

(1) Number of pages _____

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(3) Initials of the Referencer _____

MADRAS RECORD OFFICE.

Government of Madras.

Public DEPARTMENT.

G.O. No.	814-815	Press
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Dated	18	

Not to be folded or roughly handled

*Proceedings of the Madras Government, Public Works Department,
31st January 1873.*

No. 640. Read the following letter from Assistant Surgeon E. NICHOLSON, R. A., on special duty, Public Works Department, to the Chief Engineer and Secretary to Government, Public Works Department, dated Bangalore, 16th December 1872, No. 4 :—

I HAVE the honour to state that I have established my laboratory and engaged in the work of examining the lime-stones already received. I have received specimens from the following localities :—

No. of Specimens.	Locality.	By whom sent.	Remarks.
1		Assistant Engineer, Vellore Range	7th Division.
1		Executive Engineer No. 5 Eastern Canal Range, Chingleput.	
1		Supervisor No. 1 Range, North Arcot.	
1		Captain Hunter, Engineer, Presidency.	
4	Mettapollium	Executive Engineer, Ootacamund.	
2	Palghat	Assistant Engineer, Palghat.	
3	Coimbatore	Overseer, Coimbatore Range.	
12	Collegal	Range Office, Collegal.	
5	Bhowany	Executive Engineer, Irrigation Range, Coimbatore.	
4	Do.	Do.	

I have also the following specimens from uncertain localities, as owing probably to their having arrived long before my arrival here, I do not find any information with reference to them. I shall be obliged if you could kindly aid me in finding out their localities.

No.	Contents.	Apparent locality.
1 Case containing	6 Bags of lime in powder...	Very probably from the 7th Division. Marked "Triperitty" (!) to Bangalore. Signature illegible, Lieutenant, Assistant Eng., Polar Range.
1 Parcel (railway)	1 lb. of lime-stone	
1 Parcel (banghy)	1 lb. of lime-stone	

I have thus thirty-six samples of raw lime-stone to examine, most of them from the 7th Division. Besides these the lime-stones of Bangalore and the neighbourhood, which will be furnished me by the Commandant Sappers and Miners, will also be examined.

It would perhaps be advisable to call for samples from the stations where military buildings are often under construction—Secunderabad, Trichinopoly, Bellary, Kamptee, from none of which places have any been sent.

*Proceedings of the Madras Government, Public Works Department,
31st January 1873.*

2. In many cases, especially where hydraulic properties are required, it would be advisable to examine specimens of the clays available for mixing with lime, as in case a good formula for cement is obtained it will be well to know the resources of localities.

I believe that very pure clay is procurable at Cuddapah. I can procure, through the Commandant of Sappers and Miners for experiments here, excellent Bangalore clay from which I expect good results.

3. I shall not neglect to examine the hydraulic effect produced by the admixture of surkhi made with the various qualities of brick available as refuse, and to establish, if possible, practical standards of quality, nor to examine the various questions which may arise on points connected with the chemistry of mortars.

4. I believe that a large quantity of silicate of soda (or water-glass) solution is available in the Madras Railway Stores; and as some of my experiments will be on the hydraulic action of this substance, either on the whole or on the surface of mortar used, I should be obliged if you would kindly arrange for a convenient quantity to be sent to me. The employment of this substance, if found useful, would be exceptional, as the material used should, if possible, be indigenous to India, still I should wish to have some, even if only for the purpose of examining how far the quality of mortar is influenced by the presence of the silicates so abundant in Indian sub-soil waters.

I should also be obliged to you if you could also have sent to me a box of first-rate, recently-burnt, shell-lime as a standard of pure lime, and a barrel of Portland cement for standard experiments. I believe that a quantity is available in the Executive Engineer's stores, Bangalore.

No. 641.

ORDER THEREON, 31st January 1873, No. 314.

ESTABLISHMENT, No. 45.

THIS letter will be communicated to the District Engineers with a view to samples of lime-stones and clays being forwarded to Dr. Nicholson, for examination at Bangalore, from those districts which have not already sent them; and the officers in charge of Public Works at Secunderabad and Kamptee will be invited to avail themselves of the opportunity of having the lime-stones and clays of those stations analyzed.

2. The localities from which specimens are obtained should be distinctly noted, and the District Engineers of Coimbatore and North Arcot will communicate to Dr. Nicholson the places whence the lime-stones regarding which doubts are entertained were procured.

Paragraph 1.

3. The Agent and Manager of the Madras Railway Company will be requested, through the Consulting Engineer, to favour Dr. Nicholson with a convenient quantity of silicate of soda solution for experiment, if it is available in the Railway stores; freshly burnt shell-lime will be supplied by the District Engineer, Presidency, and a barrel of Portland cement from Bangalore.

*Proceedings of the Madras Government, Public Works Department,
31st January 1873.*

4. The Indent for Stationery which accompanied this letter has been transferred to the Superintendent of Stationery for compliance.

(True Extract.)

(Signed) G. W. WALKER, Colonel, R.E.,

Secretary to Government.

To Dr. Nicholson.

„ District Engineers.

To the Executive Engineer, Wynaad.

„ Controller of Public Works Accounts.

„ Military Department.

„ Consulting Engineer for Railways.

Erd. S. T. Austin

4-3
PUBLIC WORKS DEPARTMENT,
FORT ST. GEORGE, 31st January 1873.

No. 642.

No. 315.

To

THE RESIDENT AT HYDERABAD.

ESTABLISHMENT, No. 46.

SIR,—In forwarding the accompanying copy of Proceedings of Government, I am directed to invite the Officers in charge of Public Works at Secunderabad to avail themselves of the opportunity of having the lime-stones and clays of that neighbourhood analyzed by the Officer now employed on that duty at Bangalore.

I have the honour to be,

Sir,

Your most obedient servant,

(Signed) G. W. WALKER, Colonel, R.E.,

Secretary to Government.

Exd. S. T. Austin.

No. 643.

No. 316.

To

THE CHIEF COMMISSIONER, CENTRAL PROVINCES,
NAGPORE.

ESTABLISHMENT, No. 47.

SIR,—In forwarding the accompanying copy of Proceedings of Government, I am directed to invite the Officers in charge of Public Works at Kamptee to avail themselves of the opportunity of having the lime-stones and clays of that neighbourhood analyzed by the Officer now employed on that duty at Bangalore.

I have the honour to be,

Sir,

Your most obedient servant,

(Signed) G. W. WALKER, Colonel, R.E.,
Secretary to Government.

Erd. S. T. Austin.

Proceedings of the Madras Government.
Read the following

From Asst. Surgeon
E. Nicholson - R.A.
on special duty -

(N.E. dated 16th Decr.
1872 No. 4 -

This letter will be communicated to the District Engineers with a view to samples of lime stones and clays being forwarded to E. Nicholson for examination at Bangalore, from those Districts which have not already sent them, and the Officers in charge of Public Works at Secunderabad and Kamptee will be invited to

avail themselves of the opportunity of having the limestones and clays of those stations analyzed.

The localities from which specimens are obtained should be distinctly noted, and the District Engineers of Coimbatore and North Arcot will communicate to Dr. Nichol-son the places whence the limestones regarding which doubts are entertained were procured. paragraph 1.

The Agent and Manager of the Madras Railway Company will be requested through the Consulting Engineer to favor Dr. Nicholson with a convenient quantity

of silicate of soda solution for experiment if it is available in the Railway stores; freshly burnt shell-lime will be supplied by the District Engineer Presidency; and a barrel of Portland cement from Bangalore.

The indent for Stationery which accompanied this letter has been transferred to the Superintendent of Stationery for compliance.

G.M.W.

280
30
To
3 Dr. Nicholson ✓
130 Dr. Eng. ✓
2 Ge. Eng. Hydrabad ✓
13 Controller ✓
15 M. Eng. Dept. ✓
19 Comm. Eng. ✓
* M. Eng. for Lm.

24-6
42
N^o 315

To. The Resident at Hyderabad.

Sir,

In forwarding the ac-
-companying copy of Pro-
-ceedings of Government,
I am directed to invite
the officers in charge of
Public Works at Secun-
-derabad to avail them-
-selves of the opportunity
of having the limestones
and clays of that ^{neighbourhood} ana-
-lyzed by the officer
now employed on that
duty at Bangalore.

W. M.

25-6
1874

N^o 376

47

To,
The Chief Commissioner
Central Provinces
Nagpore

Sir,

In forwarding the accom-
panying copy of Proce-
dings of Government, I am
directed to invite the
Officers in charge of Public
Works at Rampur to
avail themselves of the
opportunity of having the
lime-stones and clays of
that ^{neighbourhood} analyzed by the
Officer now employed
on that duty at Bangalore.

G.W.

Ck 6298

Govt. of 1873 Madras.

PUBLIC WORKS.

To Mr. Nicholson

To the Resident at Hyderabad
and
To the Chief Commissioner
Central Provinces
Madras.

Date

Recd.

Encl.

G. O. 31st Aug 1873, 314-315-316.

No. 610-641-642 & 643

Letter to Nagpur

Forward copy of Pro.
and inviting attention of P. St. Officers
at Raipur with
a view to having limestone
relays analyzed by
Mr. Nicholson at
Raipur.

Under Secs. V. & W.
orders on letter from
Mr. J. C. Surgeon Nicholson
submitting plan of opera-
tion for the examination
of lime stones.

Forward copy of Pro. and in-
viting attention of P. St. Officers
at Secunderabad with a view to
having limestone relays analyzed
by Mr. Nicholson at Raipur.