

## Corrigendum 2 dated Oct 19, 2019 to Tender Specification BHEL PSSR SCT 1854

**Corrigendum 2 dated Oct 19, 2019 to Tender Specification BHEL PSSR SCT 1854** for the works of Material handling at Site Stores / Storage yard, Transportation to Site of Work, Erection, Testing and Commissioning of Cooling Water Piping, Part of ACW piping including supply and application of painting, coating and wrapping, PU/Glass flake coating as applicable for Unit-1 and Unit-2 at 2X800MW Uppur Supercritical Thermal Power Project at Ramanathapuram District, Tamil Nadu.

**A. One of the bidders had raised queries in the published tender specification. The Clarifications issued by BHEL are furnished below:**

<u>Sl. No</u>	<u>Ref. clause</u>	<u>Existing provision</u>	<u>Bidder's query</u>	<u>BHEL's clarification</u>
1.	Techno commercial bid Volume – I Book - I TCC	Query Related to Well Point De-watering	We require the following details in related to the Well Point De-watering for the tender at Uppur, Ramanathapuram. 1. Soil Investigation report 2. Depth of excavation 3. Segment length at a time 4. Total length of excavation.	1. Soil Investigation report is attached. 2. Depth of Excavation can be arrived at from drawing attached in the tender. 3. Maximum length of single piece/segment is 10 m. 4. Total length of excavation can be arrived at from drawing attached in the tender.

All other conditions of the tender specification remain unchanged.

Bidders are requested to consider this corrigendum as part of tender specification and quote accordingly.

-Sd-  
Shailendra Kumar  
Senior Engineer / Subcontracts

### BOREHOLE LOG

**Project No: MSGTPL/SI-3814/17-18**

**Project: Geotechnical Report on 2x800mw Uppur STPP (Unit-1 & 2) Ramanathapuram District**

Location	Transformer Yard Area
E.G.L.(m)	4.65
Method of Boring	Rotary
Co-ordinates	161S, 110W

<b>Borehole No</b>	<b>BH-28</b>
Depth of G.W.T (m)	(-) 1.80m
Date of Commencement	7-Sep-2017
Date of Completion	8-Sep-2017
Dia of Bore (mm)	150
Termination Depth (m)	30.00

Depth below EGL (m)	Depth w.r.t.RL (m)	Layer Thickness (m)	Description	Symbol	IS-Classification	Type of Sample	Test Depth (m)	SPT N Value, Each division = 15 Cm					SPT- N- Value	Remarks
0.0	4.65	2.0	Stiff Brownish Silty Clayey SAND		CI	SPT	1.0	3	6	5	11			
0.5	4.15													
1.0	3.65													
1.5	3.15													
2.0	2.65							UDS Collected						
2.5	2.15	3.0	Loose to Medium Dense Brownish Medium to Fine SAND		SM	SPT	3.0	3	3	5	8			
3.0	1.65													
3.5	1.15													
4.0	0.65							UDS Collected						
4.5	0.15													
5.0	-0.35													
5.5	-0.85	1.5	Medium Dense Brownish Silty CLAY		SC	SPT	6.5	7	9	14	23			
6.0	-1.35													
6.5	-1.85													
7.0	-2.35	1.5	Hard Brownish CLAY		CI	SPT	8.0	9	15	18	33			
7.5	-2.85													
8.0	-3.35													
8.5	-3.85	4.5	Dense to Very Dense Brownish Clayey SAND		SC	SPT	9.5	11	17	22	39			
9.0	-4.35													
9.5	-4.85													
10.0	-5.35													
10.5	-5.85													
11.0	-6.35													
11.5	-6.85													
12.0	-7.35													
12.5	-7.85													
13.0	-8.35	1.5	Hard Brownish Sandy CLAY with Limestone		CI	SPT	12.5	14	35	65	100			
13.5	-8.85													
14.0	-9.35													
14.5	-9.85													
15.0														
<b>Borehole Termination Depth (m) 30.0</b>														

EGL- Existing Ground Level  
R.L- Reduced Level  
GWT- Ground Water Table

SPT- Standard Penetration Test  
UDS- Undisturbed Sample  
VST- Vane Shear Test

DS- Disturbed Sample  
CR- Core Recovery  
RQD- Rock Quality Designation

### BOREHOLE LOG

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Dia of Bore (mm)	150
Termination Depth (m)	30.00

Depth below EGL (m)	Depth w.r.t.RL (m)	Layer Thickness (m)	Description	Symbol	IS-Classification	Type of Sample	Test Depth (m)	SPT N Value, Each division = 15 Cm				SPT- N- Value	Remarks		
15.0	-10.35	6.5	Hard Brownish & Light Greyish Clay with Limestone		CH-CI										
15.5	-10.85							SPT	15.5	16	26	39		<b>56</b>	
16.0	-11.35														
16.5	-11.85														
17.0	-12.35							SPT	17.0	18	30	43		<b>73</b>	
17.5	-12.85														
18.0	-13.35														
18.5	-13.85							SPT	18.5	21	39	48		<b>87</b>	
19.0	-14.35														
19.5	-14.85														
20.0	-15.35							50 Blows for 9Cm							
20.5	-15.85														
21.0	-16.35														
21.5	-16.85								50 Blows for 4Cm						
22.0	-17.35	8.5	Hard Brownish & Light Greyish Sandy CLAY		SC-SM										
22.5	-17.85														
23.0	-18.35							SPT	23.0	30	50 Blows for 11Cm				
23.5	-18.85														
24.0	-19.35														
24.5	-19.85							SPT	24.5	39	50 Blows for 9Cm				
25.0	-20.35														
25.5	-20.85														
26.0	-21.35							SPT	26.0	32	50 Blows for 8Cm				
26.5	-21.85														
27.0	-22.35														
27.5	-22.85	SPT	27.5	39	50 Blows for 7Cm										
28.0	-23.35														
28.5	-23.85														
29.0	-24.35	SPT	29.0	40	50 Blows for 6Cm										
29.5	-24.85														
30.0	-25.35	SPT	30.0	50 Blows for 10Cm											

**Borehole Termination Depth (m) 30.0**

EGL- Existing Ground Level  
R.L- Reduced Level  
GWT- Ground Water Table

SPT- Standard Penetration Test  
UDS- Undisturbed Sample  
VST- Vane Shear Test

DS- Disturbed Sample  
CR- Core Recovery  
RQD- Rock Quality Designation

### BOREHOLE LOG

**Project No: MSGTPL/SI-3814/17-18**

**Project: Geotechnical Report on 2x800mw Uppur STPP (Unit-1 & 2) Ramanathapuram District**

Location	Transformer Yard Area
E.G.L.(m)	4.8
Method of Boring	Rotary
Co-ordinates	210S, 73W

<b>Borehole No</b>	<b>BH-30</b>
Depth of G.W.T (m)	(-) 1.70m
Date of Commencement	18-Sep-2017
Date of Completion	19-Sep-2017
Dia of Bore (mm)	150
Termination Depth (m)	30.00

Depth below EGL (m)	Depth w.r.t.RL (m)	Layer Thickness (m)	Description	Symbol	IS-Classification	Type of Sample	Test Depth (m)	SPT N Value, Each division = 15 Cm					SPT- N- Value	Remarks		
0.0	4.80		Medium Stiff to Stiff Brownish CLAY		CH											
0.5	4.30															
1.0	3.80					SPT	1.0	3	3	4	7					
1.5	3.30															
2.0	2.80					SPT	2.0	UDS Collected								
2.5	2.30															
3.0	1.80					SPT	3.0	5	7	7	14					
3.5	1.30															
4.0	0.80		SPT	4.0	UDS Collected											
4.5	0.30		Brownish silty Fine to Medium SAND		SC-SM											
5.0	-0.20					SPT	5.0	6	9	12	21					
5.5	-0.70															
6.0	-1.20															
6.5	-1.70					SPT	6.5	8	14	16	30					
7.0	-2.20															
7.5	-2.70															
8.0	-3.20		SPT	8.0	9	15	18	33								
8.5	-3.70		Hard Light Greyish Sandy CLAY		CH											
9.0	-4.20															
9.5	-4.70					SPT	9.5	8	14	20	34					
10.0	-5.20		Very Dense Brownish Medium SAND		SM											
10.5	-5.70															
11.0	-6.20					SPT	11.0	12	21	29	50					
11.5	-6.70															
12.0	-7.20															
12.5	-7.70		SPT	12.5	13	23	30	53								
13.0	-8.20		Hard Brownish CLAY		CH											
13.5	-8.70															
14.0	-9.20					SPT	14.0	16	29	39	68					
14.5	-9.70															
15.0			<b>Borehole Termination Depth (m) 30.0</b>													

EGL- Existing Ground Level  
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UDS- Undisturbed Sample  
VST- Vane Shear Test

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RQD- Rock Quality Designation

### BOREHOLE LOG

**Project No: MSGTPL/SI-3814/17-18**  
**Project: Geotechnical Report on 2x800mw Uppur STPP (Unit-1 & 2) Ramanathapuram District**

Location	Transformer Yard Area
E.G.L(m)	4.8
Method of Boring	Rotary
Co-ordinates	210S, 73W

<b>Borehole No</b>	<b>BH-30</b>
Depth of G.W.T (m)	(-) 1.70m
Date of Commencement	18-Sep-2017
Date of Completion	19-Sep-2017
Dia of Bore (mm)	150
Termination Depth (m)	30.00

Depth below EGL (m)	Depth w.r.t.RL (m)	Layer Thickness (m)	Description	Symbol	IS-Classification	Type of Sample	Test Depth (m)	SPT N Value, Each division = 15 Cm				SPT- N- Value	Remarks
15.0	-10.20	0.5	Hard Brownish CLAY		CH	SPT	15.5	17	36	40	<b>76</b>		
15.5	-10.70												
16.0	-11.20	1.5	Very Dense Light Greyish Fine Sand with Limestone		SM	SPT	17.0	19	33	41	<b>74</b>		
16.5	-11.70												
17.0	-12.20												
17.5	-12.70	3.0	Hard Light Greyish Sandy CLAY with Limestone		CH	SPT	18.5	20	40	51	<b>91</b>		
18.0	-13.20												
18.5	-13.70												
19.0	-14.20												
19.5	-14.70												
20.0	-15.20					SPT	20.0	22	46	53	<b>99</b>		
20.5	-15.70	3.0	Hard Brownish Sandy CLAY		CH	SPT	21.5	24	48	50 Blows for 11Cm			
21.0	-16.20												
21.5	-16.70												
22.0	-17.20												
22.5	-17.70												
23.0	-18.20					SPT	23.0	46	50 Blows for 10Cm				
23.5	-18.70	1.5	Hard Brownish Sandy Clay with Limestone		SC-CI	SPT	24.5	28	50	50 Blows for 10Cm			
24.0	-19.20												
24.5	-19.70												
25.0	-20.20	4.5	Hard Brownish CLAY		CH	SPT	26.0	39	50 Blows for 12Cm				
25.5	-20.70												
26.0	-21.20												
26.5	-21.70												
27.0	-22.20												
27.5	-22.70												
28.0	-23.20												
28.5	-23.70												
29.0	-24.20					SPT	29.0	44	50 Blows for 9Cm				
29.5	-24.70	1.0	Hard Brownish Silty Medium SAND		SC	SPT	30.0	46	50 Blows for 7Cm				
30.0	-25.20												

**Borehole Termination Depth (m) 30.0**

EGL- Existing Ground Level	SPT- Standard Penetration Test	DS- Disturbed Sample
R.L- Reduced Level	UDS- Undisturbed Sample	CR- Core Recovery
GWT- Ground Water Table	VST- Vane Shear Test	RQD- Rock Quality Designation

### BOREHOLE LOG

**Project No: MSGTPL/SI-3814/17-18**

**Project: Geotechnical Report on 2x800mw Units Thermal power Station at Uppur, Ramanathapuram District.**

Location	Transformer Yard Area
EGL (m)	4.43
Method of Boring	Rotary
Co-ordinates	65S, 109W

<b>Borehole No</b>	<b>BH-50</b>
Depth of G.W.T (m)	(-) 1.4m
Date of Commencement	22-Sep-2017
Date of Completion	24-Sep-2017
Dia of Bore (mm)	150
Termination Depth (m)	30.00

Depth below EGL (m)	Depth w.r.t R.L	Layer Thickness (m)	Description	Symbol	IS-Classification	Type of Sample	Test Depth (m)	SPT N Value, Each division = 15 Cm				SPT- N- Value	Remarks	
0.0	4.4	4.0	Stiff to Very Stiff Brownish CLAY		CH									
0.5	3.9													
1.0	3.4													
1.5	2.9													
2.0	2.4													
2.5	1.9													
3.0	1.4													
3.5	0.9													
4.0	0.4	2.5	Medium Dense to Very Dense Brownish Silty Medium SAND		SM									
4.5	-0.1													
5.0	-0.6													
5.5	-1.1													
6.0	-1.6													
6.5	-2.1	4.5	Dense to Very Dense Brownish Clayey SAND		SC									
7.0	-2.6													
7.5	-3.1													
8.0	-3.6													
8.5	-4.1													
9.0	-4.6													
9.5	-5.1	1.5	Dense Brownish Fine SAND		SM									
10.0	-5.6													
10.5	-6.1													
11.0	-6.6	1.5	Dense Brownish Silty Fine SAND		SM									
11.5	-7.1													
12.0	-7.6													
12.5	-8.1													
13.0	-8.6	1.5	Dense Brownish Silty Fine SAND		SM									
13.5	-9.1													
14.0	-9.6													
14.5														
15.0														
<b>Borehole Termination Depth (m) 30.0</b>														

EGL- Existing Ground Level  
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GWT- Ground Water Table

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UDS- Undisturbed Sample  
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### BOREHOLE LOG

**Project No: MSGTPL/SI-3814/17-18**  
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EGL (m)	4.43
Method of Boring	Rotary
Co-ordinates	65S, 109W

<b>Borehole No</b>	<b>BH-50</b>
Depth of G.W.T (m)	(-) 1.4m
Date of Commencement	22-Sep-2017
Date of Completion	24-Sep-2017
Dia of Bore (mm)	150
Termination Depth (m)	30.00

Depth below EGL (m)	Depth w.r.t RL	Layer Thickness (m)	Description	Symbol	IS-Classification	Type of Sample	Test Depth (m)	SPT N Value, Each division = 15 Cm				SPT- N- Value	Remarks
15.0	-10.6	2.0	Dense Brownish Silty Fine SAND		SM	SPT	15.5	11	20	25	<b>45</b>		
15.5	-11.1												
16.0	-11.6												
16.5	-12.1												
17.0	-12.6												
17.5	-13.1	3.0	Hard Light Greyish Sandy Clay with Limestone		CH	SPT	18.5	16	50 Blows for 13Cm				
18.0	-13.6												
18.5	-14.1												
19.0	-14.6												
19.5	-15.1												
20.0	-15.6									<b>86</b>			
20.5	-16.1	10.0	Very Dense Brownish Clayey SAND		SC	SPT	21.5	20	50 Blows for 11Cm				
21.0	-16.6												
21.5	-17.1												
22.0	-17.6												
22.5	-18.1												
23.0	-18.6												
23.5	-19.1												
24.0	-19.6												
24.5	-20.1												
25.0	-20.6												
25.5	-21.1												
26.0	-21.6												
26.5	-22.1												
27.0	-22.6												
27.5	-23.1												
28.0	-23.6												
28.5	-24.1												
29.0	-24.6												
29.5	-40.1												
30.0	-40.6												

**Borehole Termination Depth (m) 30.0**

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**Project: Geotechnical Report on 2x800mw Units Thermal power Station at Uppur, Ramanathapuram District.**

Location	Transformer Yard Area
EGL (m)	4.61
Method of Boring	Rotary
Co-ordinates	203S, 109W

<b>Borehole No</b>	<b>BH-51</b>
Depth of G.W.T (m)	(-) 1.95m
Date of Commencement	9-Sep-2017
Date of Completion	11-Sep-2017
Dia of Bore (mm)	150
Termination Depth (m)	30.00

Depth below EGL (m)	Depth w.r.t R.L	Layer Thickness (m)	Description	Symbol	IS-Classification	Type of Sample	Test Depth (m)	SPT N Value, Each division = 15 Cm				SPT- N- Value	Remarks					
0.0	4.6	3.0	Medium Stiff Brownish Silty Sandy CLAY		CH	SPT	1.0	2	3	3	<b>6</b>							
0.5	4.1																	
1.0	3.6																	
1.5	3.1																	
2.0	2.6									UDS Collected								
2.5	2.1																	
3.0	1.6				SPT	3.0	3	3	5	<b>8</b>								
3.5	1.1	1.0	Medium Dense Brownish Silty Clayey SAND		SC	SPT	4.0	4	5			7	<b>12</b>					
4.0	0.6																	
4.5	0.1	4.0	Very Stiff to Hard Brownish CLAY		CH	SPT	5.0	5	8			11	<b>19</b>					
5.0	-0.4																	
5.5	-0.9																	
6.0	-1.4																	
6.5	-1.9									SPT	6.5	11			14	18	<b>32</b>	
7.0	-2.4																	
7.5	-2.9																	
8.0	-3.4				SPT	8.0	14	19	22	<b>41</b>								
8.5	-3.9																	
9.0	-4.4																	
9.5	-4.9				SPT	9.5	16	19	28			<b>47</b>						
10.0	-5.4																	
10.5	-5.9	4.5	Dense to Very Dense Brownish Sity Clayey SAND		SM	SPT	11.0	18	23					33	<b>56</b>			
11.0	-6.4																	
11.5	-6.9																	
12.0	-7.4																	
12.5	-7.9									SPT	12.5	22	27	36			<b>63</b>	
13.0	-8.4																	
13.5	-8.9	1.5	Hard Brownish CLAY		CH	SPT	14.0	23	38	43	<b>81</b>							
14.0	-9.4																	
14.5																		
15.0																		
<b>Borehole Termination Depth (m) 30.0</b>																		

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GWT- Ground Water Table

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UDS- Undisturbed Sample  
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### BOREHOLE LOG

**Project No: MSGTPL/SI-3814/17-18**  
**Project: Geotechnical Report on 2x800mw Units Thermal power Station at Uppur, Ramanathapuram District.**

Location	Transformer Yard Area
EGL (m)	4.61
Method of Boring	Rotary
Co-ordinates	203S, 109W

<b>Borehole No</b>	<b>BH-51</b>
Depth of G.W.T (m)	(-) 1.95m
Date of Commencement	9-Sep-2017
Date of Completion	11-Sep-2017
Dia of Bore (mm)	150
Termination Depth (m)	30.00

Depth below EGL (m)	Depth w.r.t RL	Layer Thickness (m)	Description	Symbol	IS-Classification	Type of Sample	Test Depth (m)	SPT N Value, Each division = 15 Cm				SPT- N- Value	Remarks
15.0	-10.4	0.5	Hard Brownish silty CLAY		CH								
15.5	-10.9					SPT	15.5	19	25	37	<b>62</b>		
16.0	-11.4	11.0	Very Dense Brownish Silty Clayey SAND		SC								
16.5	-11.9												
17.0	-12.4					SPT	17.0	21	29	41	<b>70</b>		
17.5	-12.9												
18.0	-13.4												
18.5	-13.9					SPT	18.5	24	39	50 Blows for 11Cm			
19.0	-14.4												
19.5	-14.9												
20.0	-15.4					SPT	20.0	29	50 Blows for 11Cm				
20.5	-15.9												
21.0	-16.4												
21.5	-16.9					SPT	21.5	21	50 Blows for 10Cm				
22.0	-17.4												
22.5	-17.9												
23.0	-18.4					SPT	23.0	26	50 Blows for 12Cm				
23.5	-18.9												
24.0	-19.4												
24.5	-19.9					SPT	24.5	31	50 Blows for 11Cm				
25.0	-20.4												
25.5	-20.9												
26.0	-21.4	SPT	26.0	28	44	59 Blows for 9Cm							
26.5	-21.9												
27.0	-22.4												
27.5	-22.9	SPT	27.5	36	56 Blows for 10Cm								
28.0	-23.4												
28.5	-23.9												
29.0	-24.4	SPT	29.0	22	44	59 Blows for 7Cm							
29.5	-24.9												
30.0	-25.4	SPT	30.0	31	56 Blows for 8Cm								

**Borehole Termination Depth (m) 30.0**

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R.L- Reduced Level  
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