

QUALITY CONTROL DIVISION, LAXMIPOSI

SUBARNAREKHA IRRIGATION PROJECT

ANNUAL REPORT - 2016-17

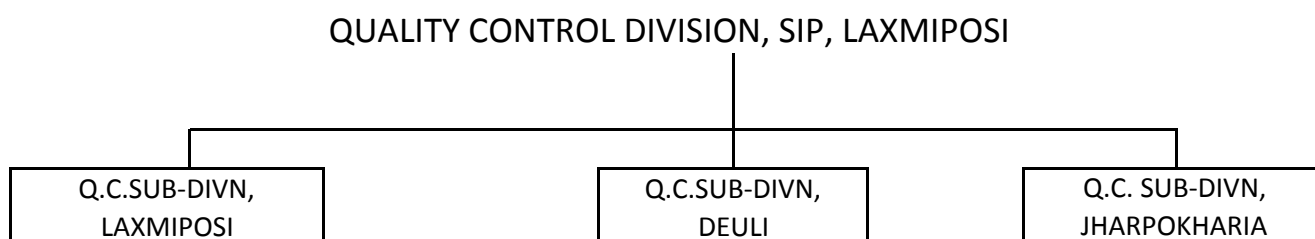
Chief Research Officer

Quality Control Division

SIP, Laxmiposi

ANNUAL REPORT OF QUALITY CONTRL DIVISION FOR THE YEAR 2015-2016
(SUBARNAREKHA IRRIGATION PROJECT, LAXMIPOSI, MAYURBHANJ)

The quality control division of Subarnarekha Irrigation Project was established on dated **09.01.1990** to assure and maintain the quality of different works under this projects. Subsequently some more divisons under Balasore and Mayurbhanj districts were added into the jurisdiction of this quality control division which were subsequently delited by the order of Chief Engineer, Quality Control and Research, BBSR. The head of this office is Chief Research Officer, Quality Control Division, Laxmiposi. Three nos. of sub-divisions headed by Assistant Research Officers were created under this division with head quarters at Laxmiposi, Deuli & Jharpokharia.



The staff position of the division has beeb attached seperately.

One central laboratory at Laxmiposi has been established under this division on **10.4.99**. Following types of tests are being conducted in the laboratory for the ongoing works of this projects.

Coarse Aggregates

- 1 Gradation
- 2 Abrasion
- 3 Absorption
- 4 Flakiness
- 5 Elongation
- 6 Specific Gravity

Fine Aggregates

- 1 Gradation
- 2 Silt content
- 3 Bulkage
- 4 Specific Gravity

<u>Cement</u>	1	Consistency
	2	Initial and Final setting time
	3	Fineness
	4	Compressive strength of cement

<u>For Soil</u>	1	Grain size analysis
	2	Specific Gravity
	3	Liquid limit and Plastic limit
	4	O.M.C and M.D.D.

<u>For Concrete</u>	1	Compressive strength of cubes
	2	Design Mix
	3	Slump

The laboratory is centrally located at Laxmiposi, Baripada. One Senior Technical Assistant , one Technical Assistant , one Embankment one Laboratory Attended Inspector are posted in the laboratory to look after the daily testing works. There are two nos of Embankment Inspectors, one Asst. Embankment Inspector , two Technical Assistants and one laboratory attended supervising the work of five division at field levels. The laboratory is having the following equipments.

List of Machinaries:-

<i>Sl.No.</i>	<i>Type of Machine</i>	<i>Type of test</i>
1	Compressive strength Machine (2Nos.)	Compressive strength of concrete
2	Casagrade's Apparatus	Liquid Limit /Plastic Limit
3	Vicat apparatus	Initial & Final setting time of Cement
4	Traixial Testing Machine	C & Q value of soil
5	Loss Angels Apparatus	Abrasion of C.A.
6	Vibrating Table	Cube Casting
7	Pento Meter	Penetration test of soil
8	Permeability Apparatus	Permeability of soil
9	Drying Oven	For soil drying
10	Standard Proctor apparatus	soil testing
11	Core Cutter with Rammer	Core collection of soil
12	Pan Balance	Balance
13	Pycnometer	Specific Gravity

14	Pipette	Soil testing
15	Set of IS sieves for Fine and Coarse Agg.	Gradation
16	Moulds for concrete and cement cubes	Cube Casting
17	Glass Cylinders	Bulkage / Silt of F.A.
18	Mixture Machine (Hand Oprated)	Design Mix
19	Slump Cone	Water cement ratio of Concrete
20	Concrete test Hammer(N)	Strength of concrete
21	Aggregate Impact Tester(N)	Imact value of stone
22	Dewalt 14" Chap Saw Machine(N)	Cutting
23	Crushing value Appartus(N)	Crushing strength of stone

The various tests of soil, cement, stone, aggregates and concrete are being conducted in the central laboratory as per the requisition from field. Apart from central laboratory tests, field level tests are being conducted at various sites as per the requirement of work by the field officer, quality control staff and the agency. Though we have got inadequate technical staffs for field and laboratory works, we are carrying on the quality aspects with strong determination and constant efforts. Various records like OK books, gradation register, cube register, compaction density forms, etc. are being maintained at all work sites for the betterment of the quality as per quality control manual. The details of tests conducted in the central laboratory for 2016-17 has been attached separately.

The Quality Control, Monitoring & Assurance works are carried out in accordance with the guidelines contained in the codes and publications of the B.I.S.(Appended) on different subjects read with relevant provisions of any technical manual issued by the department from time to time on the subject of standards and quality of different items of work.

Apart from the activities carried on by this division, the Director, Quality Control & Research, BBSR and the SQMC personnel have visited to different work sites under our jurisdiction as per the list below.

Detail of SQMC visits various divisions of SIP during 2016-17

Date	Name of SQMC	Divisions visited
09.03.15	S.K.Mohapatra	S.I.Division No.I, Jharpokharia
05.05.15	S.N.Ghosal	J.C.Division No.II, Morada
12.05.15	S.N.Ghosal	S.I.Division No.I, Jharpokharia
22.06.15	S.K.Mohapatra	S.I.Division No.I, Jharpokharia
25.06.15	T.B.Das	Betnoti Canal Division, Laxmiposi
14.12.15	S.K.Mohapatra	S.I.Division No.I, Jharpokharia
12.01.16	S.N.Ghosal	S.I.Division No.II, Deuli
19.01.16	S.K.Mohapatra	Betnoti Canal Division, Laxmiposi
03.02.16	S.N.Ghosal	S.I.Division No.I, Jharpokharia
25.02.16	M.R.Mishra	J.C.Division No.II, Morada
19.04.16	S.K.Mohapatra	J.C.Division No.II, Morada
28.03.17	P.K.Acharya	Betnoti Canal Division, Laxmiposi
11.04.17	T.B.Das	S.I.Division No.I, Jharpokharia
17.04.17	T.B.Das	S.I.Division No.II, Deuli
19.04.17	T.B.Das	J.C.Division No.II, Morada

Field Activities

Field laboratories have been set up at different work sites by the agencies. There are also equipments in sub-division and division levels for different nature of field test. and tests are being conducted by the concerned J.E./A.E./A.E.E./EE in the presence of Quality Control staff.

Deficiency

We have very acute shortage of field and laboratory technical staff such as :- Lab attendant/A.E.I/E.I/T.A. to assure the quality control aspects. Since numbers of works are going on Simultaneously in a wide spread area, it's very difficult to cover all the works properly regarding quality aspects. Procurement of advanced equipments with posting of trained technical staff is very essential to cope with the project activities.

STAFF POSITION OF QUALITY CONTRL DIVISION ,LAXMIPOSI

Sl.No.	Employee Category	Sanctioned Post	Existing Post	Vacant Post
1	CRO in the rank of EE (C)	1	1	0
2	ARO in the rank of AEE (C)	3	3	0
3	Assistant Engineer (C)	1	1	0
4	JRO in the rank of JE (C)	2	1	1

5	Sr.Technical Assistant	1	1	0
6	Techinal Assistant	3	3	0
7	Head Clerk	1	1	0
8	Sr. Clerk	1	1	0
9	Jr. Clerk	2	1	1
10	Jr. Stenographer	1	1	0
11	Embankment Inspector	3	3	0
12	Asst.Embankment Inspector	2	0	2
13	Lab Assistant	1	0	1
14	Lab Attendant	2	2	0
15	Dark Room Assistant	1	0	1
16	Daftary	1	0	1
17	Peon	7	4	3
18	NWM cum Sweeper	1	1	0
19	CK	12	12	0
20	CK wages	4	4	0
	TOTAL	50	40	10

QUALITY CONTROL DIVISION , SIP, LAXMIPOSI

MONTHLY PROGRESS REPORT FOR THE PERIOD FROM 02/2016 to 01/2017														
Sl. No.	Types of Test.	Apr./2016	May./2016	Jun./2016	Jul./2016	Aug./2016	Sep./2016	Oct./2016	Nov./2016	Dec./2016	Jan./2017	Feb./2017	Mar./2017	Total.
1	Soil Test.													
a)	L.L.	15	4	6	3	2	3	2	2	5	2	15	10	69
b)	P.L.	15	4	6	3	2	3	2	2	5	2	15	10	69
c)	Proctor Compaction.	15	4	6	3	2	3	2	2	5	2	15	10	69
d)	Triaxial shear.	..	..	..	..	..	..	..	..	..	..	..
e)	Classification	15	4	6	3	2	3	2	2	5	2	15	10	69
f)	Specific Gravity.													
g)	Grain size Analysis.													
2	Coarse Aggregate.													
a)	Gradation.	6	3	3	5	2	11	4	1	4	3	8	15	65
b)	Flakiness.	5	3	3	5	2	11	4	1	2	1	4	15	56
c)	Elongation.	5	3	3	5	2	11	4	1	2	1	4	15	56
d)	Impact												4	
e)	Crushing str.												4	
f)	Specific Gravity.	3			2					2	1	2	6	16
g)	Abrasion Value.	5		3	5	2	11	4	1	1	1	5	15	53
3	Fine Aggregate.													
a)	Gradation	6	2	2	2	3	6		2	3	5	4	8	43
b)	F.M.	6	2	2	2	3	6		2	3	5	4	8	43
c)	Bulkage.	2	2							..	..	..		4
d)	Silt content.	6	2	2	2	3	6		2	3	5	4	8	43
4	Cement.													
a)	Consistency.	2	3	5	2	1			2	2	5	3	3	28
b)	Fineness.	2	3	5	2	1			2	2	5	3	3	28
c)	Setting Time.	2	3	5	2	1			2	2	5	3	3	28
d)	Casting of Mortar Cubes.	18	27	45	18	9			18	18	45	27	27	252
5	Concrete Cube Test.													
a)	Compressive Strength.	275	195	211	279	230	99	38	41	61	46	65	139	1679
6	Design Mix.													
a)	M10									1				1
b)	M15(A40 +A20)	7+4	7+8	8+7	5+6	1	1+1			3+3	2+3	12+14	9+8	109
c)	M20	1	5	3	2	1	1			3	2	6	6	30
d)	M25	1	3							2	2	2	3	13
e)	M30										1			1
Grand Total =														0