER SECTOR EASTERN REGION, DJ-9/1, SALT LAKE CITY, KOLKATA - 700 091  
फैक्स/Fax : (033) 23211960 फोन/Phone : बोर्ड/EPABX : 23211798/ 1691

|   |  |   |
|---|--|---|
|  | <b>TITLE:</b><br><b>2X250 MW BARAUNI TPS UNIT # 8 &amp; 9</b><br><b>AT BEGUSARAI</b> | <b>SPECIFICATION NO. PE-DC-374-164-A001</b> |
|   |  | <b>REV.NO. 0      DATE : 20/03/2012</b>     |
|   | <b>DESIGN PHILOSOPHY</b><br><b>FOR EFFLUENT TREATMENT PLANT</b>                      | <b>SHEET 3      OF      5</b>               |

**RAW WATER ANALYSIS**

**ANNEXURE - 1**

| SL.NO. | DISCRIPTION               | UNIT AS SUCH | VALUE       |
|--------|---------------------------|--------------|-------------|
| 1.     | pH                        | -            | 8.90        |
| 2.     | DISSOLVED OXYGEN          | mg/l         | 7.5         |
| 3.     | CHLORIDE                  | mg/l         | 58          |
| 4.     | CALCIUM                   | mg/l         | 51.20       |
| 5.     | MAGNESIUM                 | mg/l         | 17.01       |
| 6.     | COD                       | mg/l         | 58          |
| 7.     | BOD                       | mg/l         | 3.00        |
| 8.     | TOTAL SOLIDS              | mg/l         | 694.40      |
| 9.     | VOLATILE TOTAL SOLIDS     | mg/l         | 117.98      |
| 10.    | SUSPENDED SOLIDS          | mg/l         | 64.43       |
| 11.    | VOLATILE SUSPENDED SOLIDS | mg/l         | 28.30       |
| 12.    | SETTABLE SOLIDS           | mg/l         | 1.90        |
| 13.    | TOTAL DISSOLVED SOLIDS    | mg/l         | 237.00      |
| 14.    | TURBIDITY                 | NTU          | 12.00       |
| 15.    | OILS/HYDROCARBON          | mg/l         | 6.50        |
| 16.    | PHENOLS                   | mg/l         | 0.010       |
| 17.    | AMMONIA (N)               | mg/l         | 0.210       |
| 18.    | NITRATE (N)               | mg/l         | 0.80        |
| 19.    | NITRITE (N)               | mg/l         | 6.67        |
| 20.    | PHOSPHATE AS PHOSPHORUS   | mg/l         | 0.09        |
| 21.    | FLURIDES (F)              | mg/l         | 0.69        |
| 22.    | IRON                      | mg/l         | 0.29        |
| 23.    | COLIFORM                  | MPN          | 1405.00     |
| 24.    | FAECAL COLIFORM           | -            | 175         |
| 25.    | FAECAL STREPTOCOCCUS      | -            | 1600        |
| 26.    | TOTAL ORGANIC CARBON      | mg/l         | 5.30        |
| 27.    | TOTAL INORGANIC CARBON    | mg/l         | 28.00       |
| 28.    | TOTAL NITROGEN (N)        | mg/l         | 4.08        |
| 29.    | TOTAL ORGANIC (N)         | mg/l         | 3.03        |
| 30.    | INORGANIC NITROGEN        | mg/l         | 2.78        |
| 31.    | DDT                       | mg/l         | 0.001       |
| 32.    | BROMIDE AS BR             | mg/l         | 2.10        |
| 33.    | CADMIUM                   | mg/l         | 0.960       |
| 34.    | CHROMIUM                  | mg/l         | 0.055       |
| 35.    | COPPER                    | mg/l         | 1.400       |
| 36.    | LEAD                      | mg/l         | 0.120       |
| 37.    | MERCURY                   | mg/l         | 0.56        |
| 38.    | NICKLE                    | mg/l         | 0.230       |
| 39.    | ZINK                      | mg/l         | 2.00        |
| 40.    | TOXICANT VS TOXICITY      | -            | NEGATIVE    |
| 41.    | BORON                     | mg/l         | 1.87        |
| 42.    | SODIUM                    | mg/l         | 28.00       |
| 43.    | COLOR                     | -            | LIGHT BROWN |
| 44.    | TOTAL CHROMIUM            | ppb          | 68          |
| 45.    | TOTAL COLLIDAL SILICA     | ppb          | 980         |

**CLARIFIED WATER ANALYSIS**

**OUTLET TSS : 15 PPM (MAXIMUM)**