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MADRAS RECORD OFFICE.

Government of Madras.

Public Works DEPARTMENT.

G.O. No.	981	Press Mis.
Dated	31-3-	1864.

Not to be folded or roughly handled

No. 552. Read the following letter from Major-General S. O. E. LUDLOW, Consulting Engineer for Irrigation and Canal Company, to Colonel C. A. ORR, R. E., Secretary to Government, Department Public Works, dated Kurnool, 5th March 1864, No. 163 :—

SIR,

1. In continuation of my letter No. 112 of 4th December 1863, I have the honor to submit the following Report of progress made in the Company's works during the quarter ending 30th April 1863. The delay in the submission of this report is owing as usual to the non-receipt in time of the Agent's reports, which were first received on the 23rd December 1863, returned for correction with my Memorandum of audit thereon on the 28th January 1864, and finally received by me on the 27th ultimo.

2. On the Soonkasala Anicut there was an expenditure during the quarter under review of Rupees 26,756-6-11 on 334 cubic yards of masonry and 7,202 cubic yards of earthwork. The accompanying sketch gives a view of the extent of work done to the body of the Anicut up to 30th April 1863. The Executive Engineer states that on the 23rd April the gap in the south Anicut was closed, and the masonry over the arch which was turned over the north branch well advanced, when, on the following night, a high and unexpected fresh, produced entirely by local rains, carried away every vestige of the work in the south Anicut, and rising yet higher carried away the north Anicut on the second night. All the vents of the under Sluices were covered in except the two centre ones, and the head Sluice was completed up to the coping, and the shutters were received at the station from the Central Workshops on the 26th April 1863.

3. On the Hindry Aqueduct the total expenditure during the quarter was Rupees 31,942-0-1, of which Rupees 7,982-7-10 was for 2,016¼ cubic yards of rubble stone in chunam, Rupees 229 for 4 cubic yards of cut-stone in chunam, Rupees 15,592-13-1 for 3,235 cubic yards of arch work, Rupees 4,437-6-4 for centrings, Rupees 1,619-12-2 for 4,551 cubic yards of revetment and Rupees 2,080-8-8 for special superintendence and sundries. The progress made up to the end of the quarter was the completion of one-third portion of all the arches and the skewbacks of the piers of the remaining two-thirds as well as the masonry flooring over the former. No injury was done to the work by the fresh which occurred on the 24th April 1863, though the water in the river is said to have risen to 9 feet or within 2 feet of extraordinary flood-mark. The new road under the first arch of the Aqueduct was however submerged and slightly damaged, but to guard against a similar occurrence the river wall that runs parallel to the road on the west of the Aqueduct was raised and the drainage which discharges into the Hindry under the road was embanked.

4. On the first 17¼ miles of the main Canal the expenditure during the quarter was Rupees 22,379-1-11, which consists of Rupees 10,348-1-8 for 60,153 cubic yards of excavation and embankment, Rupees 6,485-6-11 for 930½ cubic yards of masonry, and Rupees 5,545-9-4 for

special superintendence and sundries. The progress made in this portion of the line up to 30th April 1863 as reported by the Executive Engineer was as follows:—

I. All the Calingulahs are finished and covered, except Nos. 5 and 9.

II. The Waste Channels for Calingulahs Nos. 1, 4, 5 and 7 are completed.

III. Culvert No. 10.—Inlet Sluice piers completed up to coping.

IV. Revetting.—Mile 17th completed and of the 18th going on steadily.

V. The cutting in miles 5, 7, and 14, and the bank in mile 13th progressed rapidly.

5. In the next 25 miles constituting the 2nd and 3rd portions of the 1st section there was a total expenditure of Rupees 91,376-4-11, of which Rupees 63,248,-2-7 are for 4,98,095 cubic yards of excavation and embankment, Rupees 19,434-2-0 for 7,280½ cubic yards of masonry, Rupees 1,278 for alteration of road, and Rupees 7,416-0-4 for special superintendence. The whole 25 miles in this section are under construction. The Canal from the Hindry Aqueduct to the end of the 30th mile progressed very slowly. This the Executive Engineer states was owing to the very difficult nature of the work and the soil for the embankment having to be brought from a long distance, but a fair amount of earthwork was executed between the 31st and 43rd mile. The masonry works which are stated to have been completed in this section are:—

Calingulah No. 11.

Bridge " 3.

11 Road Tunnels.

Calingulahs No. 13, 14, 15, 16, 18 and 19, are under construction.

6. Between the 43rd and 72nd mile, which constitute the 4th and 5th portions of the 1st section, there was a total expenditure of Rupees 76,690-9-9 during the quarter, consisting of Rupees 60,852-12-5 for 6,85,905 cubic yards of excavation and embankment, Rupees 9,637-5-2 for 2,616½ cubic yards of masonry and Rupees 6,200-8-2 for special superintendence and sundries. The first 18 miles from 43rd to 61st lie in the Nagatoor Division where a fair amount of earthwork was done, and the progress made in the masonry works was satisfactory. The 3 feet Culvert at Nagatoor is nearly completed. The Calingulahs at the 47th, 52nd and 57th mile were making rapid progress. The next 12 miles extending from 61st to 72nd mile lie in the Bowanassy Division. The Executive Engineer there states that good progress was made in the excavation and embankments from the 61st to the 65th mile and in the 71st and 72nd mile, but that owing to the sudden death of the Engineer in charge of the line from the 66th to 72nd mile the Coolies in this portions had fallen off considerably.

7. Between the 73rd and 92nd mile, which constitute the 1st portion of the second section, there was an expenditure of Rupees 4,911-13-5, of which Rupees 3,991-10-11 are for 57,003 cubic yards of excavation and embankment, and Rupees 920-2-6 for special superintendence and sundries. The progress in this portion of the line, as observed in my last report, is still unsatisfactory, which is attributed to the failures on the part of the Contractors in fulfilling their agreements. The Executive Engineer, however, reports that fresh contracts were let out. The Estimate for this work was sanctioned on the 3rd July 1862, and from that date up to 30th April 1863, the total expenditure thereon amounted to Rupees 8,161-5-7.

8. In the 2nd portion of the 2nd section, which extends from the 92nd to the 114th mile, there was a small expenditure of Rupees 267-15-8 during the quarter. The Estimate for this work was sanctioned only on the 17th January 1863.

9. On distribution Rupees 457-12-8 were expended during the quarter for the branch Channels and Sluices along the first 17½ miles of the main Canal. Out of the 20 sanctioned Sluices the first 18 were completed and the other 2 are in course of construction.

10. On buildings there was a total expenditure of Rupees 4,703-1-1, of which Rupees 702 were for improving the Central Hospital at Kurnool, Rupees 128-9-0 on account of Office and store at Bowanassy, Rupees 5 for the Office and store at Soonkasala, and Rupees 3,867-8-1 on roads and bridges leading to the Bowanassy station, for which no Estimate has been sanctioned by Government as yet.

11. The following is an abstract showing the entire expenditure from the commencement on all the works compared with their respective sanctioned Estimates :—

	Amount of the Estimate.	Expenditure up to 31st January 1863.	Cost in the quarter ending 30th April 1863.
Main Supply.	Rs.	Rs. A. P.	Rs. A. P.
Anicut and head works at Kurnool ...	3,03,080	64,880 2 7	... ...
Do. do. at Soonkasala	1,25,000	2,06,978 4 8	26,756 6 11
Aqueduct across the river Hindry, at Kurnool	1,45,000	1,19,477 15 1	31,942 0 1
Canal for one mile from the head Sluice of the Kurnool Anicut	65,000	48,597 9 6	613 4 1
South main Canal, first portion of the first Section, 17¼ miles	4,60,000	5,17,718 7 2	22,379 1 11
Do. 2nd and 3rd do. from 17½ to 42nd mile.	7,22,500	3,10,837 6 0	91,376 4 11
Do. do. 4th and 5th do. do. from 43rd to 72nd do.	5,40,490	99,708 10 4	76,690 9 9
Do. do. 1st portion of the 2nd section from 73rd to 92nd mile	3,81,210	3,249 8 2	4,911 13 5
Do. do. 2nd do. from 93rd to 114th mile ...	2,38,460	... ...	267 15 8
Total Main Supply.....	29,80,740	13,71,447 15 6	2,54,937 8 9
Distribution.			
Branch Channels and Sluices between the 1st and 17¼ mile of the 1st portion South Main Canal	5,520	1,891 11 5	457 12 8
Buildings.			
Central Hospital with out-houses and compound wall at Kurnool	2,540	3,022 12 3	702 0 0
Office, Store-house and Workshop at Soonkasala	4,000	7,021 10 8	5 0 0
Office, Store and Artificers' shed at Bowanassy	7,298	7,913 6 2	128 9 0
Roads and Bridges at do.	...	... ...	3,867 8 1
Central Office, Engine shed and Overseer's hut	...	3,326 13 5	... ...
Total Buildings.....	13,838	21,284 10 6	4,703 1 1
Grand Total.....	30,00,098	13,94,624 5 5	2,60,098 6 6

Total Expenditure.	Deduct Refunds.	Total net Expenditure.	Amount	
			Available.	In excess of Estimate.
Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.
64,880 2 7	... ...	64,880 2 7	2,38,199 13 5	... ...
2,33,734 11 7	5,369 3 11	2,28,365 7 8	... ...	1,03,365 7 8
1,51,419 15 2	90 15 9	1,51,328 15 5	... ...	6,328 15 5
49,210 13 7	... ...	49,210 13 7	15,789 2 5	... ...
5,40,097 9 1	3,118 9 7	5,36,978 15 6	... ...	76,978 15 6
4,02,213 10 11	102 15 9	4,02,110 11 2	3,20,389 4 10	... ...
1,76,399 4 1	231 8 3	1,76,167 11 10	3,64,322 4 2	... ...
8,161 5 7	... .	8,161 5 7	3,73,048 10 5	... ...
267 15 8	... ...	267 15 8	2,38,192 0 4	... ...
16,26,385 8 3	8,913 5 3	16,17,472 3 0	15,49,941 3 7	1,86,673 6 7
2,349 8 1	... ...	2,349 8 1	3,170 7 11	... ...
3,724 12 3	... ...	3,724 12 3	... ...	1,184 12 3
7,026 10 8	28 2 0	6,998 8 8	... ...	2,998 8 8
8,041 15 2	1,895 0 0	6,146 15 2	1,151 0 10	... ...
3,867 8 1	... ...	3,867 8 1	... ...	3,867 8 1
3,326 13 5	2,082 0 2	1,214 13 3	... ...	1,244 13 3
25,987 11 7	4,005 2 2	21,982 9 5	1,151 0 10	9,295 10 3
16,54,722 11 11	12,918 7 5	16,41,804 4 6	15,54,262 12 4	1,95,969 0 10

12. From this it will be observed that the total expenditure during the quarter was Rupees2,60,098-6-6,and that from the commencement up to 30th April 1863 Rupees 16,54,722-11-11. Deducting from this amount Rupees 12,918-7-5 which were refunded from the expenditure on the same works, the net expenditure on construction is Rupees 16,41,804-4-6.

13. In my Progress Report for the quarter ending 31st January 1863, I noticed that there was a sum of Rupees 1,47,143-6-4 expenditure in excess of the sanctioned Estimate. During the next quarter for which this report is submitted, a further excess expenditure of Rupees 60,258-9-1 was incurred making the aggregate to Rupees 2,07,401-15-5, deducting the amount of refunds from this sum, viz., Rupees 11,432-14-7, the net excess is Rupees 1,95,969-0-10 which consists of the following items :—

	Excess Expenditure up to 31st January 1863.			Excess Expenditure during the quarter ending 30th April 1863.			Total.			Deduct Refunds.			Net excess Expenditure up to 30th April 1863.		
	Rs.	A.	P.	Rs.	A.	P.	Rs.	A.	P.	Rs.	A.	P.	Rs.	A.	P.
Main Supply.															
Anicut and head works at Soonkasala ...	81,978	4	8	26,756	6	11	1,08,734	11	7	5,369	3	11	1,03,365	7	8
Aqueduct across the river Hindry at Kurnool.	...	...	...	6,419	15	2	6,419	15	2	90	15	9	6,328	15	5
South main Canal, 1st portion of the 1st Section, 17¼ miles...	57,718	7	2	22,379	1	11	80,097	9	1	3,118	9	7	76,978	15	6
Building.															
Central Hospital at Kurnool	482	12	3	702	0	0	1,184	12	3	...	...	...	1,184	12	3
Office and store at Soonkasala	3,021	10	8	5	0	0	3,026	10	8	28	2	0	2,998	8	8
Do. at Bowarassy	615	6	2	128	9	0	743	15	2	743	15	2	...	...	...
Roads, Bridges, &c., at do.	...	...	...	3,867	8	1	3,867	8	1	...	...	...	3,867	8	1
Central Office without Estimate... ...	3,326	13	5	...	...	...	3,326	13	5	2,082	0	2	1,244	13	3
Total.....	1,47,143	6	4	60,258	9	1	2,07,401	15	5	11,432	14	7	1,95,969	0	10

14. A supplemental Estimate for the Aqueduct across the Hindry river at Kurnool was submitted with my letter No. 156 of the 27th ultimo, and that for the first portion of the main Canal is now under examination in my Office, but none for the completion of the other works though called for have been received as yet from the Agent, and his attention to their early submission will be again requested.

15. The following Estimates were received and submitted to Government during the quarter :—

Plan and Estimate for Locks in the 6th and 7th sections of the south main Canal Rupees 81,580.

Plan and Estimate of the continuation of the 7th and the whole of the 8th sections of the main Canal amounting to Rupees 5,33,750.

16. Of the above the first Estimate received the sanction of Government during the quarter.

No. 553. ORDER THEREON, 31st March 1864, No. 881.

In this letter, the Consulting Engineer Irrigation and Canal Company reports on the state of the Company's works on the 30th April 1863, nearly a year ago, and the reason assigned for the delay is, as usual the late submission of his reports by the Company's Agent. Major General Ludlow will again point out to the Agent that the delay renders the quarterly Progress Reports practically useless, and that the Governor in Council expects the Agent to be more punctual in future in putting the Consulting Engineer in possession of the necessary information for his reports to Government. Major General Ludlow will also inform the Agent that Government considers the delay in the submission of his reports and of supplementary Estimates prejudicial to the interests of the Company.

(True Extract.)

(Signed) CHARLES, A. ORR, Colonel, R. E.,
Secretary to Government.

To the Consulting Engineer, Irrigation and Canal Company.
„ Agent for do. do.

Exd. S. T. Augustin.

No 881

In this letter the Consulting Engr. and C. Co. reports on the state of the Company's works on the 30th April 1863 - nearly a year ago - and the reason assigned for the delay is, as usual the late submission of his reports by the Company's Agents - Major Hutchinson. ×

It is to be hoped that General Ludlow will again point out to the Agent that the delay renders the Quarterly Progress Reports practically useless and that the Govt. of India cannot be expected to wait for information so long before they can take action in the matter. The Consulting Engr. in possession of the necessary information for his reports to Govt. should be ordered by Major General Ludlow

will

Pro: 19 Dec/63 Cl: 497-498

(5) 1864 Depte
Prov. Stores for March
No. 183 No. 1106

From
The Consulting Engineer
for P. & C.

To
The Secretary Talbot
in the D. P. Works

Lake L. } Chesapeake
Pier } Marsh
one Enclosure Sketch

Submits Progress Report
on the Campaigns Operations for the quarter
ending 30 April/63
No. 881 31st March 1864.

With an Order

also informs the Agent that Lloyd's Engineer will also inform the Agent that the Submission of his Report
will also be delayed by the Submission of his Report
Nos 532 533 Calumets prejudiced

to Mr. Talbot
Chief Engineer's Office
31st March 1864

to the Consulting Engineer
Chief Engineer's Office
31st March 1864

Agent
Lloyd's Engineer
Nos 532 533 Calumets