

**GOVERNMENT OF GOA
QUALITY CONTROL LABORATORY
WATER RESOURCES DEPARTMENT**

Test Report No.: WRD/QC/F.6-2/Cube -T : 108,109 ,114,115 ,120, 122,123,126,127,131,132,/ Lab / **94** / 2020 - 2021 Dated:- 10/ 07/ 2020

135,136,138,139,145,146,150,151,154,155,156,158,159,160 & 165

Laboratory : Bicholim -Goa / Sub Division V (QC)/WRD/ Bicholim -Goa.

Name of Work: - Construction of Barrage and up gradation of Raw water pumping station at Ganjem on Mhadei River for Augmentation of Raw water for Opa water works. Part III : Construction of Bank protection wall for upstream of barrage at Ganjem.

Ref. to Requisition No.: MI/WDI/WRD/SDII /F.62/59/2020-21 Dated :- 22-06-2020

Qty. Recived. : 26 Sets of cubes Date of Receipt: -23 /06/2020. Tested on:- 25/06/2020 TO 07/07/2020 as per due dates. Ref to CPWD :2009, Vol. I

Sample: PCC 1 : 1.5 : 3 Mix O.S No. : 4003,4004,4008,4009,4013,4015,4016,4019,4020,4023,4024,4027,4028,4030,4031,4036,4037,4040,

4041,4044,4045,4046,4048,4049,4050 & 4055/SS. Lab. Sample No.: 9267 To 9292 Tested By: - Mrs. S.B. Naik Shirodkar, J.E.

REPORT PAGE 01 OF 04

SR. NO.	DISCRIPTION OF SAMPLE	TESTED FOR	RESULTS		Max./Min.Value permissable	% above or below	REMARK
1	Cement concrete cube of mix 1:1.5:3 , cast on 28/05/2020. PCC for wall V- Ganjem U/s of road bridge LHS wall -bed. Ch. 0 to 73 mts.	28th day compressive strength	294.48	Kg/Cm ²	265.00 Kg/Cm ²	15.69	Represents Qty. 20.00 Cum.
			308.08	Kg/Cm ²			
			317.14	Kg/Cm ²			
		Average	306.57	Kg/Cm²			
2	Cement concrete cube of mix 1:1.5:3 , cast on 28/05/2020. PCC for wall V- Ganjem U/s of road bridge LHS wall -bed. Ch. 0 to 73 mts.	28th day compressive strength	283.16	Kg/Cm ²	265.00 Kg/Cm ²	10.27	Represents Qty. 21.00 Cum.
			303.55	Kg/Cm ²			
			289.95	Kg/Cm ²			
		Average	292.22	Kg/Cm²			
3	Cement concrete cube of mix 1:1.5:3 , cast on 29/05/2020. PCC for wall V- Ganjem U/s of road bridge LHS wall -bed. Ch. 0 to 73 mts.	28th day compressive strength	299.01	Kg/Cm ²	265.00 Kg/Cm ²	11.41	Represents Qty. 20.50 Cum.
			265.04	Kg/Cm ²			
			321.67	Kg/Cm ²			
		Average	295.24	Kg/Cm²			
4	Cement concrete cube of mix 1:1.5:3 , cast on 29/05/2020. PCC for wall V- Ganjem U/s of road bridge LHS wall -bed. Ch. 0 to 73 mts.	28th day compressive strength	303.55	Kg/Cm ²	265.00 Kg/Cm ²	9.70	Represents Qty. 19.00 Cum.
			276.36	Kg/Cm ²			
			292.22	Kg/Cm ²			
		Average	290.71	Kg/Cm²			
5	Cement concrete cube of mix 1:1.5:3 , cast on 30/05/2020. PCC for wall V- Ganjem U/s of road bridge LHS wall -bed. Ch. 0 to 73 mts.	28th day compressive strength	326.20	Kg/Cm ²	265.00 Kg/Cm ²	22.24	Represents Qty. 18.00 Cum.
			342.05	Kg/Cm ²			
			303.55	Kg/Cm ²			
		Average	323.93	Kg/Cm²			
6	Cement concrete cube of mix 1:1.5:3 , cast on 31/05/2020. PCC for wall VI- Ganjem U/s of road bridge RHS wall -bed. Ch. 0 to 78 mts.	28th day compressive strength	335.26	Kg/Cm ²	265.00 Kg/Cm ²	17.39	Represents Qty. 19.00 Cum.
			317.14	Kg/Cm ²			
			280.89	Kg/Cm ²			
		Average	311.10	Kg/Cm²			

Junior Engineer

Assistant Engineer

REPORT PAGE 02 OF 04

SR.NO.	DISCRIPTION OF SAMPLE	TESTED FOR	RESULTS		Max./Min.Value permissable	% above or below	REMARK
7	Cement concrete cube of mix 1:1.5:3 , cast on 31/05/2020. PCC for wall VI- Ganjem U/s of road bridge RHS wall -bed. Ch. 0 to 78 mts.	28th day compressive strength	299.01	Kg/Cm ²	265.00 Kg/Cm ²	16.82	Represents Qty. 22.00 Cum.
			294.48	Kg/Cm ²			
			335.26	Kg/Cm ²			
			Average	309.59			
8	Cement concrete cube of mix 1:1.5:3 , cast on 01/06/2020. PCC for wall VI- Ganjem U/s of road bridge RHS wall -bed. Ch. 0 to 78 mts.	28th day compressive strength	294.48	Kg/Cm ²	265.00 Kg/Cm ²	10.84	Represents Qty. 21.50 Cum.
			283.16	Kg/Cm ²			
			303.55	Kg/Cm ²			
			Average	293.73			
9	Cement concrete cube of mix 1:1.5:3 , cast on 01/06/2020. PCC for wall VI- Ganjem U/s of road bridge RHS wall -bed. Ch. 0 to 78 mts.	28th day compressive strength	328.46	Kg/Cm ²	265.00 Kg/Cm ²	8.56	Represents Qty. 23.00 Cum.
			271.83	Kg/Cm ²			
			262.77	Kg/Cm ²			
			Average	287.69			
10	Cement concrete cube of mix 1:1.5:3 , cast on 02/06/2020. PCC for wall VI- Ganjem U/s of road bridge RHS wall -bed. Ch. 0 to 78 mts.	28th day compressive strength	317.14	Kg/Cm ²	265.00 Kg/Cm ²	17.96	Represents Qty. 24.50 Cum.
			294.48	Kg/Cm ²			
			326.20	Kg/Cm ²			
			Average	312.61			
11	Cement concrete cube of mix 1:1.5:3 , cast on 02/06/2020. PCC for wall VI- Ganjem U/s of road bridge RHS wall -bed. Ch. 0 to 78 mts.	28th day compressive strength	292.22	Kg/Cm ²	265.00 Kg/Cm ²	14.83	Represents Qty. 21.00 Cum.
			317.14	Kg/Cm ²			
			303.55	Kg/Cm ²			
			Average	304.30			
12	Cement concrete cube of mix 1:1.5:3 , cast on 03/06/2020. PCC for wall VI- Ganjem U/s of road bridge LHS wall -step 1. Ch. 0 to 73 mts.	28th day compressive strength	265.04	Kg/Cm ²	265.00 Kg/Cm ²	9.42	Represents Qty. 19.50 Cum.
			326.20	Kg/Cm ²			
			278.63	Kg/Cm ²			
			Average	289.95			
13	Cement concrete cube of mix 1:1.5:3 , cast on 03/06/2020. PCC for wall VI- Ganjem U/s of road bridge LHS wall -step 1. Ch. 0 to 73 mts.	28th day compressive strength	253.71	Kg/Cm ²	265.00 Kg/Cm ²	12.27	Represents Qty. 24.00 Cum.
			308.08	Kg/Cm ²			
			330.73	Kg/Cm ²			
			Average	297.50			
14	Cement concrete cube of mix 1:1.5:3 , cast on 04/06/2020. PCC for wall VI- Ganjem U/s of road bridge LHS wall -step 1. Ch. 0 to 73 mts.	28th day compressive strength	280.89	Kg/Cm ²	265.00 Kg/Cm ²	11.70	Represents Qty. 23.50 Cum.
			317.14	Kg/Cm ²			
			289.95	Kg/Cm ²			
			Average	295.99			
15	Cement concrete cube of mix 1:1.5:3 , cast on 04/06/2020. PCC for wall VI- Ganjem U/s of road bridge LHS wall -step 1. Ch. 0 to 73 mts.	28th day compressive strength	296.75	Kg/Cm ²	265.00 Kg/Cm ²	4.57	Represents Qty. 21.50 Cum.
			258.24	Kg/Cm ²			
			276.36	Kg/Cm ²			
			Average	277.12			

Junior Engineer

Assistant Engineer

SR.NO.	DISCRIPTION OF SAMPLE	TESTED FOR	RESULTS		Max./Min.Value permissible	% above or below	REMARK
16	Cement concrete cube of mix 1:1.5:3 , cast on 05/06/2020. PCC for wall VI- Ganjem U/s of road bridge LHS wall -step 1. Ch. 0 to 73 mts.	28th day compressive strength	271.83	Kg/Cm ²	265.00 Kg/Cm ²	4.00	Represents Qty. 22.00 Cum.
			287.69	Kg/Cm ²			
			267.30	Kg/Cm ²			
			Average	275.61			
17	Cement concrete cube of mix 1:1.5:3 , cast on 05/06/2020. PCC for wall VI- Ganjem U/s of road bridge LHS wall -step 1. Ch. 0 to 73 mts.	28th day compressive strength	287.69	Kg/Cm ²	265.00 Kg/Cm ²	12.55	Represents Qty. 23.00 Cum.
			335.26	Kg/Cm ²			
			271.83	Kg/Cm ²			
			Average	298.26			
18	Cement concrete cube of mix 1:1.5:3 , cast on 06/06/2020. PCC for wall VII- Ganjem D/s of road bridge RHS wall -bed. Ch. 0 to 33 mts.	28th day compressive strength	305.81	Kg/Cm ²	265.00 Kg/Cm ²	14.83	Represents Qty. 26.00 Cum.
			283.16	Kg/Cm ²			
			323.93	Kg/Cm ²			
			Average	304.30			
19	Cement concrete cube of mix 1:1.5:3 , cast on 06/06/2020. PCC for wall VII- Ganjem D/s of road bridge RHS wall -bed. Ch. 0 to 33 mts.	28th day compressive strength	308.08	Kg/Cm ²	265.00 Kg/Cm ²	9.99	Represents Qty. 27.50 Cum.
			294.48	Kg/Cm ²			
			271.83	Kg/Cm ²			
			Average	291.46			
20	Cement concrete cube of mix 1:1.5:3 , cast on 07/06/2020. PCC for wall VII- Ganjem D/s of road bridge RHS wall -step 1. Ch. 0 to 33 mts.	28th day compressive strength	317.14	Kg/Cm ²	265.00 Kg/Cm ²	11.70	Represents Qty. 23.00 Cum.
			303.55	Kg/Cm ²			
			267.30	Kg/Cm ²			
			Average	295.99			
21	Cement concrete cube of mix 1:1.5:3 , cast on 07/06/2020. PCC for wall VII- Ganjem D/s of road bridge RHS wall -step 1. Ch. 0 to 33 mts.	28th day compressive strength	253.71	Kg/Cm ²	265.00 Kg/Cm ²	9.70	Represents Qty. 26.50 Cum.
			289.95	Kg/Cm ²			
			328.46	Kg/Cm ²			
			Average	290.71			
22	Cement concrete cube of mix 1:1.5:3 , cast on 07/06/2020. PCC for wall VII- Ganjem D/s of road bridge RHS wall -step 1. Ch. 0 to 33 mts.	28th day compressive strength	308.08	Kg/Cm ²	265.00 Kg/Cm ²	9.70	Represents Qty. 22.00 Cum.
			258.24	Kg/Cm ²			
			305.81	Kg/Cm ²			
			Average	290.71			
23	Cement concrete cube of mix 1:1.5:3 , cast on 08/06/2020. PCC for wall VII- Ganjem D/s of road bridge RHS wall -step 2. Ch. 0 to 33 mts.	28th day compressive strength	246.91	Kg/Cm ²	265.00 Kg/Cm ²	4.86	Represents Qty. 23.00 Cum.
			283.16	Kg/Cm ²			
			303.55	Kg/Cm ²			
			Average	277.87			
24	Cement concrete cube of mix 1:1.5:3 , cast on 08/06/2020. PCC for wall VII- Ganjem D/s of road bridge RHS wall -step 2. Ch. 0 to 33 mts.	28th day compressive strength	278.63	Kg/Cm ²	265.00 Kg/Cm ²	11.41	Represents Qty. 18.00 Cum.
			317.14	Kg/Cm ²			
			289.95	Kg/Cm ²			
			Average	295.24			

Junior Engineer

Assistant Engineer

REPORT PAGE 04 OF 04

SR.NO.	DISCRIPTION OF SAMPLE	TESTED FOR	RESULTS		Max./Min.Value permissable	% above or below	REMARK
25	Cement concrete cube of mix 1:1.5:3 , cast on 08/06/2020. PCC for wall VII- Ganjem D/s of road bridge RHS wall -step 2. Ch. 0 to 33 mts.	28th day compressive strength	310.34	Kg/Cm ²	265.00 Kg/Cm ²	11.70	Represents Qty. 19.00 Cum.
			305.81	Kg/Cm ²			
			271.83	Kg/Cm ²			
		Average	295.99	Kg/Cm²			
26	Cement concrete cube of mix 1:1.5:3 , cast on 09/06/2020. PCC for wall VII- Ganjem D/s of road bridge RHS wall -step 3. Ch. 0 to 33 mts.	28th day compressive strength	308.08	Kg/Cm ²	265.00 Kg/Cm ²	15.12	Represents Qty. 14.50 Cum.
			321.67	Kg/Cm ²			
			285.42	Kg/Cm ²			
		Average	305.06	Kg/Cm²			

1.Copy to: The Assistant Engineer SD II , WD VI , WRD , Valpoi, Sattari - Goa.

2. Copy submitted to:The Superintending Engineer ,CPO,WRD, Sinchai Bhavan, Porvorim Goa. For kind Information.

3. Copy submitted to:The Executive Engineer ,WDVI,WRD, Bicholim-Goa.

4. QC Lab File. 5. Bill File.

Junior Engineer

Assistant Engineer