

Home (1916) Department.
(Education)
Ordinary SERIES.

G.O., No. 1334.

DATED the 11-12-1916.

INDEXED

[Despatch Abstract.]

oil industries.

Informing the director of the Indian Institute of Science, Bangalore, that this Government are prepared to assist in the scheme for the establishment in the Institute of a central experimental department to deal with technical problems connected with oil, fat and allied industries.

2
No 1888-3 8/11.7.16

Letter to :-

The Director of the Indian Institute of
Science, Bangalore.

Sir,

I am directed to address you in
~~reference to~~ ^{regard to} a proposal now before this
Government to have certain experiments in
oil industries conducted at your Institute.
In connection with a scheme for the develop-
ment of the oil pressing industry and for the
establishment of subsidiary industries for the
utilization of the oil, Sir F. Nicholson has
suggested the establishment of a group of
linked industries with the object of utilizing
all the raw products in the country itself and
opening for the purpose small factories so as
to form a complete technological installation
for the whole of the oil and fat industries.
These proposals are explained in Sir F.
Nicholson's letters printed with the proceed-
ings of this Government, No. 52 Edl., dated the
16th January 1915, a copy of which is enclosed

2. It is believed that these experiments,
closely connected as they are with problems
of applied chemistry, would fall within the
scope of work of your Institute and may be
undertaken by it. It is also understood that
your Institute is equipped with the necessary
expert supervision and direction and possessed
in other ways of adequate facilities for the
conduct of the investigations. This Government

would

888
11/7
11/7
Spull
Have despatch
with this a copy
of the go. 5-2 with
8/16.16 15- without note.
8/16

Noted in CD
12.7.16

Page 1 to 10 of go. No. 52
Page 11 to 19 of go. No. 52, 16.1.15
J

2
3

would be prepared to consider the question of contributing towards the provision of the plant required for the experiments and also the working expenses if your Institute would ~~on~~ on its part undertake to provide the skilled technical and chemical control

3. I am directed to request that you will be so good as to say if your Institute would be prepared to undertake the investigations referred to above, and if so, on what terms.

"I have etc.

[Handwritten signature]

P.T.O.

3 CN 2757 809
26.7.16
4
INDIAN INSTITUTE OF SCIENCE,

BANGALORE, INDIA.

POSTAL ADDRESS:
HEBBAL, BANGALORE DISTRICT.
TELEGRAMS:
"SCIENCE," BANGALORE.
CODE,
A. B. G. 5TH EDITION.

No. 4288

All letters, packages, &c., should be
addressed to the Director.

From SIR ALFRED G. BOURNE, D.Sc., F.R.S., K.C.I.E.
Director.

To



The Secretary to the Government of Madras,
Educational Department,
Fort St. George.

22nd July 1916.

Sir,

Pages 1 & 2 infra
In reply to your letter No. 1885-3, dated the 11th July 1916, I have the honour to state that the Council of the Institute have appointed a Committee to draw up a scheme for the development of the study of oils and fats and allied industries and that the scheme will be framed to meet if possible the request contained in your letter under reply.

Messrs. Chatterton and Couchman and Sir Frederick Nicholson are being asked to join the Committee.

(J) I should be glad to have 10 copies of G.O. No. 52 Educational, dated the 16th January 1915, for the use of the Committee.

I have the honour to be,

Sir,

Your most obedient servant,

A. G. Bourne
Director.

SK

2757-1829.7.16.
Letter to
The Director of the Indian
Institute of Science
Bangalore.

Sir,

With reference to
your letter No. 4228, dated
the 22nd July 1916, I am to en-
close ten copies of G.O.
No. 52 E.S., dated the 16th
January 1916, as requested
by you.

I have &c,

SK
28/7/16.

CR
28.7.16

29.7.16

pay 3 7 cp.
down with 10 copies
28/8/16

KPS

INDIAN INSTITUTE OF SCIENCE,
BANGALORE, INDIA.

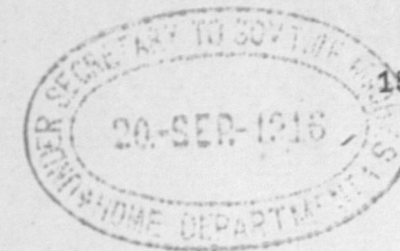
POSTAL ADDRESS:
HEBBAL, BANGALORE DISTRICT.
TELEGRAMS:
"SCIENCE," BANGALORE.
CODE,
A. B. C. 5TH EDITION,

NO. 4468

From SIR ALFRED G. BOURNE, D.Sc., F.R.S., K.C.I.E.
Director.

To

The Secretary to the
Government of Madras.



15th September 1916.

Sir,

In continuation of my letter No.4288, dated the 22nd July 1916, I have the honour to inform you that the Committee referred to therein has after a full discussion of the whole subject come to the conclusion that the most satisfactory solution of the problem will be the establishment here of a special department to deal with oils and fats and allied industries and that the present dislocation of the export trade renders it desirable to start the work with as little delay as possible.

2. The Committee was given to understand that the Government of Madras had purchased a certain amount of oil pressing machinery and that it was proposed to send samples of the oils to the Institute for experiment and treatment with a view to the production of edible oils. It was however generally agreed that the special chemical problems could not be taken up to full advantage unless the Institute were provided with a complete outfit for dealing on a large experimental scale with all stages of the process and for the investigation at the same time

of

All letters, packages, &c., should be addressed to the Director.



6
7

-2-

of various allied processes.

3. The operations of pressing and refining are so intimately connected, that it is very undesirable to carry out one operation in one place and the other elsewhere, especially as by careful pressing, much of the subsequent labour of refining can be avoided. For this reason, it seems desirable that any experiments on refining, should also be combined with others on pressing.

4. It may be objected that oil pressing and preliminary refining is a well understood and thoroughly developed industry, so that all that is necessary for its conduct is the purchase of the requisite machinery. At first sight this seems plausible, but as soon as the matter is investigated a little more deeply, numerous difficulties arise. For instance, the Anderson expeller, owing to the small amount of skilled labour it requires, might seem to be an ideal machine for use in this country. Certain accounts seem to confirm this, but on the other hand the Committee was informed that there are users who altogether condemn the machine. Again, Sir F. Nicholson in his letter to the Government of Madras dated the 13th October, 1914 remarks that copra can be pressed cold in one pressing on the West Coast, while two pressings, one of which is carried out hot, are necessary in England. It is also still open to question whether the country ghanny with all its well known imperfections, is not relatively more profitable than more expensive machinery in many cases. Details of this kind are numerous, and all will have to be settled before any oil pressing and refining industry can be established which will be as successful and efficient as this industry now is in Europe.

para 7, page 5
78. 5-2
16.1.15 (T)

5. The whole question is one of vast importance in

Madras but it is also of very great importance in some other parts of India and there is no Province or State which might not profit by the results of a thorough investigation.

It seems as pointed out above essential to work at all stages of the processes at one and the same place but the machinery and cost of the experiments will be considerable and it would seem to be the most economical method for the various Local Governments and States to subscribe towards the cost of large scale experiments carried on at one centre.

6. For this reason, it is proposed to establish at the Institute of Science a central experimental department for all India, in which all technical problems connected with the oil and fat and allied industries could be examined. It is not intended that this department shall be in any way a commercial concern, but at the same time the equipment would consist of a number of different units, each of a size commonly used in commercial practice. By this means, comparative tests could be made with different machinery upon the same seeds, and reliable data could be obtained not only upon the quantity and quality of the oil but also upon the actual cost of working, and, a very important point, the suitability of various machines to Indian labour.

7. It is not proposed to run any or all of these machines continuously, except for testing purposes, and consequently the quantities of raw material required would not be very large. Owing to this fact, there would be little objection to Bangalore as a site for an experimental station, although it is not in the centre of an oil-seed producing district, and therefore would be an unsuitable situation for a factory. On the other hand there are already at the Institute of Science, large chemical

departments with expert chemists, together with office establishment and the organisation necessary for work of this kind, and the existence of these would more than outweigh any disadvantages of locality.

8. A department of this nature would form an exceedingly valuable training ground for students. After a full course lasting for three or four years, men should be quite capable of managing the technical work in a factory, and there would always be the department to which they could refer if in difficulties. At present the only procedure open to the organisers of an oil pressing factory is to engage at a very high salary, as Manager, a European expert who is totally unacquainted with Indian conditions. Only the very largest factoris^e could stand such an expense, and even then, the money thus spent might have been saved, if a capable Indian were available as doubtless will soon be the case if our experiment succeeds.

9. The nature of the work it is proposed to undertake in the new department is as follows:-

1. A careful comparative examination of all methods of oil expression now in vogue, with special reference to their suitability to Indian conditions.
2. The possibilities of the development of extraction processes particularly with regard to the recovery of oil from country cake.
3. The purification and refining of oils including chemical & mechanical treatment.
4. The hardening of oils.
5. The preparation and blending of oils for edible purposes especially with the view of producing a product to replace the dangerous substances now sold

as ghee.

6. The production of soap for various purposes.

7. The economical production of glycerine of high quality.

8. The manufacture of candles.

9. The utilisation of the lesser known oils.

10. It will be necessary to put up ^{some} special buildings of considerable size but quite simple in character. The existing laboratory buildings have been so constructed that such buildings can be added on as wings at the back.

The plant required will be fairly extensive and its cost especially at the present time will be considerable.

The total cost of the buildings and plant need not however exceed Rs.4 or 5 lakhs.

The recurring expenditure is estimated at Rs.75,000/- per annum.

Much will depend upon securing a suitable head for the Department and of scarcely less importance will be the officer in charge of the ^{or} mechanical processes. About six Assistant Chemists will also be required.

11. If this expenditure is compared with the annual value of the oil seeds produced in India, it will be seen to be an insignificant sum. The area under oilseed crops (exclusive of cotton) in 1912-13 in British India and those Native States for which statistics are available was very nearly 18 million acres. At the low estimate of Rs.30/- per acre this amounts to Rs.54 crores, of which seeds to the value of Rs.28 crores were exported, thus leaving Rs.26 crores to be dealt with in the country. In addition, in the same year, oils, soap, greases and candles

candles to the value of a crore of rupees, all of which might have been produced in the country, were imported.

12. Without in any way attempting to interfere with the export trade in oil seeds, it will be seen what an enormous amount of material still remains to be dealt with. Some recent analyses carried out at the Institute show that at least 5% more oil than is necessary for cattle food is usually left in country made cake, and the annual value of this amounts to something of the order of Rs.50 lakhs. This item alone should be sufficient to warrant an attempt at modifying the existing methods, quite apart from any other cognate questions.

13. The present financial condition of the Institute of Science will not allow of any extensions. There is no further capital available, the annual income is only just sufficient to meet the present expenses, and the members of the present staff are already fully occupied. It is proposed therefore to make an appeal to all Governments interested in the question of oil pressing and allied industries for the necessary funds, the amount in each case being roughly proportional to the area under oil seeds in the Province concerned.

14. I am to enquire whether the Government of Madras would be prepared to contribute Rs.One lakh towards the capital outlay and to guarantee an annual contribution of not less than Rs.12,000/- for, say, six years. Towards the end of the fifth year the question of continuing the experiments might be investigated. This arrangement would allow of sufficient notice being given if it were thought desirable to close down the department.

15. I am addressing the other Local Governments and our ability to undertake the work will naturally depend upon

sufficient

11
-7- 12
sufficient financial assistance being forthcoming from
them.

I have the honour to be,

Sir,

Your most obedient servant,

A. G. Boush

Director.

Oil - pressing.

When the war broke out the export of ground ~~nut~~ and other oil seeds to European countries seriously suffered for want of shipping facilities and owing to the closure of the Marseilles market. The question as to how to dispose of the seeds in this country came under the serious consideration of the Department of Industries.

After considering various proposals put forward by the Director of Industries, the Government decided that ~~expensive~~ experiments should be undertaken both in the production of oil by improved methods and for ascertaining whether the export of oil could be undertaken with financial success. They accordingly sanctioned the purchase of two small Anderson Expellers for the former purpose and one large Premier mill for the latter costing ~~Rs. 92~~ Rs. . 92 lakhs in the aggregate - please see

- ① G.O.No.52 Ed 1., dated the 16th January 1915, and
② G.O.No.158 Ed 1., dated 13th February 1915.

Sp. No. 52 Ed 1. (J)
16.1.15.

Small Expellers.

The Department had already purchased an Anderson expeller before the outbreak of war. Of the two new ones the purchase of which was sanctioned after the commencement of the war, the Director purchased only one. The two expellers were originally used for crushing ground nuts. After some months' experience Mr. Tressler reported (in January last) that they were unsuitable for crushing this class of seeds and that gingelly and other oil seeds were being tried. In a D. O. dated ^{the} 21st March 1916 he has been asked to complete the experiments and report the result to Government.

Large Mill.

Though the Director placed an order for the large mill early in 1915, only a part of the machinery was delivered till the close of ^{the} official year 1915-16, owing to the fact that the firms in England who had the order were engaged in the manufacture of munitions. It does not appear that the rest of the machinery has yet arrived. The Director has however made preliminary arrangements for working the plant. He has with the sanction of Government entered into

The Special Officer has since reported that these expellers are not suitable for this country. (The Gov. is in Press).

para 2. page 2 of Gov. 844
5-8-15

14/1
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expeller before the outbreak of war. Of the two new
ones the purchase of which was negotiated after the
commencement of the war, the Director purchased only
one. These two expellers were originally used for
crushing ground nuts. After some months' experience
Mr. Trevelyan reported (in January last) that they
were unsuitable for crushing this class of seeds and
that kinnery and other oil seeds were being tried.
In a D.O. dated 1st March 1916 he has been asked
to complete the experiments and report the result to
Government.

14/1
The Director placed an order for the
large mill early in 1915, only a part of the machinery
was delivered till the close of 1915. The remainder
owing to the fact that the firm in England who had
the order were engaged in the manufacture of munitions.
It does not appear that the rest of the machinery
has yet arrived. The Director has however a

14/1
The Director has been working the plant
has with the sanction of Government entered into
an agreement with Messrs Best and Co., for the
supply of ~~the~~ seed to be crushed on payment of the
cost thereof. They will themselves pack the oil
and ship it for export. They have been given the first
refusal of the plant at ~~any~~ ^{any} time it may be offered
for sale. A site has been selected near the leather
trade school at Washermanpet for the erection of the
machinery. Towards November of last year the Director
began the construction of a building for the purpose.
But as Government sanction was required for such
construction, plans and estimates were obtained from
him and these have ~~been~~ ^{just} been scrutinized by the
P.W.D. The issue of final orders thereon has been
postponed pending receipt of certain further information
called for from the Director of Industries.
In his letter dated the 4th January 1916 the
Director stated that the total liabilities incurred
on account of oil machinery amounted to Rs. 52,640.
No further information as to the total amount spent
in the oil pressing experiments has been received from
the Director.

14/1
No. 94325 (S)
27.8.15

orders have since
issued on this. 42704 (C)
27.6.16

Box No 13
27-5-16

14/1
an agreement with Messrs Best and Co., for the
supply of ~~the~~ seed to be crushed on payment of the
cost thereof. They will themselves pack the oil
and ship it for export. They have been given the first
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No further information as to the total amount spent
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the Director.

CA 14/5.16
CA 27.5.16
H E I propose to
send this note and the

file held to the
Caucasian for purchase.
~~and return~~

29.5.16.

29.5.16.

Mr. C. C. C. C.

30/5/16.

The discussion on this subject
has not touched on the most
important point from the point
of view of the permanent interests
of India, i.e., the retention in
India of the oil-cake.

Oil being mainly derived by the
plant from light & air, its export
does not impoverish the soil. The
cake contains the most valuable
elements of soil fertility. Our aim
should be, therefore, to retain

5/16

the rate in the country.
The difficulty
of effecting this is due
to the fact that oil
is not so easy to export
as sell in Europe as the
whole seeds or the copra.
Probably, therefore, so long
as the oil has to find
a market abroad, the
whole seed will be exported
as at present.

The most promising
line of experiment is that
suggested by Sir F. Nicholson,
the establishment of a
group of linked industries
the object of which
is to utilize all the
raw produce in the
country itself.

In his note
on the economic situation
(in G.O. 2802 of 26th Sep. 14
p. 2.)

Mr. Tresselt says that
after meeting the local

17
6/

demand, the exports of
Madras amount to 24
crores, chiefly in the
form of raw material
which the country does
not reimport in manu-
factured form, and
therefore does not require.

I think he is
quite wrong here, & that
if we could demonstrate
the suitability of the oils
for the manufacture
(for example) of a palatable
fat, suited to the Indian
taste, we should find
that Sir J. Nicholson is
right when, in his
O.O. of 20. XII. 1914
(p. 15 of notes to G.O.
no. 52 of 16. I. 1915)
he says that India
wants far more oil
for herself than she
now enjoys, and that
there is immense room
for further consumption.
I have shown

(J)

18/7

g.o. no. 52 of 16. 1913

to Sir Alfred Bourne, I
asked him if he considered
that experimental work in
the direction of establishing
Sir F. Michelson's 'linked
industries' for dealing
with the whole oil question
falls within the scope of
the Tata Institute. He
said that he thought
it did, & suggested
that government should
formally address him
on the subject.
I suggest, therefore, that this
g.o. should be sent
to him (he would
like one copy with the
notes ^{from} which he would
eliminate all names &
all personal matter &
before circulation to the
members of the Institute)
& that he should be

asked to ~~say~~ say if the
Bongalore Institute would be
prepared to furnish the expert
supervision & direction of such
a ~~plant~~ scheme as Sir F. Nicholson
suggests. I think that
Madras might after to provide all
the plant, & pay the working
expenses, if the Institute
provided the skilled technical
& chemical control. I should
have far more confidence in the
results of experiments conducted
in this way, than if they were
conducted by the Fisheries
chemist without further expert
advice & control. The solution
of problems of applied chemistry
of this kind seems to me just
what the Institute is intended
for. There can be no two
opinions in regard to the
immense importance of such
investigations for this country.
There is plenty of room near the
Institute in Bongalore for the
erection of such a plant.

M.R.

1. VI, 16



21

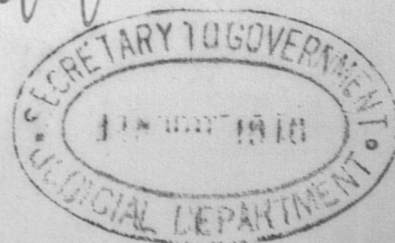
Please see the
remarks I have made at
the end of the V. 4,
which I should like the
Library to see as soon
as possible.

Mr. P.
1. 11 16

It is for perusal of the
 Mr. Cunningham note the
 pages 4 to 8. May I assume
 the proposal to assume Dr.
 Brown and note therein?
 It will be treated as before.

2/6/66

No. φ.
8.6.16.



2. 6. 16

~~2K~~
~~12/6~~

Mr. Gouchman recommends for adoption the scheme of linked oil industries proposed by Sir F. Nicholson in 1914. That scheme contemplated the setting up of--

- (1) a small but complete oil-pressing plant and of a refining plant attached to it;
- (2) of a soap plant, to which might be added a plant for the winnowing of the stearic acid for candle-making;
- (3) of a small glycerine plant for the recovery of the by-product, glycerine;
- (4) of a plant for the manufacture of sweet and edible vegetable fats and butter substitutes;
- and (5) of a small paint and lubricant factory.

As Mr. Couchman speaks of the "group" of linked industries and of the "whole oil question", he apparently means to entrust all the above items to the Bangalore Institute. This will ^{be} in accordance with Sir Frederick Nicholson's opinion who stated that the "Government should at once establish a group of small linked and contiguous factories forming a complete technological installation for the whole of the oil and fat industries."

para 6, page 4
of p. 11. 52 Es.
16.1.16

para 5, page 4 of p. 52

24.6.16

para 5, page 4 of p. 52
16.1.15

2. Of the five items above mentioned the Government ~~have~~ have so far taken up only the first three items, have issued orders as regards the fourth, and have not ~~yet~~ considered ~~the~~ the fifth.

Item 1. Oil - pressing. The Government sanctioned the purchase of a few oil mills at a cost of nearly a lakh of rupees. Though a considerable portion of this amount has been spent, still a large part of the one large mill ordered has not yet been received. A portion of the plant already ordered is intended for refining oils also. ~~the~~

Is it ~~not~~ ~~altogether~~ desirable to transfer to Bangalore ^{biggest} all these oil mills, the ~~largest~~ of which ^{already} has been partially set up in Madras. But if all the experiments should be located in one place, this cannot be helped.

Items

Gr. No. 158 ^{EW} (A)
13.2.15

24.6.16

12 23 24
Items (2) and (3). Soap ~~plant~~ and glycerine plant.

For some time past Sir F. Nicholson has been carrying on soap experiments with the help of Mr. A.K. Menon. A sum of Rs. 75,000 has been provided in the current year's budget for the purchase of a complete soap and glycerine recovery plant. The machinery has been ordered from England and the India Office, has, at the instance of this Government, persuaded the Munitions Department under whose control the manufacturer is at present, to give priority to the order. It is not known whether the soap plant ordered includes plant for the recovery of stearic acid.

Item (4)

Besides these, the Government have also asked Sir F. Nicholson to carry on experiments in the manufacture of vegetable fats; but it does not appear that anything has been done so far in this direction.

2. Mr. Couchman suggests that the authorities of the Indian Institute of Science, Bangalore, should be asked to say whether they would be prepared to provide the expert supervision and direction for a scheme of linked oil industries if this Government provided all the plant and working expenses.

The suggestion to entrust the investigation to the Indian Institute of Science is not a new one. In his note, dated the 21st December 1914, the Honourable Sir Harold Stuart, observed as follows :-

"I may add that I believe the Institute of Science intends to take up this very question of oil products and to work at it on a commercial scale; so perhaps we may be spared the cost of any experiments beyond those which we now propose to sanction".

If the oil pressing and soap-making experiments already initiated by the Government should be transferred to Bangalore, it seems desirable to know whether in regard to these two the amount already sanctioned for the purchase of plant will be sufficient or any additional amounts will be required.

It seems also desirable to have an estimate of the expenditure that will have to be faced by this Government in the near future on the purchase of plant for the other items comprised in the group.

Similarly a rough estimate of the working expenses will also be useful in this connection. Before addressing the authorities of the Institute, it may

para 3, page 12 of notes to S. N. S. 25/11/15

* purchase of a few oil-pressing machines.

24.6.16

24.6.16

24.6.16

be better to call for information on these points and decide whether the Government would be able to provide the money required for the scheme.

S.K.
19.6.16
C.R.
19.6.16.

24/7/16

Will Mr. Conchua
Please note further, with
reference to the departmental
note on pages 10 to 14?

W
24-6.16

Col no 1885-2
26.6.16

Returned.

It would be premature to prepare estimates now, but we know if the idea of cooperation with us is agreeable to the Tata Institute authorities. If they agree, I will then settle details in consultation with me, & submit proposals to government. At the
P.T.O.

present stage it is impossible for me to say if the oil machinery already purchased could be used for the purpose.

I may be going to Bangalore in the middle of this month, & I should, therefore, be glad if this reference to the Tata Institute could be sent so as to reach them before my visit.

M.L.E.
3. VII. 16.

Educational Dept.

It is for orders whether the authorities of the Institute at Bangalore may be addressed at once as suggested by Mr. Conchman. If so, the draft letter below is for approval.

2. Mr. Conchman has suggested that a copy of G.O. No. 52 Est., dated the 16th January 1916, with notes should be sent to the Director of the Institute. These notes contain minutes recorded by the Honble Sir Hard W. Smart and the Honble Sir Alexander Leardew. The file may

CA
4-7-16

Page 7 of notes

Page 12 + page 6 to 8 of notes

Mr. Conchman
think this
a mistake
Shankar

may therefore be circulated to them
also, if the notes are to be sent Confidentially
8K for the perusal of Sir Alfred Bowne
5.7.16.

CR

5/7/16

HE

HE has seen the
Notes up to page 9. Please
see the subsequent notes.
I confess that I am by
no means enthusiastic
about Mr. Conckman's
idea of transferring the
whole set of experiments
in connection with the
oil industry to the Institute
of Science at Bangalore.
We have no control over
this Institute whose history
in recent years has not been
marked, so far as I can
gather, either by harmony
of management or efficiency
of work. It would be
a pity to dislocate what
is being done under the
supervision of Mr. Parker

Box No. 13

8.7.16

2

This objection will
not apply to a
specific experiments
in the past.

PR

8/7/16.

and Sir Frederick Nicholson
for the sake of a possibility
of improved supervision
over the experiments. At
the same time there can
be no harm in allowing
Mr. Cusackman to discuss
matters with Sir Alfred
Barnes, and hence the
draft letter which I propose
to send and which does
not commit us in any
way.

W. B. 11/12

The letter is a letter of enquiry merely:
and I understand that we are in no degree
fettered by it in considering our future action,
when we have received this information.

P.
10.7.16.

J. S. 11/12

Letter No 1885-3 est. 8 11.7.16

29 78
CN 2555-69
18/7/16 30

D.O.

MADRAS,

July 12th 1916. 191

TELEGRAPHIC ADDRESS:
"CHROMIUM," MADRAS
POST BOX NO.



Dear Mr. Rajagopala Achariyar,

Since the file about my proposal to consult the Indian Institute of Science with reference to the proposal to collaborate with them in establishing an experimental series of linked industries for the investigation of the oil problem, I have had several discussions with Dr Marsden about it. He has made certain suggestions which I have asked him to elaborate a little, and which I propose to submit for the consideration of Government. If, therefore, the papers have not yet been referred to Bangalore, I should prefer to postpone referring them, pending the further proposals which I intend to make. Briefly, they are that we should retain this work in Madras, build a laboratory for Dr Marsden, and place him in charge of the experiments, with Mr Menon under him. There are several good points about this plan, which I shall explain more fully later on.

Yours sincerely,

M. L. Bouchman.

The Hon'ble Dewan Bahadur P. Rajagopala Achariyar Avl. C. I. E.

Secretary to Government, Educ. Dept.

Ed. Dept.

Letter placed below.

Submitted that the reference to the Indian Institute of Science, Bangalore, has already issued. Mr Bouchman may be informed accordingly. Draft do. is placed below.

8/7/16. 16/7/16.

HE

2 kept do. to
in Cambrian for
all

box no 13
17.7.16

19.7.16

18.7.16

19.7.16



31/20
Educational Department.

32
C.No.2555.

sp 9/7
D.O. 2555-1 208
19.7.16

Dear Couchman,

page 18 of n.p.
With reference to your d.o. letter of the 12th instant I write to say that a reference has already issued to the Director of the Indian Institute of Science, Bangalore, on the subject of ~~the~~ linked oil industries. I send a copy of it for your perusal. You will see that it is a letter of enquiry merely and that the Government are in no degree fettered by it in considering their further action. It is open to you to elaborate the scheme ~~the~~ indicated in your d.o. letter under reply.

Yours sincerely,

1000 10/7
To
M.E.Couchman, Esq., I.C.S.,
Special Officer,
Department of Industries.

17/9/16
19.7.16

EDUCATIONAL DEPARTMENT.

CURRENT No.

2662

Eol

From

Received

190

Registered

20.7

1906

Subject.

July 18th
16

Dear Mr. Rajagopal Acharyar,

I thought I would write at once & tell you that after seeing the Indian Institute of Science, I think that my original proposal, to let the oil research be conducted here, is preferable to Dr. Manden's suggestion to build

GK



EDUCATIONAL DEPARTMENT.

CURRENT No.

2662

Eol

From

Received

190

Registered

20.7

1906

Subject.

a laboratory in Madras for
this purpose.

we could not provide the
same facilities except at a
prohibitive cost.

Your letter was fully discussed
by the Council yesterday, &
the idea of cooperation
with us was favourably
received. The Director
will send a reply soon.

yours sincerely,
W. L. Clenchman.

M. A. Jay Deewan Bahadur 39

P. Rajagopal Acharya B.A.
P. I. S.

Secretary to Government.

Educational Deptt

Please see Mr. Couchman's letter on the previous page. The reply from the Director of the Indian Institute of Science, Bangalore, may, it is submitted, be awaited.

8K 10.7.16. A 20.7.16.

HE

for perusal of Mr. Couchman & to previous page.

21.7.16

P 23.7.16.



CR 2757. From the Director of the Indian Institute of Science, Bang. 8.22.7.16.

The letter from Sir A. Bowme, Director of the Indian Institute of Science, Bangalore, on page 3 of current file is

Box 27 22.7.16

page 3 of ep.

Box 42
12.7.16
8.8.16

is submitted for perusal.

2. With reference to the last paragraph of the Director's letter a draft letter forwarding ten copies of the fo. required by him is submitted below.

SK
28.7.16. A
28.7.16

29.7.16

After issue of the reply please send me the file so that I can work in it.

29.7.16.

[Letter No. 2757-1 etc., dated the 29th July 1916]

The reply has issued. The file is resubmitted.

SK
2.8.16.
MH
5/8/16

A
5.8.16
See

HE for perusal 9/8/16

P
S. 8. 16.

It has been ascertained from the Madras office that there are insufficient copies of the fo. in the record.



is submitted for perusal
to the Attorney General
for the purpose of the
draft of the proposed
copy of the report of the
is submitted below.

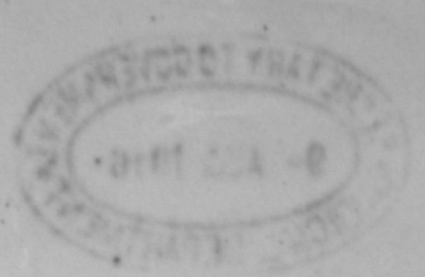
10/10/16
10/10/16
10/10/16

After the
the report
the report
the report

10/10/16
10/10/16
10/10/16

Letter N. 2727-127, dated the 10th of July
The report has been
submitted.

10/10/16
10/10/16
10/10/16



36
DEPARTMENT.

Seott. II-8.

CURRENT No. 33/3 Ed

From _____

Received _____ 191 . Registered 14 9 1916.

Subject.

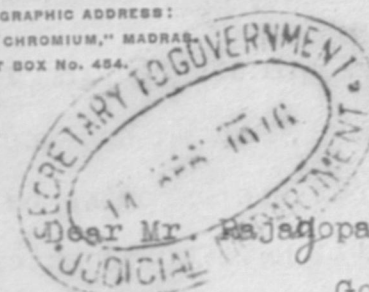
D.O. Edl

K107

36
MADRAS,

TELEGRAPHIC ADDRESS:
"CHROMIUM," MADRAS
POST BOX No. 454.

12th September 1916.



Dear Mr. Rajagopala Achariyar,

Government may like to know how the question of dealing with oil seeds in this country is getting on.

The Sub-Committee appointed by the Council of the Indian Institute of Science met in Bangalore on 4th inst. After some discussion we unanimously decided that there was a strong case for a complete technological station to deal with the whole oil question, on the lines laid down by Sir Frederic Nicholson in the letters printed in G.O. No.52 of 16th Jan. 1915. It is proposed to study the question of extraction, to ascertain the losses caused by the present methods of extraction, and for this purpose to provide an installation representing the chief types of oil-pressing machinery. Researches are to be instituted into the possible uses which can be found for oils in India, on Sir Frederic Nicholson's lines, including the manufacture of vegetable fats and edible

oils, soap, candles, glycerine, paints &c. An oil expert will be required from home, and an engineer to attend to the plant and carry out the experiments, and a staff of Indian Assistants will have to be entertained to help them.

For these purposes it was resolved to address the various Local Governments and perhaps some of the leading Native States for contributions. The capital cost of the required plant was roughly estimated at Rs.5,00,000 and the recurring cost at Rs.75,000. The income of the Institute itself is only just sufficient for the present work going on there, and without substantial help from outside it would be impossible to do anything on the necessary scale. Of course the scientists of the Institute will be able to afford valuable help to the oil specialist, and the laboratories will be available for work. Sir Frederic Nicholson approves the scheme. The Director of the Institute will shortly address the Government on the subject. Naturally I was unable to give the Sub-Committee any idea of what the Madras Government would be able to contribute, but in view of the

enormous importance of the subject ~~of~~ to this Presidency, I think that Madras might well offer to give one lac towards the capital cost, and Rs.25,000 towards the recurring expenditure. Our export of oil seeds sometimes exceeds Rs.50,000,000. per annum, and as most of this consists of groundnut and copra, from both of which edible products could be made, I hope that it may be found possible to put up this amount. It is by far the most important question which the Industrial Department has before it.

Yours Sincerely,

M. C. C. Chinn

The Hon'ble Dewan Bahadur,
P. Rajagopala Achariyar Avl.

Secretary to Government.

Home(education) Department.

Ootacamund.

Box 8
Cue. 1579
Retd. 16/9

NOTES.

37 Page 26

40

Home (Ed.) Dept.

Please see Mr. Bouchman's do. on the previous page. He states that the Director of the Bangalore Institute will shortly address the Govt on the subject. The Director's letter may contain full particulars relating to the scheme. It is for orders whether its receipt may be awaited.

SK
15.9.16.

15/9/16

S.

15/9/16

H.E. and H.P. (Res)

In pursuance of Mr. Bouchman's do. on the previous page.

UNDER SECRETARY
15-9-16

15.9.16

Sec. P

16.9.16.

10-SEP-1916

18.9.16.

19-SEP-1916

CM-34.05- From the Director, Indian Institute of Science, Bangalore. 12-4-89 to 15-9-90

The Director of the Indian Institute of Science, Bangalore, submits his reply to this Govt's letter of the 11th July last. The scheme outlined in the Director's letter contemplates the putting up of a complete technological installation to deal with the whole question of oil. pressing and linked industries. The cost of the scheme is estimated at about Rs 4 or 5 lakhs, non-recurring and Rs 75,000, recurring, per annum. It is proposed to ask the various local Governments & Native States to cooperate in the scheme. The Madras Govt are asked to contribute a sum of Rs 1 lakh towards the non-recurring expenditure + Rs 12,000 ^(a year) towards the recurring ~~exp~~ for six years.

2. Attention is solicited to the note on pages 10 to 14 supra which gives an account of what has already been done or proposed

page 5 to 11 of cf.

pages 1 & 2 of cf.

para 10, page 9 of cf.

paras 5 & 15; page 6, 7 & 10 of cf.

para 14, page 10 of cf.

42

to be done by the Deptt of Industries in this Presidency in connection with the oil-pressing & subsidiary industries. It will be seen that a considerable ^(amount of) expenditure has already been incurred in the purchase of machinery for oil-pressing and soap-making and the extraction of glycerine. If this Govt cooperate in the Bangalore scheme it may not be necessary to continue the experiments in oil industries already initiated here. ^{infact.} If so, the plant available here may be transferred to the Bangalore Institute. In his note dated the 3rd July last Mr. Bonchman stated that it was impossible at that stage to say if the oil machinery already purchased could be used in connection with the Bangalore scheme. He may, it is submitted, be now requested to state whether the machinery can be transferred & if so, whether in view of the large expenditure already incurred

29/7/16
Page 14 + 15 Infra

29/7/16

incurred on its purchase ~~of~~
~~the machinery~~ this Govt. should
contribute towards the non-
recurring expenditure of the
scheme, and if so, how much.

It may be noted here that
Sir J. Nicholson stated recently
that he would ^{soon} begin the regular
~~recurring~~ manufacture of
soaps of various kinds. It is
not known whether at this stage
he would agree to transfer the
experiment to Bangalore. Mr
Brachman may perhaps be
requested to consult Sir J.
Nicholson and report to the
Govt.

3. The ~~recurring~~ recurring contri-
bution of Rs. 12000 ^{annually} does not
appear to be unduly high &
may be accepted. It is doubt-
ful whether the local Govt.
can sanction any such
grant without the concurrence
of the Govt. of India. The Finan-
cial Dept. may be requested
to advise on this point and
also to offer their remarks
generally.

The file has gone to him
for further information

But not p 2 of the
Commissioner's D.O. at

P 25 4.7.
Sir F. A. J.
Nicholson
aidant
attorney
25.9.16
29.10.16

25.9.16

After the
Commissioner
has replied
29.10.16

generally on the scheme. This may be done after the receipt of Mr. Connelman's recommendations in regard to the transfer of the plant to Bangalore.

Mr. Connelman has for long remembered as Sir Alfred Barnes' Scheme - pages 5 to 10 of.



Colin 1885-1
27. 9. 16

Reply.
This is the scheme discussed and approved of by the Sub-Committee on which Sir Frederic Nicholson & I sat. I am convinced that the money would be well spent, & that there is an urgent necessity for systematic research on the methods of extraction & the utilization of all our oils. The annual contribution asked

for in less than I expected, & may be agreed to. Regarding our contribution to the capital cost, after discussing the matter with Mr. Green & Dr. Morrison, I think that we may offer them our two Anderson expellers, if not sold, & also the hydraulic press now in course of erection at Warrimoo.

I do not see that we could ~~find~~^{do} any good with it, without a chemist in charge to conduct experiments. There crushing of oil & export to Europe would not (as Sir Frederic Nicholson has pointed out) help us to solve the question. There are plenty of good power ~~plants~~ oil presses in India already. Our main problem is to find out how to use the whole produce (oil & oil-cake) in this country.

The enclosed specification shows the nature of the Press. We have up to the present time spent the following sums on erecting it at Warrimoo.

Est about Rs 26,000
under p. 2 of G.O. 1588
8-13-15 A

(Encl. 5 specification)
(placed below)

NOTES.

- 1.) Buildings Rs 9850
 - 2.) Foundation 2520
 - 3.) Erecting Machinery 900
 - 4.) Miscellaneous 330
- Rs 13600

The money spent on the building will not be wasted if we remove the hull, as it is very near the Leather Trades School, & can be utilized for this, or for any other industry which may be taken up for development hereafter. We should lose the money spent on foundation & erection (Rs 3420). The estimated cost of dismantling the hull again, & packing & removing it to Bangalore (F.O.R. Bangalore) would be Rs 3500.

The total value of the order placed with the manufacturers was Rs 72,400, out of which machinery to the value of Rs 35,468 only has been received up to date.

The plant is a large up to date one, & would be valuable for the purpose of the experiments proposed by the Director. It may even be

47
given to the Institute, or lent
for a period of five years, in
which time I think the problems of
extractions should have been thoroughly
investigated. On the whole I recom-
mend the latter ~~of~~ course.

What other contri-
-bution should we make to the
Institute?

They ask us for Rs 1,00,000, but
if we had given them the money,
it is not likely that they would have
spent it on the purchase of such
a large mill as this. I think,
therefore, that we may offer them
a sum of Rs 50,000 (half a lac)
in addition to the mill (a fine
Expeller if not sold before. Then
may be given in that case. We
do not want them back.)

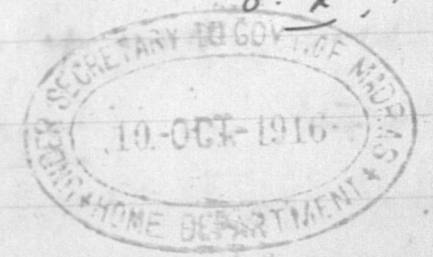
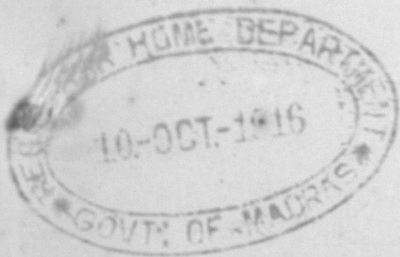
Mr. L.
8. x 16

I do not know what plant Sir
Frederic has at Tamer, etc, but
he may be consulted by Govt. if
thought advisable. My own
opinion is that it would be a pity

to interrupt his work there by asking him to transfer his plant to Bangalore. The fact that he is working on a part of the same problem will have a stimulating effect on the Bangalore Institute, & they will be able to help each other by comparing results. Sir Frederic has the advantage of having his plant on the spot where the raw materials are produced.

As His Excellency will shortly visit Malabar, & meet Sir Frederic there, I suggest that he may take this file with him & discuss the whole matter with Sir Frederic.

M.R.
8. x. 16



Home (Education) Dept.

Mr. Leachman agrees to hand over to the Bangalore Institute, ^{if not sold,} the ^{two Anderson Spectacles} ~~microscopic apparatus~~ already purchased by the Dept. of Industries. He suggests that ^{large hydraulic press (parts of which have not been received)} they may be lent to the Institute for

+ Each Spectacle costs Rs 13,000 roughly.

+ Estimated cost Rs 72,400/-

for a period of five years. In consideration of this loan of machinery he proposes that the non-recurring contribution from this Govt may be fixed at Rs 50000 instead of one lakh of rupees asked for by the Director of the Institute. He recommends the payment of the recurring contribution of Rs 12000 a year also. It is submitted that the file may be sent to the Financial Dept for remarks as suggested in para 3 of office-note on page 29 supra. Mr. Bonchman suggests that the file may be circulated to H.E. the Governor so that H.E. may discuss the matter with Sir Frederick Nicholson. His Excellency leaves Ootacamund on the 16th instant & visits Sir F. Nicholson's soapery the next day. The Financial Dept may be requested to return the file in time for submission to H.E. before he goes on tour.

Page 10 of 11

page 34 supra.



(The file has been sent to H.F.)

3. Mr. Couchman is not in favour of transferring the soap experiment carried on by Sir Frederick Nicholson to the Bangalore Institute. In a separate communication about ^{the permanent location of} ~~accommodation~~ for the soap factory Sir Frederick Nicholson has stated that the question may lie over as the ~~contemplated the necessary re-~~ ^{experiments may eventually have to be transferred} ~~move of the business to Bangalore~~. As His Excellency will discuss the matter with him, it does not seem necessary to make ^(separate) a reference to him now.

SK
10.10.16.

2nd 11.10.16

File (no)

Financial Department

The Indian Institute of Science, Bangalore, proposes to establish a central experimental department for all India, in which oil and fat and allied industries could be examined. ^(Director of the Institute) They have addressed all Local Govts. for contributions towards the

Colno 1885-4

11.10.16

Current N.
5887
FINANCE / PL

Recd 11.10.16.

para. 6 on
p 7 CF.

Paras: 14+15 on
pp 10-11 CF.

expenditure. The total estimated cost and the contribution asked for from this Govt. are shown below:-

(1)	Total Cost (2) Lakhs	Contri- bution from Madras Govt. (3) Lakhs	Percent of Col. (3) to Col. (2) (4)
Non-recurring	5.00	1.00	20
Recurring (for a period of six years)	.75	.12	16.

2. Non-recurring:- The Director of Industries has 2 small Anderson expellers costing Rs 26,000 and an oil mill costing Rs 72,400 (exclusive of cost of erection etc). It is proposed to hand over the two expellers to the Institute and to lend it the use of the mill for a period of 5 years. In view of this help, it is proposed to offer a reduced contribution of Rs. 50 lakhs.

The total area cultivated with oil seed crops in the Madras Presidency was, according to the figures for 1912-13, 19 per cent of the area for the whole of India, so that the gross contribution of which is about 20% of the total cost 1 lakh asked for by the Director

Para: 10 on
page 9 CF
+ para: 14 on
page 10 CF

pp 31+32 ante

*only part of this
machinery has
been received

p. 30 ante

Page VI statistics of
India, vol I, 1912-13.
(put up)

52

of the ~~Bangalore~~ Institute is reasonable. This deptt. may therefore accept the proposal to offer .50 lakh, with the 2 expellers and a loan of the ~~oil~~ mill.

3 Recurring:- The recurring contribution of .12 lakh is only 16 per cent of the total cost and seems favourable to this Govt. The expenditure now being incurred on oil experiments by the Director of Industries will cease.

4 The Home (Ed.) deptt. has raised the question whether the sanction of the Govt. of India would be necessary to these grants. Reference is invited to rule 10 (10) in G.O. 464 Mil. & 17.8.16., and to rule III (12) on p. 7 of G.O. 508 Mil. & 4.9.16. The limits of Rs 10,000 for recurring and Rs 50,000 for non-recurring grants laid down in these rules refer to Charitable or religious institutions. The Institute of Science, Bangalore is an educational institution and it does not appear that the sanction of the higher authorities is necessary for the proposed grants. This question may perhaps be referred to the

A.G.

p 37 ante

Pana: 3 on pp
29-30 ante

of Rule 31 on page 13 of
G.O. 464 Mil. & 17.8.16.
Flag F

A.G., after H.E. the Governor has discussed the case with Sir Frederic Nicholson, in regard to soap experiments &c - pp 35-36 ante.

JAS
12.10.16 The Chief Secretary is leaving only early tomorrow. We shall have to consult. The A.G. Home may therefore if it wishes submit the file to H.E. Financial will reserve its remarks till the return of the file.

File no 5887-1
12-10-16.

JAS
12.10.16

Home Dept
(Education)

Dr. H. S.

The file may now be circulated to His Excellency.

MS
12/10/16

B. S. the Governor.

Submitted with reference to the last page of the Commission's report in p 34.

ELH
12.10.16

Now back to Financials, for further examination.
I have discussed with Sir F. Nicholson: and after
consulting with Mr. Lockman.

P.
18.10.16.

Final lco.

20/10/16.

Financial dept

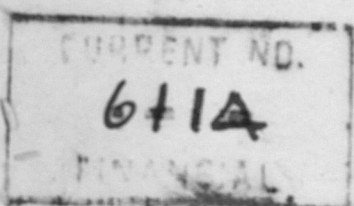
Please see the office note on
pages 36-39 ante. With ~~para:~~
reference to para: 4 of the note
(pp 38-39 ante) + A.S.'s note thereon,
a draft no. note to the A.C., is
submitted for approval.

YAS 21.10.16
VSK. 21.10.16

to me
21.10.16



Colno 1885-5
20.10.16



Regd: 21.10.16.

4114

P.T.O

52 41

CN 6114

U.O. note to A.G.

Financial Deptt

Very Urgent

msd 2/11/16

21.4.16

para: 6 on p7 C.F.

Para: 14+15 on p16-11 C.F.

p. 35 of note.

p. 34 of note

etc

It is proposed to establish at the Indian Institute of Science, Bangalore, a central experimental department for Technical problems connected with all India, in which ~~oil~~ and fat and allied industries could be examined. The Director of the Institute has addressed all local Govts for contributions towards the expenditure.

~~The Educational Deptt~~
It has been suggested that this Govt. should give the Institute a non-recurring grant of Rs 50,000 and a recurring grant of Rs 12,000 per annum. ~~It is~~ ^{also} proposed to hand over to the Institute free of cost the two Anderson expellers purchased for the Department of Industries at a cost of Rs 26,000 and to lend ~~the~~ ^{the institute} the use of the oil mill costing about Rs 72,400 for a period of 5 years.

2. Under rule 10(10) in G.O. 464 Mil. & 17.8.16 and rule III (12) on page 7 of G.O. No. 508 Mil. & 4.9.16, the sanction of the Secretary of State is required to a cash grants to charitable or religious institutions, which exceeds Rs 10,000 a year if recurring or Rs 50,000 if non-recurring. The Indian Institute of Science, Bangalore, is in the nature of an educational institution and ~~does the Govt.~~ it is considered that it does not fall within the scope of these rules. It therefore appears that the Local Govt. can sanction the proposed grants.

The Accountant General may be requested to be so good to offer his remarks on the question.

YAS
21.10.16.
O.S.K.
21.10.16.

21.10.16



CURRENT NO.
6397

Regd. 1-11-16

AG's No. 10232

31. X. 16



Paras. 2+3 on
pp 37+38 ante

300-7-5-14.

U. O.

Accountant General's Office

The Indian Institute of Science is, I think, a local body, to which the Local Government can sanction grants from Provincial Revenues not exceeding the limits specified in Rule 10 (12) of G.O. No. 464 Financial dated the 17th August 1916.

A. G. 31/10/16.

To

The Ch. Secy., to Govt.,

Financial Department, (U.O.)

Financial dept

[Please see the notes from page 36]

It is proposed that this Govt. should contribute towards the Central experimental department for the examination of oil, fat and allied industries to be established at the Indian Institute of Science, Bangalore. The contributions are to be:-

- (1) Recurring grant of Rs 12,000 per annum
- (2) Non-recurring grant of Rs 50,000
- (3) Free transfer of 2 Anderson expellers costing Rs 26,000
- (4) Lending an oil mill (costing

Rule 10(12) in p 8
G.O. 464 Finl. &
17.8.16 F

Rs 72,400) for a period of 5 years.
The A.G. has pointed out on page 43 ante that the Indian Institute of Science is a local body to which the Local Govt. can sanction ^{grants} upto 1 lakh recurring and 10 lakhs non-recurring. The proposed grants are according to the A.G. sanctionable by the Local Govt. [The Indian Institute of Science does not appear to be a local body as defined in art. 33 C.S.R., but the A.G. ~~seems to be~~ apparently considers that the term "local bodies" used in Rule 10(12) of G.O. 464 Finl. & 17.8.16 is used in a loose sense and not ~~strictly~~ in the sense of art. 33 C.S.R.; but it does not seem necessary to contest the A.G.'s decision, as the amounts in the present case are according to him within the sanctioning powers of this Govt.]

2. The proposed Contributions may, it is submitted, be accepted

* Budget provision for
1916-17 is 15 lakhs
(page 209 CSE)

* Budget provision
is 75 lakhs
(page 204 CSE)

The expenditure now being incurred
on oil experiments by the Director
of Industries will not then be
incurred. ^{possibly} ~~Probably~~ ~~also~~ the
charges incurred by the Honorary
Director of Fisheries on soap
experiments will ~~not~~ ^{also ultimately} cease.

— vide page 9 CF. in linked file

The grant if promised will presumably
be given only if other local Govt. also contribute.
For orders.

YAS
4.11.16.

✓
LD
8.11.16

CS
—

BR-
7.11.16

H.M. / Jul. shd. see.

PD Home (CSE) no

File no 6397-1
8.11.16

10/11

page 33 & 34 supra.

Home (CSE) Dept

Please see H.F. the Governor's
note on page 40 supra. Mr. Louch-
man is not in favour of trans-
ferring the soap plant with
Sir Frederick Nicholson to Bangalore.
Apparently His Excellency accepts
this proposal. Subject to ap-
proval, a draft letter to the
Director of the Bangalore
Institute is submitted below.

LD
8/11

The file may be circulated to H.E.
+ H.M. (Eni!).

SA
11-11-16.

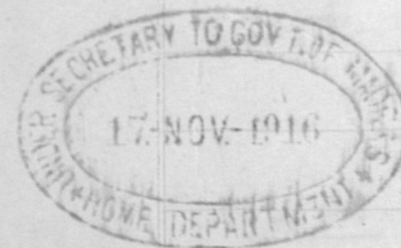
AB
15/11/16

S. Submitted.

It may be necessary to expand the draft
slightly by bringing the prices of the
oil-mill plant described by Mr. Couchman
on p 32 above; details of its value & uses
may be furnished; also the value of the
Anderson machines; presumed that the
mill will be lent; Mr. Couchman said "
may be given a lent".

2.11.16
16.11.16

I agree with the U.S.
who will please revise
the drafts on the lines
to be indicated



B
17.11.16

Resubmitted with the necessary addition to the draft.

As to the report on the working of the Anderson Expellers was unsatisfactory, the Govt. have sanctioned their sale Nov 9/16 Edn. of 12-9-16

24/11/16 Clean copy from

22-11-16

clean copy is submitted.

1. Submitted 24/11/16

22-11-16

22/11/16

Final for acceptance of the draft letter.

24/11/16

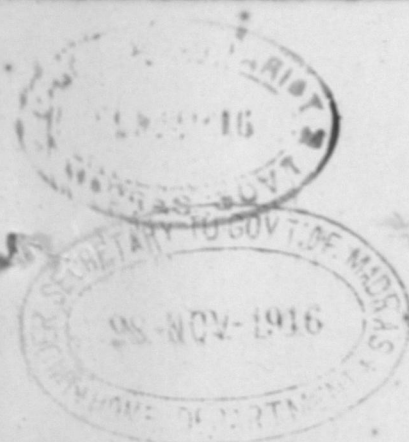
Financial Dept

For As.

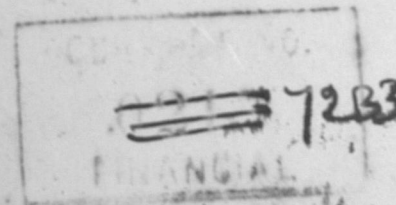
The draft letter may, it is submitted, be accepted in final.

30-11-16

I run here to think



958 no 1895-6 28-11-16



Regd. 11/16

Note: An. of provision of funds will be considered in connection with the Budget

that the draft should state
definitely that our offer is
conditional upon other local
work joining in the scheme.

C.S. 1.12.16

Yes: H.H. / Fml must see before
letter issues. 8
20.16

Final 4-0.7233-1
4-12-16

20. Home (Edm) no.

Home (Edm) Dept

Please see the addition made
to the draft. If approved,
the file may be circulated
to H.E. the Governor + H.H. (Fml).

C.S.
4.12.16.

S.

11/5
5/12/16

C.S.
6.12.16

Prox 29
air 7.12.16
retd 11.12.16

H.E. and H.H. (As and Fml)

7/12/16.

62

It will I suggest be a sufficient safeguard
to us if we say "for the present conditional"
instead of "conditional" in the draft -
I will leave the door open for other possible
arrangements if this scheme is dropped.

P
9.12.16.

slg
10.12.16

J. D. W.

11/12/16



[Ex. No 1334 of the 11.12.16]

Home (Education) Department

No 1334 of the 11.12.16.

LETTER:

Mis

To

The Director of the

Indian Institute of Science,

Bangalore.

Sir, (with specific reference to the proposal placed before the Government)

I am directed to acknowledge the

receipt of your letter No. 4468, dated

the 15th September 1916, and in

reply to state that the Madras

Government ^{are to} approve the proposal to

establish in the Indian Institute of

Science at Bangalore a central experi-

mental department to deal with tech-

nical problems connected with the oil,

fat and allied industries.

2. The initial cost of the scheme

is estimated at between 4 and 5 lakhs

of rupees and the recurring expendi-

ture at Rs. 75,000 per annum, and you

inquire whether this Government are

prepared to contribute one lakh of

rupees towards the capital outlay and

Recd + despd
with initials
mws
13.12.16.

p. 5 to 11 of cf.

p. 9 of cf.

p. 10 of cf.

6.3

64
sold in the meanwhile, and also to
lend for use in the Institute the
hydraulic oil mill for a period of five
years. In addition, they are ~~will~~
prepared to contribute a sum of
Rs.50,000 towards the initial cost of
the scheme. As desired in your letter
the Governor in Council is willing to
contribute a sum of Rs.12,000 per
annum for a period of six years towards
the annual expenditure incurred in the
conduct of the experiments.

3. I am desired to inquire whether
the terms detailed above are accept-
able to the authorities of the Institute
and to request that the final decision
arrived at in the matter of the insti-
tution of the experiments may be com-
municated to this Government as early
as possible.

I have etc.

N.K.
15-11-16.E.A.
23/11/16

62

to guarantee an annual contribution
of not less than Rs.12,000 for a
period of six years. With a view to
carrying on experiments in oil press-
ing, this Government have already
purchased two Anderson Expellers at a
cost of Rs.26,000, and also a large
hydraulic oil mill costing about
Rs.72,400. As will be seen from the
specifications herein enclosed, the
oil mill is a large up-to-date plant
and would be valuable for the pur-
poses of the proposed experiments.

Till now only a part of the machinery,
costing Rs.35,468, has been received
from England and this has already
been set up in Madras; but ~~it~~ ^{it can} be
dismantled and railed to Bangalore at
the expense of this Government. In

the event of experiments being under-
taken in the Indian Institute of
Science on the lines indicated in
your letter, this Government will be
prepared to transfer to the Institute
the two Anderson Expellers, if not

p. 41 of nt.

* placed below eq.

p. 32 of nt.

I am however to explain
that the apparatus described
is conditional upon other
local govt. financing in
the scheme

When given for copying
 When copied 12-12-1916
 When examined
 When signed

HEAD AGAIN G.O., No.
 19

DATED

CURRENT No.

ENCLOSURES TO C. No.

ORDER OF GOVERNMENT

LETTER OF GOVERNMENT

STATEMENT WITH DITTO

PAPERS NOT FILLED UP, BEING MEANT FOR DESPATCH
 IN ORIGINAL

N.B.—

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- P = Copy abstract only.
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A A A A A A A