

From Dr. Hill's report it may be assumed that pollution is general throughout the period June to November, with periods of higher concentration. The positive indications seven times during the twenty-two weeks period is sufficient evidence of the prevalence of contamination. It is quite possible that if samples had been taken more often a higher percentage of positive indications would be found.

The absence of fecal bacilli at the tap coincident with their presence at the intake, as pointed out by Dr. Hill in his report, I do not think has any particular significance. Water is pumped daily and no treatment is provided, therefore one can have little reason to suppose that complete elimination occurs at all times. I am of the opinion that if samples had been taken oftener at the tap the presence of fecal bacilli would have been disclosed.

Nothing may be found in the chemical analysis supplied by the Provincial Analyst to prevent the use of the water for ordinary purposes.

#### TREATMENT OF ST. MARY'S RIVER WATER

Treatment of the present supply may be effected by chlorination and filtration. With a carefully applied process it is usually assumed that results as high as 99% efficiency may be attained.

Mechanical pressure filters in three units should be employed to give an adequate supply for backwashing and a chlorinator of an automatic type would be the more reliable in operation as

copy

well as providing a greater degree of accuracy in treatment.

The results obtained with such a system would be proportionate to the care with which the treatment is applied.

Chlorination apparently would only be necessary during the months June to November, and should afford practically complete sterilization.

#### POSSIBLE SOURCES OF SUPPLY

The available sources of supply may be summarized as follows:-

St. Joseph's Creek

St. Mary's River

Water from underground sources

The first mentioned of these, St. Joseph's creek, while suitable for development as a source for fire protection purposes, would not prove desirable for domestic use. Sewage from the city of Cranbrook, situated about six miles upstream from the Mission, finds its way into the stream and as this sewage constitutes possibly fifty per cent of the flow of the creek, it should not be given consideration for the latter purpose.

In respect to St. Mary's river, pollution is more likely to be augmented rather than to diminish for the reason that new developments at the Sullivan Mine will probably enlarge the capacity of the various plants situated in this watershed with a consequent increase in population. No sanitary measures have been taken up to the present in the handling of sewage from the communities in the watershed.

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It will be apparent that water for domestic requirements will have to depend upon a supply from underground sources or upon a chemically treated supply from either of the above mentioned streams.

In regard to securing a supply from ground sources, no particular investigations have been made in this connection. That there exists possible sources of supply of that nature is almost an assured fact as springs are noticeable in the locality. As to whether these are fit for use or may be tapped can only be determined by tests. It is possible that these springs may be the result of seepage from St. Joseph's creek.

In considering a supply from such a source, the fact must not be overlooked that it is occasionally necessary to provide treatment for underground water to make it suitable for some uses.

However, it may generally be assumed that a good well provides water of superior quality to that from streams which require treatment of a chemical nature.

With these points in mind I am of the opinion that the best interests of the school would be served by attempting to secure a suitable supply from underground sources even if some form of treatment should be required.

#### RECOMMENDATION

I would recommend that tests be carried out to determine the possibility of securing a

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suitable supply of water from underground.

The cost of such tests should not exceed \$500.00 and should prove well worth while. As to the cost of providing for a supply from such a source this can only be determined after the water is found. It is possible that the present equipment could be adapted to such a supply. On the other hand, if the depth of the well exceeded twenty-five feet, new pumping equipment would be necessary.

Surveys are to be carried out during the coming month at St. Mary's Indian Reserve, nearby. Supervision of well tests could be made at the same time if funds could be made available immediately.

#### FUTURE DEVELOPMENTS

In the event of finding a satisfactory supply of water for domestic use from wells, the most economical development for fire protection purposes would be by gravity system from St. Joseph's creek, as it is very doubtful if a ground flow would be available at a sufficient rate for such a purpose. Such a system as outlined would cost, with complete fire equipment inside and outside the buildings, approximately \$9000.00.

Should attempts at securing a usable supply from below ground prove unsuccessful, development of a supply from St. Mary's river would prove more economical for both domestic use

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and fire protection purposes and could be carried out for approximately \$13,500.00.

Hereto are appended copies of report on bacteriological investigations made by Dr. Hill of Vancouver General Hospital Laboratories, and of chemical analysis made by Mr. Whittaker, Provincial Analyst.

Your obedient servant,

*W. C. Warren*

W. C. Warren  
Asst. Hydraulic Engineer.

APPROVED:

*W. C. Warren*  
-----  
District Chief Engineer

Indian Affairs (RG 10 Volume 6453, file 884-5 part 3)

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C O P Y

THE GOVERNMENT OF  
THE PROVINCE OF BRITISH COLUMBIA

GOVERNMENT LABORATORY

VICTORIA

12th March, 1929.

Analysis of water for C. E. Webb, Esq. District  
Chief Engineer, Department of the Interior,  
Vancouver, B. C.

Sample from St. Marys River.

-----

Free ammonia parts per million	Nil
Albuminoid ammonia parts per million.	.01
Chlorine grains per gallon.	0.9
Total solids grains per gallon	6.0
Sulphates	Trace
Metals	Nil

The analysis shows the water to be of good quality,  
being free from Animal contamination and practically  
free from decomposed vegetable matter, the analysis  
shows no contamination from the Kimberley concen-  
trator, the solids 6.0 grains per gallon is prac-  
tically all Lime with a little silica.

(Sgd) D. E. Whittaker  
Provincial Analyst.

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THE VANCOUVER GENERAL HOSPITAL  
Vancouver, B.C.

From - H. W. Hill, M.B., M.D., D.P.H., L.M.C.C.,  
Director, V. G. H. Laboratories,  
Vancouver, B. C.

To - Mr. C. E. Webb,  
District Chief Engineer,  
Dominion Water Power and Reclamation Service.

Date - December 6, 1929.

In reply to yours of December 2, 1929,  
your file no 25720-2, re Domestic Water Supply, St.  
Eugene Industrial School, Cranbrook, B. C.

Dear Mr. Webb:

As requested by you I enclose herewith a recapitulation of our tests of 144 water samples submitted approximately weekly by you, Feb. 13, 1929--November 30, 1929. These tests were in each case examinations for Fecal Bacteria in 1/10cc., 1cc., and 10cc., of the water submitted; which water consisted of duplicate samples labelled Intake and Tap.

An inspection of these results indicates no Fecal bacteria found from the beginning of the run, Feb. 13, 1929, to June 6th, 1929--56 samples in all, or 16 weekly sample lots in all. (Sometimes 2 instead of 4 samples were received.)

Following June 6, 1929, 88 samples were submitted covering 22 weeks (one not finished at this date); of these the following showed Fecal Bacteria present.

			Lowest Amount of Water showing positive
June 12	Tap (Dup. Samples)	+	10 cc.
June 19	Intake (one dup.+, one -)	+	1/10cc+in 1 Dup. = + in 1/5 cc.
Aug. 14	Intake (one dup.+, one +)	+	1 cc.
Sept. 6	Intake (one dup.+, one +)	+	1 cc.
Sept. 13	Intake (one dup.+, one +)	+	10cc.
Oct. 26	Intake (one dup.+, one -)	+	1/10cc.+ in 1 dup. = + in 1/5cc.
Nov. 8	Intake (one dup.+, one +)	+	1/10cc.
Nov. 18	Intake (one dup.+, one -)	+	1/10cc + in 1 dup = + in 1/5cc.

The proportional numbers of fecal bacilli present are indicated roughly by the amount of water required to give a positive test--thus the tap showed fecal bacilli once only and then in 10cc. The Intake however showed fecal bacilli seven times in all; six times in the last four months as against once in the previous five months; on one occasion they were found in 10cc; on 2 occasions they were found in 1cc., on 3 occasions in 1/5cc.; the last three now complete showing twice in 1/5cc, once in 1/10cc.

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C. E. Webb-continued. -2-

It is fair then to assume that fecal bacilli have been increasing in frequency and concentration since June.

The freedom of the tap sample from fecal bacilli (except once, and then only in 10cc) suggests that the water becomes rid of the fecal bacilli in its passage from intake to tap. Knowing nothing of the lay-out of the supply we cannot offer any specific explanation for this change. Lapse of time, opportunity for sedimentation, filtration, chlorination, etc. would of course act to diminish them between these two points.

As to further samples being necessary, I suggest that you decide thus--if our results so far are consistent with increasing contamination of the supply as evident from inspection I should think no more samples were required. But if our results are not consistent with the inspection results and further analytical evidence would help to elucidate the discrepancy, it would be well to run tests to next February, thus furnishing figures for one complete year.

Very sincerely yours,

(H. W. Hill, M.D.)  
Director, V. G. H. Laboratory

HWH/B  
Copy to  
Dr. Young.

Indian Affairs (RG 10 Volume 6453, file 884-5 part 3)

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THE VANCOUVER GENERAL HOSPITAL,  
Vancouver, B.C.

From - H. W. Hill, M.B., M.D., D.P.H., L.M.C.C.,  
Director, V. G. H. Laboratories,  
Vancouver, B. C.

Date - April 17, 1930.

To - C. E. Webb, District Chief Engineer,  
Dominion Water Power and Reclamation Service,  
739 Hastings St. Vancouver, B. C.

In reply to your of April 15, 1930, your file  
No. 25720-5 Re Water Supply for St. Eugene  
Kootenay Indian Residential School.

Dear Mr. Webb:

Our files show the following examinations  
re above supply, including and since November 13,  
1929.

Water received from E. H. Small, Cranbrook,  
B.C.

<u>Date</u>	<u>Sample</u>	<u>Result</u>
Nov. 30/29	Intake	Fecal Bacteria absent
	Intake	" " "
	Tap	" " "
	Tap	" " "
Dec. 13/29	Intake	" " "
	Intake	" " "
	Tap	" " "
	Tap	" " "
Mar. 13/30	Intake	" " "
	Intake	" " "
	Tap	" " "
	Tap	" " "

The interpretation is obvious--during this  
period no sewage contamination showed itself.

I should think that further tests were  
hardly necessary as you now have a years run.

If you wish I shall be glad to see you  
here for further discussion.

Very sincerely yours,

(H. W. Hill, M.D.)  
Director, V. G. H. Laboratories.

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155-0-5

PLEASE ADDRESS YOUR REPLY TO  
THE DIRECTOR OF  
WATER POWER AND RECLAMATION  
DEPARTMENT OF THE INTERIOR  
CANADA



DIRECTOR, J. T. JOHNSTON, C.E., M.E.I.C.  
ASST. DIRECTOR, V. MEEK, B.SC., M.E.I.C.

PLEASE REFER TO ONE SUBJECT IN A  
LETTER, AND IN YOUR REPLY QUOTE  
FILE NO. 2543-111A

MFC\*ZB

RT

DEPARTMENT OF THE INTERIOR  
CANADA Hydrometric Bureau  
DOMINION WATER POWER AND RECLAMATION SERVICE

OTTAWA, ONT. July 4th, 1930.

*ac*

DEPT. OF INDIAN AFFAIRS  
JUL 7 1930  
RECORDS

Sir,

Your file number: 155-0-5.

In further reference to your letter of April 7th last regarding the domestic water supply for the St. Eugene Indian residential school at Cranbrook, B.C., I enclose herewith a report received from Mr. Webb dealing with this subject.

From this report you will note that neither St. Joseph's creek nor St. Mary's river, the present source of supply, are considered satisfactory without treatment, and it is suggested that an attempt be made to secure water from underground sources. Test wells will have to be driven in order to ascertain the possibilities of an underground supply and it is recommended that authority be given to proceed with these tests, at an estimated cost not exceeding \$500.

*Inds can  
be found in  
for this R.T.*

Mr. Warren, who prepared the report, is at the present time working in the Cranbrook area making a survey of the land capable of being irrigated from the St. Mary's river on the neighbouring reserve, and he would readily be able to supervise the test wells at the same time. Future developments will depend on the result of these tests.

A copy of this report has been sent to Mr. Ditchburn and I shall be glad to have your instructions in regard to it.

Your obedient servant,

J. T. Johnston,  
Director.

Per *M. F.C.*

A. F. MacKenzie, Esq.,  
Acting Assistant Deputy and Secretary,  
Department of Indian Affairs,  
Ottawa.

Indian Affairs (RG 10 Volume 6453, file 884-5 part 3)

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July 12, 1930.

Sir,-

Replying to your letter of the 4th instant, with further reference to the domestic water supply system for the St. Eugene School at Cranbrook, I beg to say that the Department approves of your recommendation that an attempt be made to secure water from underground sources and that test wells be driven for this purpose. It is noted that the cost will be approximately \$500.00.

Your obedient servant,

*A. P. MacKennis*  
A. P. MacKennis,  
Acting, Asst. Deputy & Secretary.

*[Handwritten initials]*  
Director,  
Dominion Water Power Branch,  
Ottawa.

Indian Affairs (RG 10 Volume 6453, file 884-5 part 3)

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Cranbrook, B.C.,

June 30th.

19 30

M Dept. Indian Affairs,



CITY.

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Wholesale and Retail Dealers in

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**McCLARY'S STOVES**  
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**PLUMBING**  
Builders' Material

Terms: Cash. Interest at 10 per cent. charged on all overdue accounts.

Date	DESCRIPTION	Folio	Credits	Debits	Total
June 26	for <u>St. Eugene Indian School.</u> 1 Myers Hay Carrier complete with track.	6730		<u>91 00</u>	91 00

*Certified Correct*  
*J.M. Patterson, O.M.I.*  
*Principal*  
*Kootenay Indian Res. School.*

CRANBROOK COURIER PRINT

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*155-0-5*

*155-0-5*



CANADA

Letter No.....

Office of the..... Kootenay..... Indian Agency,

Cranbrook, B.C.,

July 10th, 1930. 19.....

**R**

Sir,

I enclose herewith Vouchers Nos. 146.....,

amounting to \$ 91.00..... in favour

of F. Parks & Company, Cranbrook, B.C......

for 1 Myers Hay Carrier complete, supplied  
Kootenay Indian Residential School, June, 1930.

This expenditure was authorized by Departmental

Letter No. 155-0-5..... dated June 18th, 1930......

*Pay  
Gives*

Your obedient servant,

*F. S. Ruckman*

F. S. Ruckman,

Constable - Farm Instructor,  
In Charge Kootenay Indian Agency.

**Indian Agent.**

The Secretary,  
Department of Indian Affairs,  
Ottawa.

Form No. 101

Indian Affairs (RG 10 Volume 6453, file 884-5 part 3)

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PLEASE ADDRESS YOUR REPLY TO  
THE DIRECTOR OF  
WATER POWER AND **HYDROMETRIC BUREAU**  
DEPARTMENT OF THE INTERIOR  
OTTAWA, CANADA



MFC+ZB

DEPARTMENT OF THE INTERIOR  
CANADA  
DOMINION WATER POWER AND **HYDROMETRIC BUREAU**

155-0-5  
DIRECTOR, J. T. JOHNSTON, C.E., M.E.I.C.  
ASST. DIRECTOR, V. MEEK, B.Sc., M.E.I.C.

PLEASE REFER TO ONE SUBJECT IN A  
LETTER, AND IN YOUR REPLY QUOTE  
FILE No. ....2543-W"A".

JUL 16 1930

RECORDED

OTTAWA, ONT.

July 15th, 1930.

*[Handwritten signature]*  
Sir,

Your file number: 155-0-5.

I have received your letter of the 12th instant with reference to the domestic water supply system for the St. Eugene school at Cranbrook, B.C., and note that our recommendation is approved with regard to drilling test wells to endeavour to secure water from underground sources. Mr. Webb has been advised accordingly and asked to have this work done as soon as possible.

Your obedient servant,

J. T. Johnston,  
Director.

Per

*A.F.C.*

A. F. MacKenzie, Esq.,  
Acting Assistant Deputy and Secretary,  
Department of Indian Affairs,  
Ottawa.

Indian Affairs (RG 10 Volume 6453, file 884-5 part 3)

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Cranbrook, B. C.,  
July 10, 1930.

Sir:-

Re: St. Eugene School,  
Storage Battery,  
Electric Light Plant.

As requested by you I made an inspection of the above mentioned plant and wish to report as follows.

The present battery, a Delco, was installed about three years ago and although it has had to carry a considerable overload, it has stood up well which is probably due to the good care it has received. While it apparently has not yet served its useful term of life, it is undoubtedly inadequate for the service for which it was intended. This battery has a capacity of about 160 ampere hours and should not be expected to provide current at a greater rate than about 10 to 15 amps per hour for continuous service or sufficient for about 50 lights whereas the maximum demand is about double that rate, as a result of which the battery becomes fully discharged early in the evenings, especially during winter time.

This necessitates the operation of the engine driven generator to carry the load for a large part of the evening. As this machine has an output of 80 amps at full load the efficiency is not very high when operating at less than half load or about 4 amps, the normal lighting load.

District Chief Engineer,  
Dominion Water Power & Hydrometric Bureau,  
739 Hastings Street West,  
VANCOUVER, B. C.

Indian Affairs (RG 10 Volume 6453, file 884-5 part 3)

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It will be apparent that a smaller engine plant would be more suitable except for the fact that the laundry machinery is operated by electric motors and requires about 5 K.W. which the large plant will handle nicely and charge the battery at the same time.

The installation of a larger battery would provide a greater operating economy. I would suggest a battery of approximately 300 amp. hours capacity which would take a higher charging rate and would not require the operation of the engine plant every evening as at present.

The installation of a new larger battery would not require the scrapping of the present battery as they may be run in parallel until such time as the old one is completely worn out.

Mr. Ditchburn has suggested a made in Canada battery. I am under the impression that there is not any completely made in this country.

The battery installed at Sechelt cost about \$1360.00. It is an Exide, supplied by the Crawford Battery Company of Vancouver and has given good satisfaction for the past three years. Any other make of equal rating at a price equivalent to that suggested, should give equally good service.

I would suggest that if it is the intention of the Department of Indian Affairs to have a new battery installed, that it should

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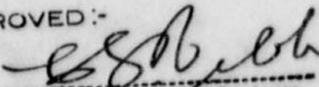
be undertaken before the 1st of October as at that time the demand on the plant becomes heavy and the replacement would be most useful to the school.

In addition to the outlay for the battery which has been estimated to cost \$1360.00 f.o.b. Cranbrook, some additional expenditure amounting to about \$130.00 would be necessary for fixed resistance switching and wiring to charge the two batteries in parallel so that the cost of the new battery installed would amount to about \$1500.00.

Your obedient servant,

W. C. Warren  
Asst. Hydraulic Engineer.

APPROVED:-

  
-----  
District Chief Engineer

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PLEASE ADDRESS YOUR REPLY TO  
THE DIRECTOR OF  
WATER POWER AND [REDACTED] HYDROMETRIC BUREAU  
DEPARTMENT OF THE INTERIOR  
CANADA



DIRECTOR, J. T. JOHNSTON, C.E., M.E.I.C.  
ASST. DIRECTOR, V. MEEK, B.Sc., M.E.I.C.

PLEASE REFER TO ONE SUBJECT IN A  
LETTER, AND IN YOUR REPLY QUOTE

FILE NO. ...2543-W "A"...

MFC:MLP  
DEPARTMENT OF THE INTERIOR  
CANADA  
DOMINION WATER POWER AND [REDACTED] HYDROMETRIC BUREAU

OTTAWA, ONT. July 24, 1930.

Sir:

*[Handwritten signature]*  
Re: St. Eugene School Electric  
Lighting Plant.

On the 13th June last Mr. Ditchburn requested Mr. Webb to investigate the electric lighting plant at the St. Eugene Indian School at Cranbrook, B.C., and I have today received from Mr. Webb a report on the storage battery for the electric lighting plant at that school.

You will note that it is suggested that a larger battery be installed at an estimated cost of \$1,500.

This report has also been sent to Mr. Ditchburn.

Your obedient servant,

J. T. Johnston,  
Director.

*for Mr. F.C.*

A. F. MacKenzie, Esq.,  
Acting Assistant Deputy and Secretary,  
Department of Indian Affairs,  
Ottawa.

Indian Affairs (RG 10 Volume 6453, file 884-5 part 3)

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155-0-5

PLEASE ADDRESS YOUR REPLY TO  
THE DIRECTOR OF  
WATER POWER AND ~~HYDROMETRIC BUREAU~~  
DEPARTMENT OF THE INTERIOR  
CANADA



DIRECTOR, J. T. JOHNSTON, C.E., M.E.I.C.  
ASST. DIRECTOR, V. MEEK, B.Sc., M.E.I.C.

PLEASE REFER TO ONE SUBJECT IN A  
LETTER, AND IN YOUR REPLY QUOTE

FILE No. ....2543-W "A"  
Your file 155-0-5

DEPARTMENT OF THE INTERIOR  
CANADA  
DOMINION WATER POWER AND ~~HYDROMETRIC BUREAU~~

MFC/MLP  
*[Handwritten signature]*



July 24, 1930.

Sir:

In further reference to your letter of the 12th instant regarding the domestic water supply system for the St. Eugene Indian School at Cranbrook, I am advised by Mr. Webb that a spring has been located which appears to be a suitable source of supply for this school. Tests are to be made as to the quality and purity of the spring and if it should provide a suitable supply it may not be necessary to expend the \$500. authorized in your letter of the 12th instant for the sinking of test wells.

A further report is expected in the course of a few days.

Your obedient servant,

J. T. Johnston,  
Director.

*[Handwritten signature]*

A. F. MacKenzie, Esq.,  
Acting Assistant Deputy and Secretary,  
Department of Indian Affairs,  
Ottawa.

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PATMORE BROS.

Tinners, plumbers and steam fitters  
All Kinds of sheet metal work.

Cranbrook, B.C.,  
July 21, 1930.

F.S. Ryckman, Esq.,  
Department of Indian Affairs,  
Cranbrook, B.C.

Dear Sir:

After having made a careful examination of the heating system in the basement of the Kootenay Indian Residential School, I beg to submit the following for consideration.

Primarily, the mains in the rooms inadequately heated should have the asbestos covering removed. This would make an approximate difference of one foot of radiation for each foot and one half of pipe uncovered, which would make an appreciable difference in the heating of the rooms, as will be readily seen. Care should also be taken, in the event of the radiators remaining in their present positions, to have them properly vented at least once each week, through vents supplied for that purpose and now in place.

As hot water is the system used in heating the School, the radiators will not function if placed below the mains, which are at present some three feet from the ceilings of the rooms. And as it is desirable to have the heat circulating as closely to the floor as possible, I would suggest that this could be accomplished by having one or more electric fans playing on the ceiling in each room. I would also suggest that this be tried out in one room only, and if it is then found that it functions satisfactorily, the remainder of the rooms could be similarly equipped. I would suggest, also, that ~~the~~ storm windows should be supplied for all basement windows.

In the heating of these rooms, two other courses are open. First, the radiators now in use to be removed from the ceilings and placed near the floors. Second, these radiators remain where they now are and additional radiators placed near the floors. In either case it would necessitate new mains being installed, but these would be smaller than those now in use and would be run under the floors.

As either of the above would be rather costly, I would strongly advise that the use of electric fans, as recommended, be given serious consideration. The cost of this will be very little, and if it does not prove entirely satisfactory I shall be pleased to submit estimates of the two other systems as set forth above.

Yours truly,  
Patmore Bros.  
Per H.S. MacLaughlin.

Indian Affairs (RG 10 Volume 6453, file 884-5 part 3)

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POOR COPY



155-0-5

DEPT. OF INDIAN AFFAIRS  
JUL 30 1930  
RECORDS

DEPARTMENT OF INDIAN AFFAIRS  
CANADA

R

IN YOUR REPLY REFER TO  
No. 15/5/18415  
ALSO TO DATE OF THIS LETTER

COMMISSIONER'S OFFICE,  
P. O. BOX 666

VICTORIA, B.C. July 25, 1930.

SCHOOL FINANCE  
AUG 1 1930

*[Handwritten signature]*  
Sir:

With further reference to Departmental letter dated July 8, instant, No. 155-0-5, I have the honour to make reference to the proposal suggested with respect to the readjustment of the heating system at the Kootenay Indian Residential School. The Department's instructions to have a steam-fitter report on the position of the radiators have been duly carried out, and I am in receipt of a report made by Messrs. Patmore Bros of Cranbrook, B.C., copy of which is sent herewith and will be self-explanatory. This report will explain some of the difficulties to be met with in the changing of the present system.

Mr. MacLaughlin of the Patmore Bros. Company states that had the heating been steam instead of hot water it would have been fairly easy to move the radiators for the steam could be forced downward, but that this cannot be done with hot water. Mr. MacLaughlin states also that provided the asbestos covering is removed from the mains there is ample radiation in the rooms as they now are, but that the heat remains near the ceilings and the floors will always be cold unless some method is used to force the heat down. It is for this reason that the use of electric fans has been recommended, and it has been submitted that if this proves to be satisfactory it will be an easy and inexpensive solution of the difficulty. As the number and cost of these fans have not been stated in the correspondence, I have written to ascertain further information and this will be forwarded to the Department in due course.

*Account  
other letters*

Your obedient servant,

*[Handwritten signature: W.E. Ditchburn]*

W.E. Ditchburn,  
Indian Commissioner for B.C.

Enc.  
P/TH.

The Secretary,  
Department of Indian Affairs,  
O T T A W A .

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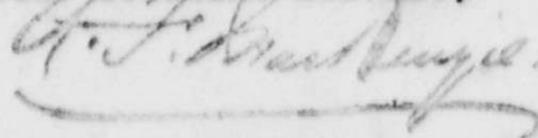
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Ottawa, August 1, 1930.

Sir:

The Department has received a copy of the report of Mr. Webb, of the Dominion Water Power Bureau, which has reference to the lighting plant at the Kootenay Indian Residential School. I understand he made the examination at your request. If you have not already written the Department in the matter, please let me have a recommendation. I understand that you have a copy of the report. The Appropriation for Indian Education is completely assigned and the improvements that can stand until next year will have to wait; but, if a new and larger battery is really required this year, it may be possible to find funds for the purpose.

Your obedient servant,



A. F. MacKenzie,  
Acting Asst. Deputy & Secretary.



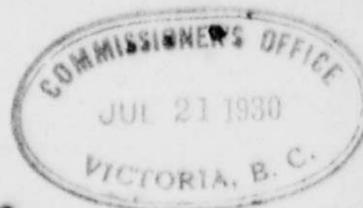
W. E. Ditchburn, Esq.,  
Indian Commissioner,  
P. O. Box 666,  
Victoria, B. C.

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Granbrook, B. C.,  
July 10, 1930.



Sir:-                    Re: St. Eugene School,  
Storage Battery,  
Electric Light Plant.

As requested by you I made an inspection of the above mentioned plant and wish to report as follows.

The present battery, a Delco, was installed about three years ago and although it has had to carry a considerable overload, it has stood up well which is probably due to the good care it has received. While it apparently has not yet served its useful term of life, it is undoubtedly inadequate for the service for which it was intended. This battery has a capacity of about 160 ampere hours and should not be expected to provide current at a greater rate than about 10 to 15 amps per hour for continuous service or sufficient for about 50 lights whereas the maximum demand is about double that rate, as a result of which the battery becomes fully discharged early in the evenings, especially during winter time.

This necessitates the operation of the engine driven generator to carry the load for a large part of the evening. As this machine has an output of 80 amps at full load the efficiency is not very high when operating at less than half load or about 4 amps, the normal lighting load.

District Chief Engineer,  
Dominion Water Power & Hydrometric Bureau,  
739 Hastings Street West,  
VANCOUVER, B. C.

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It will be apparent that a smaller engine plant would be more suitable except for the fact that the laundry machinery is operated by electric motors and requires about 5 K.W. which the large plant will handle nicely and charge the battery at the same time.

The installation of a larger battery would provide a greater operating economy. I would suggest a battery of approximately 300 amp. hours capacity which would take a higher charging rate and would not require the operation of the engine plant every evening as at present.

The installation of a new larger battery would not require the scrapping of the present battery as they may be run in parallel until such time as the old one is completely worn out.

Mr. Ditchburn has suggested a make in Canada battery. I am under the impression that there is not any completely made in this country.

The battery installed at Sechart cost about \$1360.00. It is an Exide, supplied by the Crawford Battery Company of Vancouver and has given good satisfaction for the past three years. Any other make of equal rating at a price equivalent to that suggested, should give equally good service.

I would suggest that if it is the intention of the Department of Indian Affairs to have a new battery installed, that it should

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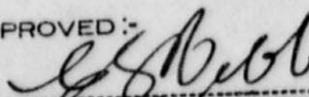
be undertaken before the 1st of October as at that time the demand on the plant becomes heavy and the replacement would be most useful to the school.

In addition to the outlay for the battery which has been estimated to cost \$1360.00 f.o.b. Cranbrook, some additional expenditure amounting to about \$150.00 would be necessary for fixed resistance switching and wiring to charge the two batteries in parallel so that the cost of the new battery installed would amount to about \$1500.00.

Your obedient servant,

W. C. Warren  
Asst. Hydraulic Engineer.

APPROVED:-

  
District Chief Engineer

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DEPARTMENT OF INDIAN AFFAIRS  
CANADA

COMMISSIONER'S OFFICE  
P. O. BOX 666

VICTORIA, B. C.

DEPT. OF INDIAN AFFAIRS  
AUG 5 1930  
RECORDS

July 29, 1930.

IN YOUR REPLY REFER TO

No. 15/5/18457.

ALSO TO DATE OF THIS LETTER

*Handwritten signatures and initials*

2 Dear Sir:-

Re-Lighting Plant St. Eugene Mission,  
Cranbrook, B. C.

Attention Mr. Orr.

In connection with the repairs to the lighting plant at the Cranbrook Indian Residential School, it has been found that the batteries are in very bad condition and Mr. Engineer Warren, of the Dominion Water Power Branch, who is at present in the Kootenay Agency has made a report as to what is necessary, recommending that one battery of approximately 300 ampere hour capacity should be purchased and installed. This battery is known as the Exide and supplied by the Crawford Battery Company, Vancouver, B. C., the cost of which is \$1,360.00, which with freight charges will amount to about \$1,500.00.

I am hereto attaching copy of Engineer Warren's report on this matter and beg to recommend that authority be given for the purchase of this battery set.

Your obedient servant,

*W. E. Ditchburn*

W. E. Ditchburn.  
Indian Commissioner for B. C.

WED/KD.

Enclosure:-

The Secretary,  
Department of Indian Affairs,  
Ottawa.

*Handwritten notes:*  
Funds?  
none: if possible  
stand till  
next yr  
A.R.

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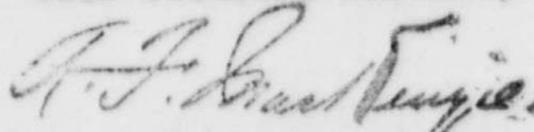
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Ottawa, August 7th, 1930.

Sir,-

I have your 15/5/18457 of the 29th ultimo, enclosing the report on the lighting plant at the Kootenay Indian Residential School, and note that the improvement will cost about \$1,500. As I stated in my letter of the first instant, there are no funds for the purpose this year. After careful reading of the report, I am unable, as yet, to determine the urgency of the matter. Perhaps you should inquire from Mr. Webb whether it is really urgent.

Your obedient servant,



A. F. Mackenzie  
Acting Asst. Deputy and Secretary.



W. E. Ditchburn, Esq.,  
Indian Commissioner,  
P. O. Box 666,  
Victoria, B. C.

Indian Affairs (RG 10 Volume 6453, file 884-5 part 3)

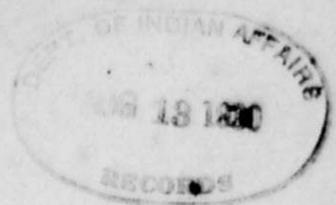
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155-0-5

R



DEPARTMENT OF INDIAN AFFAIRS  
CANADA

IN YOUR REPLY REFER TO  
No. 15/5/18344.  
ALSO TO DATE OF THIS LETTER

COMMISSIONER'S OFFICE,  
P. O. BOX 666  
VICTORIA, B.C. August 8, 1930.

*Handwritten signatures and initials*

*W. E. Ditchburn  
Aug 27 1930  
PAC*

Sir:

I have the honor to acknowledge receipt of your letter No. 155-0-5, dated August 1st instant, in regard to the proposed battery set for the electric plant at Kootenay Indian Residential School, Cranbrook, B.C.

In reply thereto I beg to say that certain parts were purchased for the generator during the present year. No definite arrangements were made regarding the purchase of a 23 plate battery set, as suggested by the Principal for service in the operation of a freezing plant as well as the general lighting plant, until a report could be had from an engineer of the Dominion Water Power & Hydrometric Bureau, whose advice was thought advisable before acceding to a request made by Reverend Principal Patterson that he be allowed to purchase a battery set in New York which would have cost approximately \$1800.00 laid down at Cranbrook.

*Funds?*

The set now proposed by Mr. Engineer Warren to be purchased in Vancouver, B.C. would cost about \$1500.00 installed at the School, and I would recommend that authority be given for the purchase of the set recommended in Mr. Warren's report, copy of which was forwarded to the Department on July 29th ultimo from this office, addressed to the Secretary and annotated for the attention of Mr. Orr.

*Should we not wait until he replies to letter of 7th inst? PAC*

It is thought that if funds can be made available now for the purpose this should be done so that the plant might be put into efficient condition before the shorter days come for service during the winter.



Your obedient servant,

*W. E. Ditchburn*

W. E. Ditchburn,  
Indian Commissioner, Tor B.C.

P/AC

The Secretary,  
Department of Indian Affairs,  
Ottawa, Ont.

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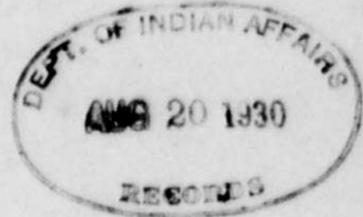
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155-0-5



R



DEPARTMENT OF INDIAN AFFAIRS  
CANADA

IN YOUR REPLY REFER TO  
No. 15/5/18583.  
ALSO TO DATE OF THIS LETTER

COMMISSIONER'S OFFICE  
P. O. BOX 666



August 14, 1930.

Your file 155-0-5.

Dear Sir:-

I beg to acknowledge receipt of your letter of the 7th instant having further reference to the purchase of a new set of batteries for the lighting system at the Kootenay Indian Residential School.

On getting in touch with Mr. Webb, as you suggested, he informs me that the new battery is not necessary immediately although the present installation is very inconvenient. Therefore, it would appear that this item can stand over until next year. The Reverend Principal has been notified to this effect and I will include an amount for this battery in my Estimates for 1931-32.

Your obedient servant,

W. E. Ditchburn.  
Indian Commissioner for B. C.

AVH/KD.

The Secretary,  
Department of Indian Affairs,  
Ottawa.

Indian Affairs (RG 10 Volume 6453, file 884-5 part 3)

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