

arshal Geo Test Laboratory

For Testing of Civil Engineering Materials

ISO 9001:2015



Certified By :

Standardisation Testing
& Quality Certification

Directorate

UDYAM-CG-14-0000899

TEST - REPORT

Date:- 18/01/2022

T.R. No. / MGTL / TRR / R-1401224/001

To,
The Executive Engineer (Civil)
HQ. Dn., C.S.P.T.C.L
Raipur (C.G.)

Subject :- Test result of Soil Sample for the proposed construction work at 220/132 KV S/s Rajim Distt. - Gariyaband (C.G.)

Your Ref.:- Letter No.:- E.E.C/HQ.Dn./Ryp/3910 Raipur, Dt.:- 13/01/2022
Sample ID Mark :- Pit No. -1, Depth- 3.00 m.

Dear Sir,
Vide subject and reference cited above, the test results report is as follows: -

Mechanical Testing
Soil and Rock - Clays & Soils

PARTICULAR OF SAMPLE (S)

Nature:- Undisturbed Soil Sample
Sample No.(S) Details:- One Sample
Dt. of Receipt in the Lab :-14/01/2022

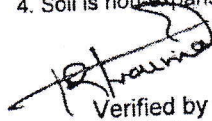
Testing Dt. :- 17/01/2022


LAB JOB NO. :- R-2201144/001

TEST RESULT

S. No.	Parameters	Test Method	Result	Unit
1	Type of Soil	As per IS 2720 Part XI (RA-2016) (Unconsolidated - Undrained) Triaxial Test	Clayey Sand	
2	Depth of Collection of Sample		3.00 m.	
3	Bulk Density		2.05	t/m ³
4	Safe Bearing Capacity		18.89	t/m ²

- Remark:-
1. SBC is calculated based on Shear Failure Criteria.
 2. Soil is susceptible Variation of GWT.
 3. SBC has been computed taking 1m x 1m footing size.
 4. Soil is non-expansive in nature.


Verified by
Himanshu R Varma
(Geotechnical Engineer)

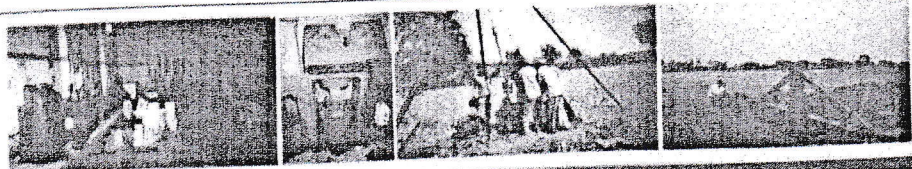

Authorised Signatory
Arun Bhawe
(C.E.O.)

Note:-

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- 5 This report pertains to only sample submitted by client & Tested at Raipur Laboratory.

*****END OF REPORT*****

P.S. City Road, Near Kushalpur Chowk,
Changorabhata, Ring Road No. -01,
Raipur 492013 (C.G.) , Ph. : 7879798900
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MGTL

Marshal Geo Test Laboratory

For Testing of Civil Engineering Materials

SHEET 1 OF 2

Date:-18/01/2022

T. R. No. / MGTL / TRR / R-1401224/002

To,
The Executive Engineer (Civil)
HQ. Dn., C.S.P.T.C.L
Raipur (C.G.)

Subject :- Test result of Soil Sample for the proposed construction work at 220/132 KV S/s Rajim Distt. - Gariyaband (C.G.).

Your Ref.: Letter No.- E.E.C/HQ.Dn./Ryp/3910 Raipur, Dt.- 13/01/2022

Sample ID Mark :- Pit No.-1, Depth - 3.00 m.

Dear Sir,

Vide subject and reference cited above, the test results report is as follows: -

Mechanical Testing

Soil and Rock - Clays & Soils

PARTICULAR OF SAMPLES (S) :-

Nature:- Soil Sample (UDS)

Sample No.(S) Details:- One Sample

Packing/Container :- Poly Bags

Dt. of Receipt in the Lab:- 14/01/2022

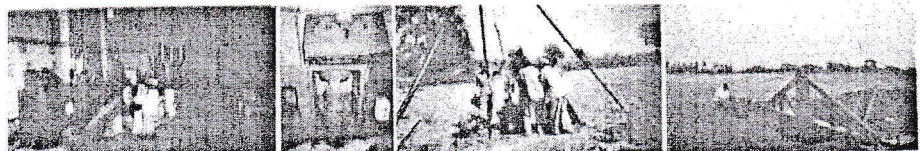
Testing Dt. :- 17/01/2022

LAB JOB NO.- R-2201144/002		TEST RESULTS		
S. No.	Name of Test	Test Method	Results	Unit
A)	Soil Sample (UDS)			
1	LL, PL & PI	As per IS : 2720 (Part V)- 1985 (RA-2015)	As per Table 1 Below	%
2	Soil Classification	As per IS : 1498-1970 (RA-2016)	As per Table 1 Below	
3	Grain Size Analysis	As per IS : 2720 (Part IV)-1985 (RA-2015)	As per table 2 below	%

Table -1

LAB JOB NO.- R-2201144/002		TEST RESULTS			
Sr. No.	% of Fines	Soil Classification	LL	PL	PI
			%	%	%
1	55.60	Clayey Sand	45.00	16.36	28.64

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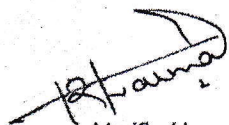


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SHEET 2 OF 2

Table -2

LAB JOB NO.- R-2201144/002		TEST RESULTS			
Sr. No.	SIEVE SIZE (MM)	WT. RET.	% OF WT.RET	CUM.WT. RET.	PERCENTAGE FINER (%)
1	10	0.0	0.00	0.00	100.00
2	4.75	0.0	0.00	0.00	100.00
3	2	5.0	1.00	1.00	99.00
4	0.6	120.0	24.00	25.00	75.00
5	0.425	18.0	3.60	28.60	71.40
6	0.75	79.0	15.80	44.40	55.60
Gravel		Coarse Sand	Medium Sand	Fine Sand	Silt & Clay
0.00		1.00	27.60	15.80	55.60


Verified by
Himanshu R. Varma
(Geotechnical Engineer)

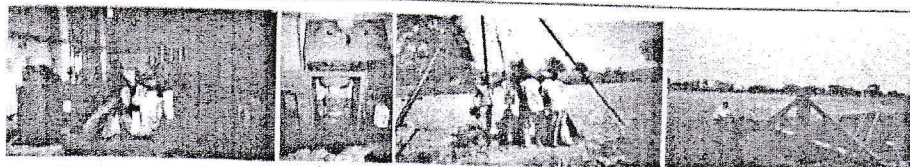

Authorised Signatory
Arun Bhawe
(C.E.O.)

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& Quality Certification
Directorate
UDYAM-CG-14-000063

TEST - REPORT

T.R. No. / MGTL / TRR / R-1401224/003

Date:- 18/01/2022

To,
The Executive Engineer (Civil)
HQ. Dn., C.S.P.T.C.L
Raipur (C.G.)

Subject :- Test result of Soil Sample for the proposed construction work at 220/132 KV S/s Rajim Distt. - Gariyaband (C.G.).

Your Ref.:- Letter No.:- E.E.C/HQ.Dn./Ryp/3910 Raipur, Dt.:- 13/01/2022
Sample ID Mark :- Pit No. -2, Depth- 2.50 m.

Dear Sir,
Vide subject and reference cited above, the test results report is as follows: -
Mechanical Testing
Soil and Rock - Clays & Soils

PARTICULAR OF SAMPLE (S)

Nature:- Undisturbed Soil Sample
Sample No.(S) Details:- One Sample
Dt. of Receipt in the Lab :-14/01/2022

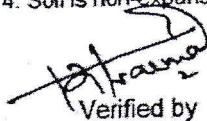
Testing Dt. :- 17/01/2022

LAB JOB NO. :- R-2201144/003

TEST RESULT

S. No.	Parameters	Test Method	Result	Unit
1	Type of Soil	As per IS 2720 Part XI (RA-2016) (Unconsolidated - Undrained) Triaxial Test	Clayey Sand	
2	Depth of Collection of Sample		2.50 m.	
3	Bulk Density		1.98	t/m ³
4	Safe Bearing Capacity		14.11	t/m ²

- Remark:-
1. SBC is calculated based on Shear Failure Criteria.
 2. Soil is susceptible Variation of GWT.
 3. SBC has been computed taking 1m x 1m footing size.
 4. Soil is non-expansive in nature.


Verified by
Himanshu R Varma
(Geotechnical Engineer)


Authorised Signatory
Arun Bhawe
(C.E.O.)

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Website : marshalgeoraiipur.com



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& Quality Certification
Directorate
UDYAM-CG-14-001

SHEET 1 OF 2

Date:-18/01/2022

T. R. No. / MGTL / TRR / R-1401224/004

To,
The Executive Engineer (Civil)
HQ. Dn., C.S.P.T.C.L
Raipur (C.G.)

Subject :- Test result of Soil Sample for the proposed construction work at 220/132 KV S/s Rajim Distt.- Gariyaband (C.G.)

Your Ref: Letter No.:- E.E.C/HQ.Dn./Ryp/3910 Raipur, Dt.:- 13/01/2022

Sample ID Mark :- Pit No.-2, Depth - 2.50 m.

Dear Sir,
Vide subject and reference cited above, the test results report is as follows: -

Mechanical Testing
Soil and Rock - Clays & Soils

PARTICULAR OF SAMPLES (S) :-

Nature:- Soil Sample (UDS)
Sample No.(S) Details:- One Sample
Packing/Container :- Poly Bags
Dt. of Receipt in the Lab:- 14/01/2022

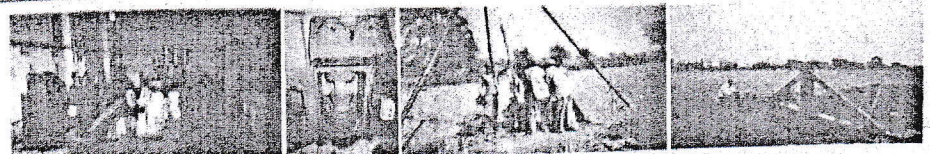
Testing Dt. :- 17/01/2022

LAB JOB NO.- R-2201144/004		TEST RESULTS		
S. No.	Name of Test	Test Method	Results	Unit
A)	<u>Soil Sample (UDS)</u>			
1	LL, PL & PI	As per IS : 2720 (Part V)- 1985 (RA-2015)	As per Table 1 Below	%
2	Soil Classification	As per IS : 1498-1970 (RA-2016)	As per Table 1 Below	
3	Grain Size Analysis	As per IS : 2720 (Part IV)-1985 (RA-2015)	As per table 2 below	%

Table -1

LAB JOB NO.- R-2201144/004		TEST RESULTS				
Sr. No.	% of Fines	Soil Classification	LL	PL	PI	
			%	%	%	
1	41.00	Clayey Sand	44.00	16.12	27.88	

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SHEET 2 OF 2

Table -2

LAB JOB NO.- R-2201144/004		TEST RESULTS			
Sr. No.	SIEVE SIZE (MM)	WT. RET.	% OF WT.RET	CUM.WT. RET.	PERCENTAGE FINER (%)
1	10	0.0	0.00	0.00	100.00
2	4.75	4.0	0.80	0.80	99.20
3	2	18.0	3.60	4.40	95.60
4	0.6	165.0	33.00	37.40	62.60
5	0.425	18.0	3.60	41.00	59.00
6	0.75	90.0	18.00	59.00	41.00
Gravel		Coarse Sand	Medium Sand	Fine Sand	Silt & Clay
0.80		3.60	36.60	18.00	41.00

Verified by
Himanshu R. Varma
(Geotechnical Engineer)

Authorised Signatory
Arun Bhawe
(C.E.O.)

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UDYAM-CG-14-001

TEST - REPORT

T.R. No. / MGTL / TRR / R-1401224/006

Date:- 18/01/2022

To,
The Executive Engineer (Civil)
HQ. Dn., C.S.P.T.C.I.
Raipur (C.G.)

Subject :- Test result of Soil Sample for the proposed construction work at 220/132 KV S/s Rajm Distt. - Gariyaband (C.G.).

Your Ref.:- Letter No.:- E.E.C/HQ.Dn./Ryp/3010 Raipur, Dt.:- 13/01/2022
Sample ID Mark :- Pit No. -3, Depth- 1.50 m.

Dear Sir,
Vide subject and reference cited above, the test results report is as follows: -

Mechanical Testing
Soil and Rock - Clays & Solis

PARTICULAR OF SAMPLE (S)

Nature:- Undisturbed Soil Sample

Sample No.(S) Details:- One Sample

Dt. of Receipt in the Lab :-14/01/2022

Testing Dt. :- 17/01/2022

LAB JOB NO. :- R-2201144/006		TEST RESULT		
S. No.	Parameters	Test Method	Result	Unit
1	Type of Soil	As per IS 2720 Part XI (RA-2016) (Unconsolidated - Undrained) Triaxial Test	Clay of medium Plasticity (CI)	
2	Depth of Collection of Sample		1.50 m.	
3	Bulk Density		1.97	t/m ³
4	Safe Bearing Capacity		9.79	t/m ²

Remark:- 1. SBC is calculated based on Shear Failure Criteria.
2. Soil is susceptible Variation of GWT.
3. SBC has been computed taking 1m x 1m footing size.
4. Soil is expansive in nature.

Verified by
Himanshu R Varma
(Geotechnical Engineer)

Authorised Signatory
Arun Bhawe
(C.E.O.)

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UDYAM-CG-14-000009

SHEET 1 OF 2

T. R. No. / MGTL / TRR / R-1401224/006

Date:-18/01/2022

To,
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HQ. Dn., C.S.P.T.C.L
Raipur (C.G.)

Subject :- Test result of Soil Sample for the proposed construction work at 220/132 KV S/s Rajim Distt.- Gariyaband (C.G.).

Your Ref.: Letter No.: - E.E.C/HQ.Dn./Ryp/3910 Raipur, Dt.: - 13/01/2022

Sample ID Mark :- Pit No.-3, Depth- 1.50 m.

Dear Sir,

Vide subject and reference cited above, the test results report is as follows: -

Mechanical Testing

Soil and Rock - Clays & Soils

PARTICULAR OF SAMPLES (S) :-

Nature:- Soil Sample (UDS)

Sample No.(S) Details:- One Sample

Packing/Container :- Poly Bags

Dt. of Receipt in the Lab:- 14/01/2022

Testing Dt. :- 17/01/2022

LAB JOB NO.- R-2201144/006

TEST RESULTS

S. No.	Name of Test	Test Method	Results	Unit
A)	<u>Soil Sample (UDS)</u>			
1	LL, PL & PI	As per IS : 2720 (Part V)- 1985 (RA-2015)	As per Table 1 Below	%
2	Soil Classification	As per IS : 1498-1970 (RA-2016)	As per Table 1 Below	
3	Grain Size Analysis	As per IS : 2720 (Part IV)-1985 (RA-2015)	As per table 2 below	%

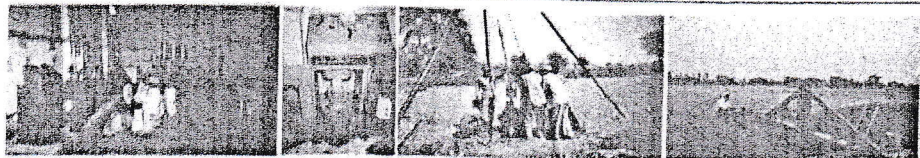
Table -1

LAB JOB NO.- R-2201144/006

TEST RESULTS

Sr. No.	% of Fines	Soil Classification	LL	PL	PI		
			%	%	%		
1	67.00	Clay of medium Plasticity (CI)	45.00	21.26	23.74		

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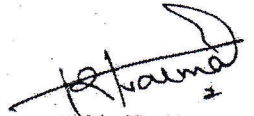


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SHEET 2 OF 2

Table -2

LAB JOB NO.- R-2201144/006				TEST RESULTS	
Sr. No.	SIEVE SIZE (MM)	WT. RET.	% OF WT.RET	CUM.WT. RET.	PERCENTAGE FINER (%)
1	10	0.0	0.00	0.00	100.00
2	4.75	9.0	1.80	1.80	98.20
3	2	8.0	1.60	3.40	96.60
4	0.6	52.0	10.40	13.80	86.20
5	0.425	9.0	1.80	15.60	84.40
6	0.75	87.0	17.40	33.00	67.00
Gravel		Coarse Sand		Medium Sand	
1.80		1.60		12.20	
				Fine Sand	
				17.40	
				Silt & Clay	
				67.00	


 Verified by
 Himanshu R. Varma
 (Geotechnical Engineer)


 Authorised Signatory
 Arun Bhawe
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