



भारत हेवी इलेक्ट्रिकल्स लिमिटेड

(भारत सरकार का उपक्रम)

BHARAT HEAVY ELECTRICALS LIMITED

(A Govt. of India Undertaking)

TCN – 01

Ref: PSER:SCT:VIZ-P1392:TCN-01

Date: 10-09-2012

Sub	Tender Change Notice (TCN-01).	
Job	Erection, testing, commissioning etc of LP piping package , misc. water treatment system piping & workshop equipments for 2x520 MW unit # 1 & 2 at HNPCL VIZAG Project, A. P.	
Ref	01	Tender No. PSER:SCT:VIZ-P1392:12.
	02	BHEL's NIT, vide reference no PSER:SCT: VIZ-P1392:2927, dated 22-08-2012.
	03	BHEL's TCN-01, vide reference no: Ref: PSER:SCT: VIZ-P1392:TCN-01, Dated 10.09.2012.
	04	Other references (if any).

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

- 1.0 Due date of submission of offer is extended from 12-09-2012 to **19-09-2012 (14-00 hrs)**. Bidders are requested to submit their offer by extended due date positively.
- 2.0 Clarifications to bidder's queries are attached herewith.
- 3.0 'Painting schedule' for the subject tender has been attached herewith.
- 4.0 "PLOT PLAN" is attached herewith for tendering purpose.
- 5.0 Revised 'No deviation certificate' is attached. Bidder to submit 'No deviation certificate' as per attached format only.
- 6.0 All other terms & conditions shall remain unchanged.

Thanking you,

Yours faithfully,
for BHARAT HEAVY ELECTRICALS LTD

ENGINEER (SCT)

Encl

- 1.0 Revised 'No deviation certificate' format.
- 2.0 Clarifications to bidders
- 3.0 Painting Schedule
- 4.0 Plot plan

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	Erection, testing, commissioning etc of LP piping package , misc. water treatment system piping & workshop equipments for 2x520 MW unit # 1 & 2 at HNPCL VIZAG Project, A. P.	
Ref	1.0	Tender No. PSER:SCT:VIZ-P1392:12.
	2.0	BHEL's NIT, vide reference no PSER:SCT: VIZ-P1392:2927, dated 22-08-2012.
	3.0	BHEL's TCN-01, vide reference no: Ref: PSER:SCT: VIZ-P1392:TCN-01, Dated 10.09.2012.
	4.0	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 authorised
representative of the contractor)

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 SEEKING CLARIFICATION

JOB	Erection, testing, commissioning etc of LP Piping package, misc. water treatment system piping & Workshop equipments for 2X520 MW unit #1 & 2 at HNPCL VIZAG project, A.P.			
TENDER NO	PSER:SCT:VIZ-P1392:12			
SI No	Reference clause of tender document	Existing provision	Bidder's query	BHEL's clarification
1	Vol IF - Technical specification for Main plant LP Piping , Clause no 5.9, Pg no 5 of 11.	All butt joints of <u>piping</u> shall be carried out by arc welding only. All the electrodes of BHEL/ Customer approved quality and make, required for the piping and structural works etc to be arranged by the vendor within his quoted price.	Please indicate the type of electrode to be considered for welding of pipes of all services and structural steel..	For CS Pipe/ LOW Hydrogen Electrode (E7018) is to be used. For SS Pipe - E347 is to be used.
2	Vol III Price schedule, Rev 0, SI no A 1 to 13, Main plant LP Piping system		The quantities for piping in the price schedule from sl no A1 to 13 are mentioned in Metric tonne, and the total surface areas cannot be worked out from tonnages, hence provide the surface area and type of paint to be considered for different services of piping. Also clarify scope of supply of paints.	Pl. refer clarification at Sl. No. 13 below. Supply and application of Paint is in the scope of bidder.
3	Vol III Price schedule, Rev 0, SI no A 1 to 13, Main plant LP Piping system		From the given price schedule we cannot identify which pipes are above ground and which pipes are under ground, if any under ground piping kindly indicate the total quantity for excavation, backfilling and disposal. And also confirm the supply of wrapping and coating material. If the supply of Wrapping and coating material is in our scope kindly provide the specification of the material and details of surface preparation and the total surface area to be considered.	Civi work is excluded from the scope of contractor. Wrapping and coating is not envisaged in this scope of work of contractor.
4	Vol III Price schedule, Rev 0, SI no A 1 to 13, Main plant LP Piping system		The BOQ calls for internal cleaning and painting, hence specify which pipes require internal painting. Please provide the total surface area, type of surface preparation and type of paint to be considered.	Internal Painting is not generally applicable. However Pl. refer clause no. 2.9 of Technical Specification. Field painting is to be done as per the 'Painting schedule' (Document No. 7137:QPC:12/Rev01) attached.

SI No	Reference clause of tender document	Existing provision	Bidder's query	BHEL's clarification
5	Vol III Price schedule, Rev 0, SI no A 6 , Main plant LP Piping system	Handling from storage, fabrication, erection, welding, inspection,fixing/ embedding, painting etc of hangers, supports & structures, misc supporting material, various operating platform/approaches etc all complete. (Supply of structural steel is by BHEL free of cost) Payment shall be released as per following. (i) Erection -60%; (ii) Welding - 35%; (iii) Painting completion -3% and (iv) As-built drawing submission - 2%.	From the referred clause, we understood that the fasteners, clamps and other miscellaneous items are also included in the given quantity and supplied by BHEL.	It is Confirmed that the same will be issued by BHEL free of cost to the vendor .
6		Free issue material	Please confirm that all types of pipes, fittings and valves, hangers, turnbuckle etc. shall be supplied to us free of cost at site.	It is Confirmed that the same will be issued by BHEL free of cost to the vendor .
7	Item sl. no. 13	HDPE piping/buried piping	Please confirm that necessary civil work / trench work related to HDPE pipe / sewerage treatment plant pipe shall be excluded from bidders scope of work.	It is confirmed that civil work is excluded from the scope of contractor PI. refer clause no. 9.7 of the Technical specification.
8	Item no. B	Grouting of chlorination system	Please specify the type of grouting cement is to be used for chlorination system i.e. non shrink grout / conbextra GP2 or epoxy grouting.	The grouting cement shall be Conbextra GP2/BHEL approved equivalent and supply is included in the scope of contractor
9	Item no. B	Skid mounted	Please confirm that all interconnected piping related to skid mounted chlorination system shall be supplied to us in mounting condition. Any welding for interconnecting piping in skid mounted equipment shall be paid on individual item rate basis.	The interconnected piping mounted on various skids shall be in assembled condition. However, in case piping is required to be erected/welded at site, same will be paid as per applicable item rate of Price schedule (Vol-III).
10	7.7 of T.C.C	Civil items for jointing	Please confirm George Fisher make tangit solvent cement required for UPVC, CPVC, HDPE piping joining shall be supplied to us free of cost at site or not.	Solvent cement for UPVC & CPVC joining shall be supplied by BHEL free of cost. All materials required for welding of HDPE pipe shall be arranged by the contractor within their quoted rate.


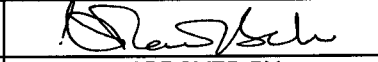
SI No	Reference clause of tender document	Existing provision	Bidder's query	BHEL's clarification
11		Size of covered storage	Please specify the size of covered store for storage of material of UF-RO-EDI plant.	Bidder may like to visit Vizag site to assess site condition and readiness of erection front for UF-RO-EDI Plant building.
12	8.19.1	Final painting of equipment	Please confirm that final painting related to piping and equipment under UF-RO-EDI plant shall be under bidders scope of work. Please specify the type of paint, no of coat along with DFT for individual items for final paint.	The Equipments/Piping etc for 'UF-RO-EDI /Chlorination Plant', is coming in Final Painted condition, and no field painting is involved except some touch up paint as applicable.
13	Painting system		Please clarify the total painting system including primer and final paint along with no of coat, DFT, specification for S.O.R item no. 1)/2)/3)/5)/6)/9)/10)/11)/12)/13)	<p>a) For Sl. No. 2 (galvanised) ,4 (ss) &5(galvanised) - no field painting at site is envisaged.</p> <p>b) For Sl. No. 1, 3 &6 - Field painting is to be done as per the 'Painting schedule' (Document No. 7137:QPC:12/Rev01) attached. Document no. 6922:QPC:02/rev01 given with the tender is superceded by document No. 7137:QPC:12/Rev01.</p> <p>c) For Sl. No. 9(CPVC), 10(UPVC), 11(GRP),12(MS) & 13(HDPE) - these are coming in Final Painted condition, and no field painting is involved.</p> <p>However, tagging and colour coding for all pipes at regular interval is to be done by the bidder within the quoted rate.</p>
14	Drawings			<p>Following Drawing is attached for general guidance of overall layout to the bidder and for tender purpose-</p> <p>1) Plot Plan - PE-DG-361-100-M001/REV05.</p>

Sl. NO	PGMA / Description	Surface Preparation & Surface Profile	Primer coat		Intermediate coat			Finish coat			REMARKS		
			Primer	No of coats	Paint	No of coats	Shade	Paint	No of coats	Shade		Total DFT Microns	
1	2	3	4	5	6	7	8	9	10	11	12	13	
1	(a) Internal Surface - CW/ACW Pipes handling sea water (Carbon steel pipes of size NB 400 and above)	Blast Cleaning SSPC SP-10 SA 2½	Isophthalic Polyester Glass Flake lining for Sea water application.									1000 Microns(Min)	
	(b) Holiday test	Holiday testing as per Paint Manufacturer's Quality Plan approved by BHEL. Holiday test Equipment to be calibrated before testing.											
2	External Surface of CW --Buried Piping / Encased in concrete (For pipe dia- 1000 mm and above) (Temporary Protection for transportation from works to site). **Wrapping and Coating will be done by BHEL Erection Group as per Contract requirement.	SSPC-SP3 / Power Tool Cleaning	Red Oxide Zinc Phosphate (Alkyd base to IS 12744)	1 (30 Microns per coat)	---	---	---	---	---	---	30 Microns		
3	External Surface (over ground piping) of CW,ACW.(For all diameters)	Abrasive Blast Cleaning to SA 2 1/2 (Near white metal)	Inorganic Ethyl Zinc Silicate Primer.	1 (min.DFT = 75 microns per coat.)	Epoxy Based MIO/TiO2 Pigmented Intermediate Coat	1 (DFT = 75 microns Min per coat.)	---	Epoxy Finish Coat	3\$ (25 Microns per coats)	Smoke Grey Shade No 692 of IS 5	200 @ shop + 25 @ site.		
4	External Surface of ECW, Plant water (For all diameters)	Abrasive Blast Cleaning to SA 2 1/2 (Near white metal)	Inorganic Ethyl Zinc Silicate Primer.	1 (min.DFT = 75 microns per coat.)	Epoxy Based MIO/TiO2 Pigmented Intermediate Coat	1 (DFT = 75 microns Min per coat.)	---	Epoxy Finish Coat	3\$ (25 Microns per coats)	Smoke Grey Shade No 692 of IS 5	200 @ shop + 25 @ site.		
5	Galvanised and Stainless steel Piping	No painting											

\$:- Out of 3 coats of Epoxy based finish paint, two coats of Epoxy finish paint shall be given at shop / subcontracting works and third coat of Epoxy finish paint shall be applied at site after erection by brush and / or spray as recommended by the Paint Manufacturer.

Notes:

- All weld spatter/ slag is to be removed, rough welds to be ground and drilled holes / cut surface to be deburred prior to abrasive blast cleaning.
- Primer to be applied within a maximum 4 hrs of Abrasive Blast Cleaning to SA 2 1/2. Repainting intervals for multicoat systems shall be strictly as per Paint Manufacturer catalogue.
- Inspection of painting system shall include measurement of DFT, check for shade, uniformity and adhesion test (Only for Epoxy).

 PREPARED BY : VIVEKANANDA YELLU, ENGR / QA	 APPROVED BY : G.PANNEER SELVAM, DGM / QA	For Customer use
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APPROVED AS INDICATED BY BELOW

CATEGORY - I APPROVED

CATEGORY - II APPROVED/SUBJECT TO COMMENTS TO BE INCORPORATED

CATEGORY - III NOT APPROVED, TO BE REVISED

CATEGORY - IV FOR INFORMATION ONLY

CATEGORY - IV-R FOR INFORMATION WITH COMMENTS

Contractor is responsible for Design, coordination, dimensions, quantities and performance of the equipment / system / overall plant in accordance with the contract document.

MOTT MACDONALD PVT. LTD.

Job No.

Checked by: **SAMAD** - **15.07.2011**

Drawing/document transmittal



Client HNPCL.
 Project 2X 520 MW TPP at Visakhapatnam, Andhra Pradesh, India
 Project No 284431

TGI- A 20, Sector 2, NOIDA
 201301 (INDIA)

To,
 BHEL-Chennai,
 Kind Attn. M.Chandrasekaran
Dy.Manager/Commercial
 BHEL/Piping Centre/Chennai

Sheet Number: 1 of 1
Date of Issue :15/07/2011

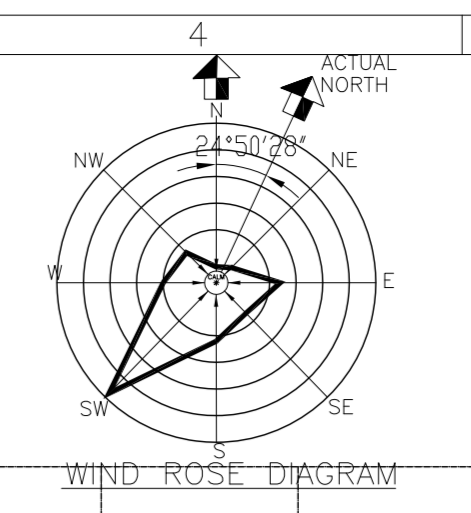
Title	Drawing No.	Revision	Category	Remarks
Painting Scheme for LP Piping	7137QPC12	01	I	

APPROVAL CATEGORY LEGEND

- Category I** - APPROVED
- Category II** - APPROVED, SUBJECT TO INCORPORATION OF COMMENTS
- Category III** - NOT APPROVED, TO BE REVISED AND RESUBMITTED
- Category IV** - FOR INFORMATION ONLY
- Category IV-R** - FOR INFORMATION WITH COMMENTS

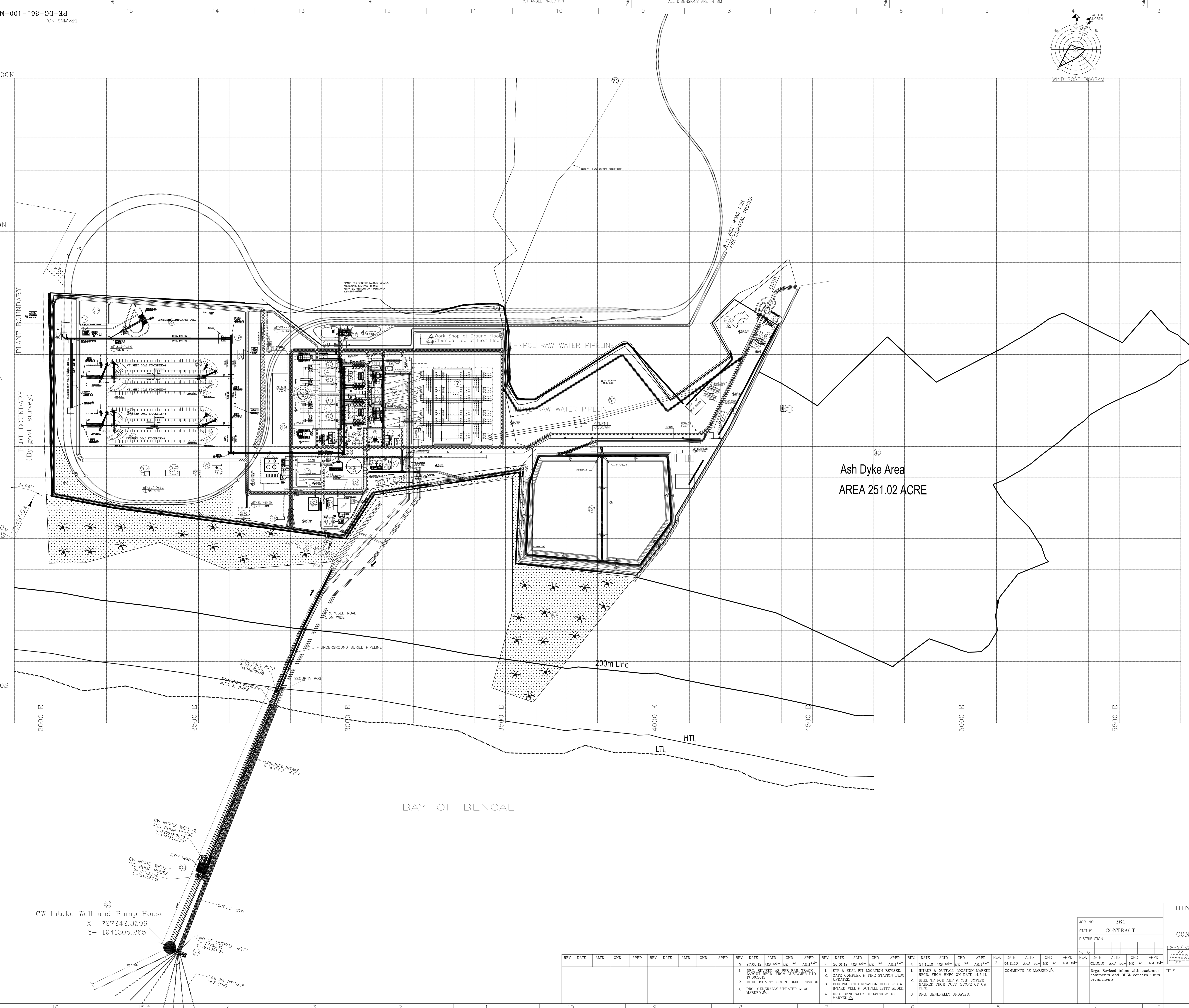
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CC: Mr. R. C. Padhy, HOD, Engineering, HNPCL	1	Email
CC: Sh. Abhishek Dubey, Sr. Manager, HNPCL	1	Email
CC: Sh.R.K. Singh, Sr. Vice president projects HNPCL	1	Email

Issued by... A K Das



S.No.	DESCRIPTION	SCOPE	COORDINATES	
			E	N
1.	Turbo Generator Building	BHEL (PEM)	3098.35	363.5
2.	Coal Mill & Bunker Bay	BHEL (PEM)	-	-
3.	Steam Generator	BHEL (TRY)	-	-
4.	Electrostatic Precipitator	BHEL (RAN.)	-	-
5.	Chimney	BHEL (PEM)	2840	470
6.	Transformer Yard	BHEL (PEM)	-	-
7.	400 kV Switch Yard (AIS)	BHEL (TBC)	3197.972	558.7028
8.	Switch Yard Control Room	BHEL (TBC)	3201.972	323.7176
9.	Service Building	BHEL (PEM)	3096.838	356.5
10.	ESP / VFD Control Room #1	BHEL (PEM)	2863.5	348
11.	DC Set	BHEL (ISG)	3138.35	305
12.	Air Compressor House	BHEL (PEM)	3110.85	305
13.	GPU Regeneration	BHEL (PEM)	3030	165
14.	ESP Pump House	BHEL (PEM)	3033.85	348
	Condensate Storage Tank #1	BHEL (PEM)	3007	348
	Condensate Storage Tank #2	BHEL (PEM)	3025	340
	DM Tank #1	BHEL (PEM)	3007	310
	DM Tank #2	BHEL (PEM)	3023	310
15.	Acw P/H & Air Washer Room #1	BHEL (PEM)	3109.35	428
	Acw P/H & Air Washer Room #2	BHEL (PEM)	3109.35	546.5
17.	Wagon Tippler	BHEL (ISG)	2061.6	658.8
18.	WT&H MCC1 Room	BHEL (ISG)	2146.3	662.35
19.	Crusher House	BHEL (ISG)	2605.6	658.22
20.	CHP Control Room	BHEL (ISG)	2646.3	615
21.	Stacker Reclaimer (2 Nos.)	BHEL (ISG)	-	-
22.	Uncrushed Imported Coal	BHEL (ISG)	2517.5	738
23.	Coal Slurry Settling Pond	BHEL (ISG)	2507.35	201
24.	Dozer Shed	BHEL (ISG)	2340.32	207.15
25.	CHP Office Cum Maint. Building	BHEL (ISG)	2392.68	220.66
26.	Tunnel Hopper	BHEL (ISG)	-	-
27.	Fuel Oil Complex (HFO & LDO)	BHEL (PEM)	2785	260
28.	Sweet Water Reservoir	BHEL (PEM)	4040	281
29.	Raw Water Pump House	BHEL (PEM)	3778.5	298
30.	UF-RO-EDI BUILDING	BHEL (RPT)	2995	129.25
31.	DM Plant/Storage Tank/Pump House	BHEL (PEM)	2815	134.75
32.	Effluent Treatment Plant (ETP)	BHEL (RPT)	2859.25	133
33.	Fire Water Pump House	BHEL (PEM)	3063.85	225
34.	Sea Water Intake	CUSTOMER	-	-
36.	Seal Pit	CUSTOMER	-	-
37.	Sea Water Outfall	CUSTOMER	-	-
38.	Fly Ash Silo	BHEL (ISG)	2967	671
39.	Ash Water/Slurry Pump House	BHEL (ISG)	2929	671
40.	Ash Slurry Pump House	BHEL (ISG)	3033.85	295
41.	Ash Dyke Area	BHEL (ISG)	-	-
42.	Gate Complex & Security Office	BHEL (PEM)	4367.438	691.36
43.	Adm building with front parking	BHEL (PEM)	4278.98	739.27
44.	Work Shop CUM CHEMICAL LAB.	BHEL (PEM)	3222.81	653.12
45.	Canteen	BHEL (PEM)	3153	262
46.	Permanent Store	BHEL (PEM)	2827	248.56
47.	Fire Station Building	BHEL (PEM)	4313.3	644.6
48.	Hydrogen Generation Plant	BHEL (PEM)	1665	90
49.	Space For FGD	BHEL (PEM)	-	-
50.	Contractor's office & Facilities	BHEL (PSER)	3114.5	195.5
51.	Construction office (Owner)	BHEL (PSER)	3160	203
53.	Labour Colony	BHEL (PSER)	-	-
54.	Watch Tower	BHEL (PEM)	2968	23.5
55.	Green Belt	CUSTOMER	3089	784
56.	Material Store Yard	BHEL (PSER)	-	-
57.	Space for Fabrication&Pre-Asy	BHEL (PSER)	3356	712
58.	Perman P/House & AHP MCC1 Room	BHEL (ISG)	2944	310
59.	Perman. comp House & AHP MCC2 Room	BHEL (ISG)	2953.6	599.5
60.	FLY Ash Evacuation Tower.	BHEL (ISG)	TO BE DECIDE LATER	-
61.	AWS Pump House & AHP MCC3 Room	BHEL (ISG)	4405	415
62.	Crushed Coal Stock Yard	BHEL (ISG)	-	-
63.	CHP MCC3 Room at JNT-5	BHEL (ISG)	2974.6	279
64.	AHP MCC3 Room/control Room	BHEL (ISG)	2953.6	322
65.	CLARIFLOCCULATOR- ASH WATER	BHEL (ISG)	3006.5	235.5
66.	SEWAGE TREATMENT PLANT	BHEL (RPT)	2780	70
67.	CLARIFIED WATER PUMP HOUSE	BHEL (PEM)	2917	130.62
68.	TRACK HOPPER	BHEL (ISG)	-	-
69.	ELECTROCHLORINATION BUILDING	CUSTOMER	2935	68
70.	In Motion Weigh Bridge Room	BHEL (ISG)	3874.16	1494.7
71.	Compressor House	BHEL (ISG)	2101.5	488
72.	DSPH-1; 30mX6m	BHEL (ISG)	2152.76	738.368
73.	DSPH-2; 30mX6m	BHEL (ISG)	2573.8	237.65
74.	DSPH Tank-1 (ø 6m)	BHEL (ISG)	2137.76	726.36
75.	DSPH Tank-2; (ø 6m)	BHEL (ISG)	2558.8	231.64

Ash Dyke Area
AREA 251.02 ACRE



- NOTES**
- ALL LEVELS MENTIONED IN DRG. ARE R.L. ONLY. TO BLDG. GROUND FLOOR ELEVATION IS + 0.0M WHICH CORRESPONDS TO RL 8.5M.
 - DETAILS OF GREENBELT SHOWN IN DRG. ARE IN CUSTOMER SCOPE.
 - LOCATION AND SIZES OF VARIOUS BUILDINGS AND FACILITIES SHOWN ARE PRELIMINARY THESE SHALL BE UPDATED AS AND WHEN FIRMED UP.
 - WIDTH OF ROAD SHOWN IN DRG. ARE INCLUDED ITS SHOULDERS.

- LEGEND :**
- Fencing
 - Railway Line
 - Route For Sweet Water Line
 - HNPCL Plot Boundary
 - HNPCL Plant Boundary
 - Edge of Levelled Ground
 - Sweet Water Reservoir
 - Green Belt
 - Bore Well
 - Fixed Coordinates of Buildings/Facilities.
 - 3.750M WIDE BITUMEN ROAD.
 - 7.50M WIDE BITUMEN ROAD.
 - ROAD BHEL ISG SCOPE

HINDUJA NATIONAL POWER CORPORATION LTD.
2 X 520 MW VIZAG THERMAL POWER PLANT
VISAKHAPATNAM

CONSULTANT:
BHARAT HEAVY ELECTRICALS LTD
POWER SECTOR
PROJECT ENGINEERING MANAGEMENT
NEW DELHI

TITLE: PLOT PLAN
DEPT. SCALE: 1:4000
DRAWING NO. PE-DG-361-100-M001
SHEET 1 OF 1 REV. 5

REV.	DATE	ALTD.	CHD.	APPD.	REV.	DATE	ALTD.	CHD.	APPD.	REV.	DATE	ALTD.	CHD.	APPD.	REV.	DATE	ALTD.	CHD.	APPD.
1.	07.08.12	ANS	MS	MS	1.	20.01.12	ANS	MS	MS	1.	24.11.10	ANS	MS	MS	2.	24.11.10	ANS	MS	MS
2.	07.08.12	ANS	MS	MS	2.	20.01.12	ANS	MS	MS	2.	24.11.10	ANS	MS	MS	3.	24.11.10	ANS	MS	MS
3.	07.08.12	ANS	MS	MS	3.	20.01.12	ANS	MS	MS	3.	24.11.10	ANS	MS	MS	4.	24.11.10	ANS	MS	MS

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